The Intelligent Cloud Contact Center

Virtual Contact Center

Administrator's Guide • Basic Configuration, Campaign, Digital Engagement, Interactive Voice Response (IVR), Single Sign-On, and UC Adapters

February 2026

This content combines all Five9 administrator's guides, so that you can access all Five9 domain configuration in one document.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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Five9
The Intelligent Cloud Contact Center

Basic Configuration

Administrator's Guide

January 2026

Learn how to configure and manage your Five9 domain using the VCC Administrator interface.

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What's New

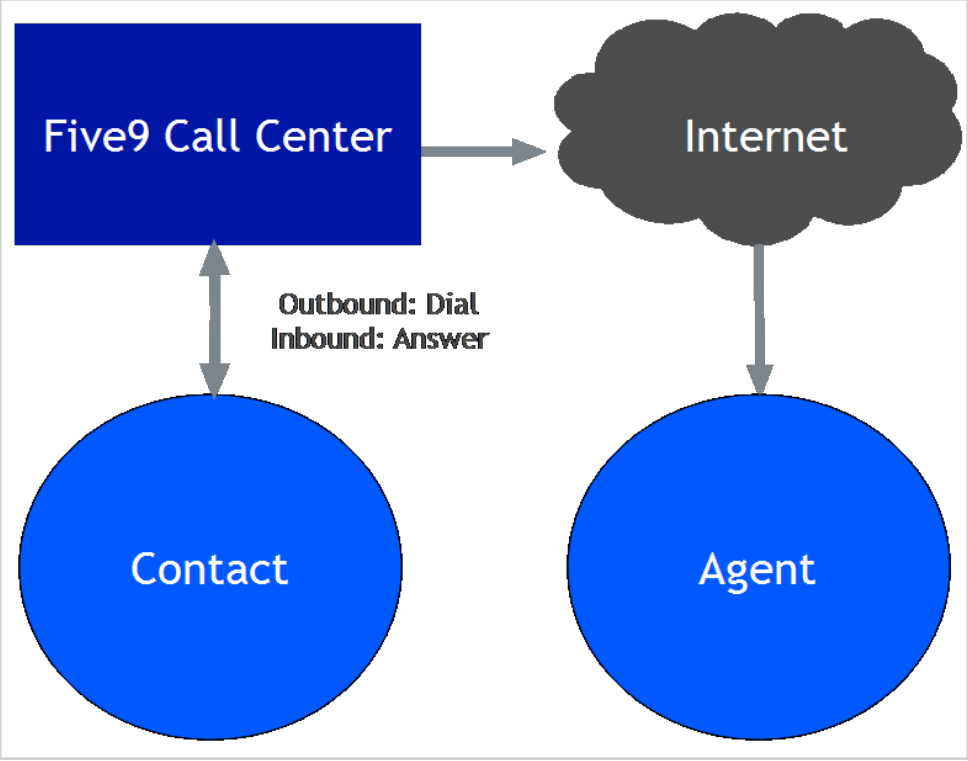
Release	Change	Topic
Jan 2026	Added a note about the new API Only User type, used to configure access to legacy web services.	Assigning User Roles and Permissions
Nov 2025	Added a note that manual outbound calls only use the phone number's area code and prefix for time zone.	Configuring Time Zone Dialing
Sep 2025	Updated the following topics to enhance clarity on how to add a number to the DNC list using dispositions and enable DNC-related permissions for agents.	Managing Do Not Call (DNC) Lists Agent Permissions
	Updated steps for how to upload greetings.	Managing Voicemail Greetings
	Corrected text on the supported number of speed dials.	Managing Speed Dial Numbers
Aug 2025	Added note to the Number Data Type.	Data Types
May 2025	Added to descriptions that FTP recording transfer details occur in real-time.	Configuring Advanced Recording Uploads Exporting Recordings and Transcripts
	Updated information on when administrative permissions are required.	Option 1: Installing the Software on a Single Workstation, Step 2 (Windows): Installing the Softphone
Apr 2025	Updated description.	Enable Session Expiration

About the Virtual Contact Center Administrator Application

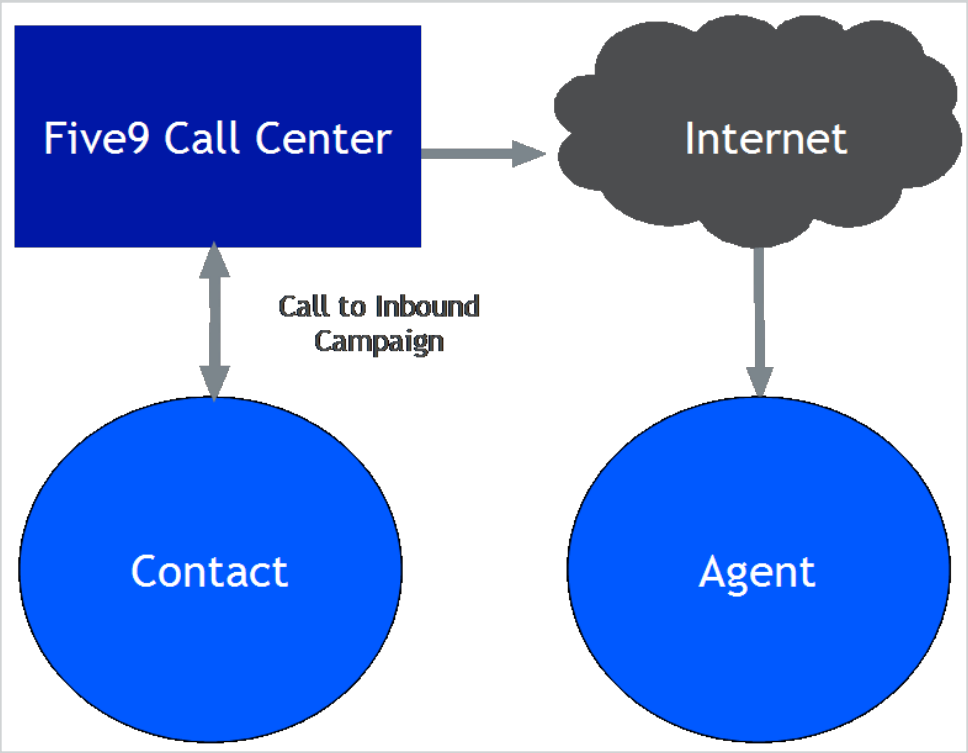
This information describes how to use the Five9 Virtual Contact Center (VCC) Administrator application to configure and manage your contact center domain.

The VCC is cloud-based software provided as a service for creating and managing outbound and inbound contact center operations:

- In outbound campaigns, the automatic dialer can make multiple simultaneous calls. The dialer can skip busy signals, answering and fax machines, and *no answer* calls. Agents process calls answered only by a live person.



- In inbound campaigns, callers dial directly to the VCC which automatically routes calls to agents based the campaign settings, such as skills and status.



The applications correspond to the user roles:

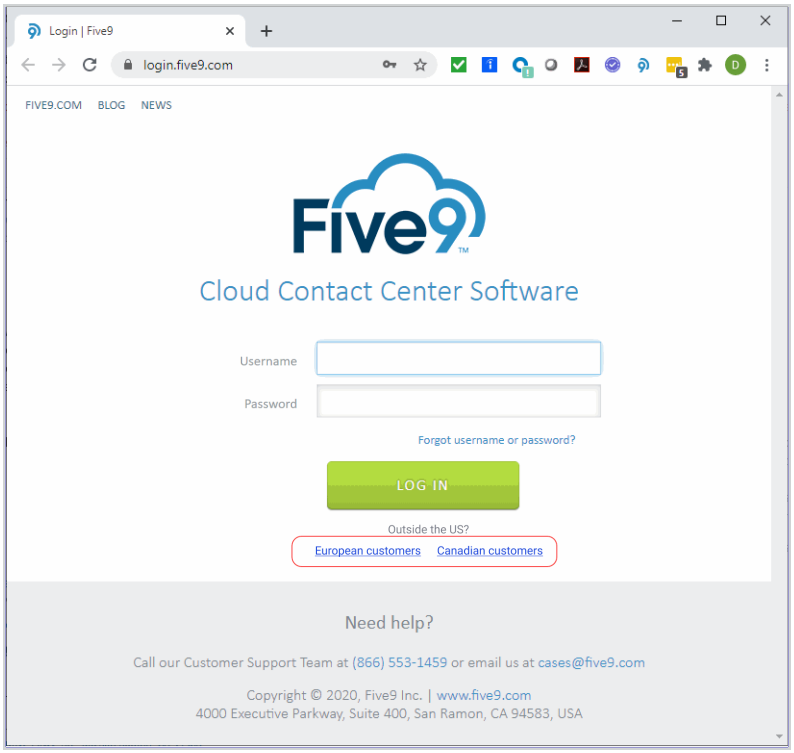
- Administrators configure and manage your Five9 contact center.
- Supervisors monitor and manage agents and campaigns, and view real-time statistics for contact center operations.
- Agents use the Internet to connect to the VCC from anywhere in the world so that they can process calls based on the rules that you define.
- Dashboards and Reports provides tools to analyze information about contact center, campaign, and agent performance.

Logging In to Five9

To log into your Five9 account, navigate to https://login.five9.com and enter your credentials.

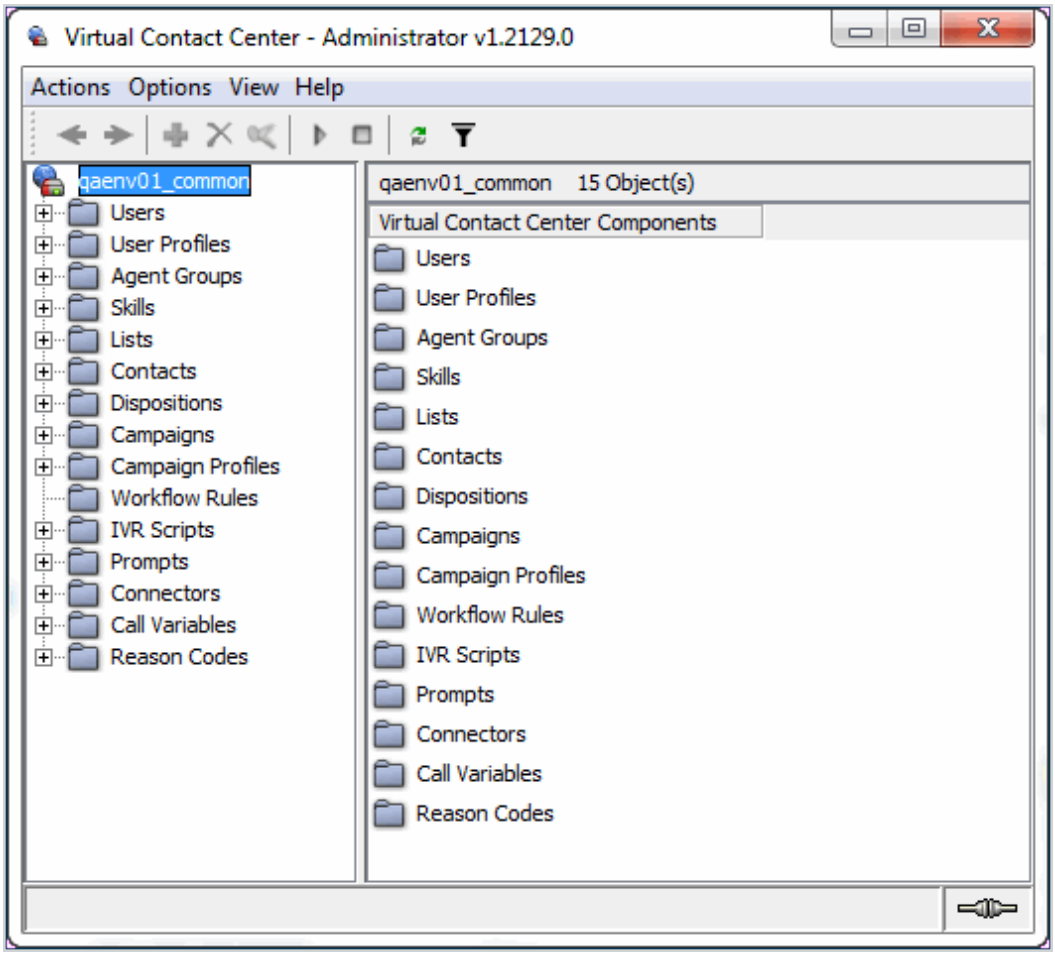
Note

To access domains outside the United States, use the links below the **LOG IN** button.



Using the Administrator Application Interface

The Administrator Application opens with the main window used to monitor and configure aspects of the Virtual Contact Center (VCC).

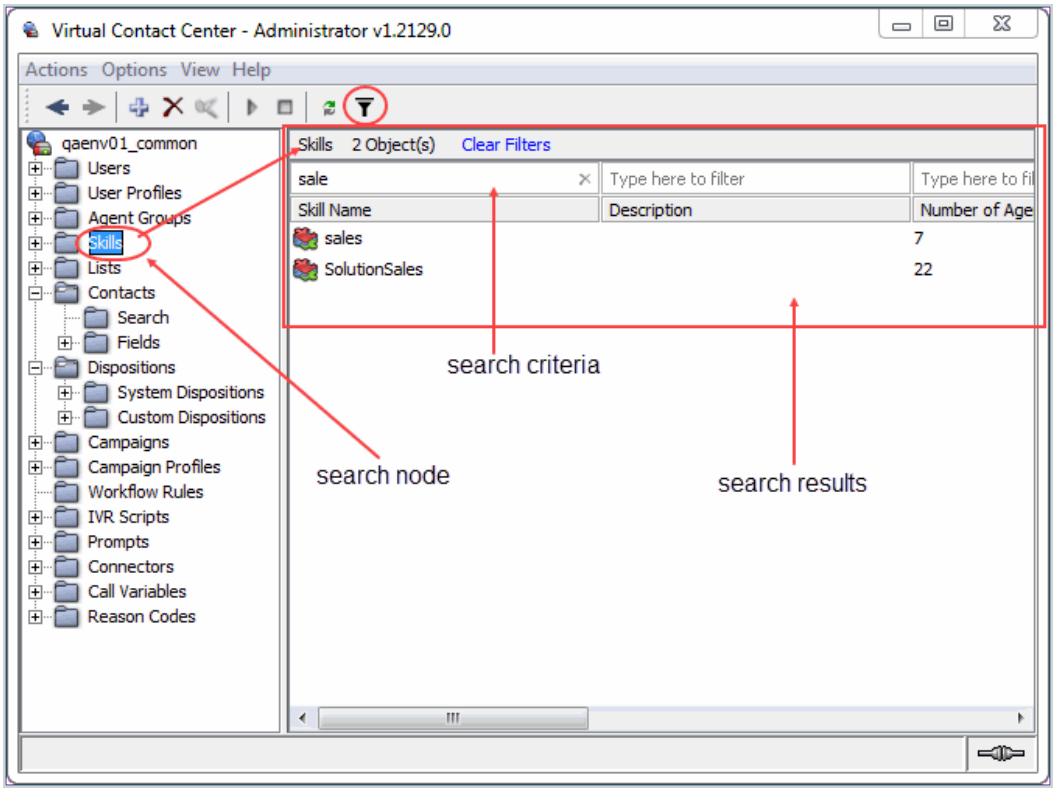


Use the navigation pane on the left to navigate the folders structure that lists the categories of objects that you can configure in your implementation.

Use the list pane on the right to see what is configured in each of the object categories. The list columns differ according to the information stored for each object category.

Filtering Objects

You can search for and filter the objects in your interface view. To enable filtering, click the filter icon.



You can see your search results in the list pane on the right. Your filters persist throughout your navigation.

Example

The skills list shown above has search criteria entered to filter for the keyword **sale**. You can navigate to another folder in the folder tree and return to the Skills folder in the left-side navigation to find the objects displayed are still filtered for the keyword **sale**.

Removing Filters

To remove the filter, click **Clear Filters**.

Filtering Options

Any search string entered as only lower case characters is not case-sensitive. A search string using a capital letter is case sensitive.

Example

Using **Sales** as the search criteria shows only results that contain **Sales**, not **sales**.

You can filter for an exact phrase using double quotation marks (**"**,**"**)

Example

Using **“Business”** as the search criteria shows results only for the exact word **Business**. This is case sensitive.

You can use an asterisk (*) as a wildcard for any number of characters.

Example

Using **“No”** as a search criteria in the System Dispositions node shows results for Do **No**t Call and **No** Answer system dispositions. Using **“No*”** as the search criteria in this same node shows only **No Answer** as a result.

You can use a question mark (?) as a wildcard for a single character.

Use the toolbar items to manage tasks. In the Actions menu, you can add, edit, and delete objects in your configuration.

Adding Objects to your Configuration

To add objects, use one of these methods:

Right-click a folder in the navigation pane, and select **Add *Object***.

or

Select a folder in the navigation pane, and in the toolbar, click the plus (**+**) sign in the toolbar.

Editing Configuration Objects

To edit objects, access the properties of the object from either the navigation or main pane:

Right-click the object, and select **View Properties**.

or

Double-click the object.

Deleting Configured Objects

To delete objects, use one of these methods:

> **Important**
>
> Because you may lose reporting data if you delete an object, be sure to export the reports that you need before deleting. To preserve all reporting data, remove the object from the campaign instead of deleting the object.

Right-click the object and select **Remove *Object***.

or

Select a folder in the navigation pane, and click the **X** in the toolbar.

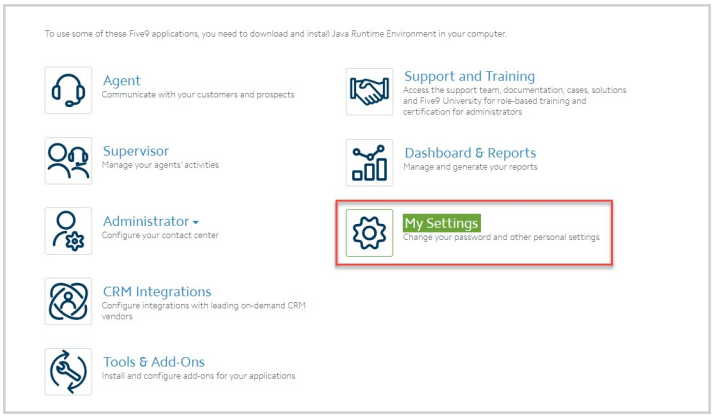
Managing Your VCC Account

Your may have been provided separate credentials for the Five9 Customer Portal and each application that you may access.

Changing Your Password and Security Answers

If you have permission, you can change your password and questions and answers at any time. If you do not have permission, you do not see this menu item.

1 Click **My Settings**.



2 Make your changes.

The password options that you see depend on your permissions and the requirements set for your domain. The security questions in the Security Setup menus contain a minimum of six options.

> **Note**
>
> Your current and maximum character count is shown as you enter a password. The **Update** button is enabled once the password requirements are met.

3 When done, click **Update.**

Recovering your Password

You must recover your password if you forget it or if you enter an incorrect password.

Forgotten Password

If you have forgotten your password to access the Customer Portal, follow these steps.

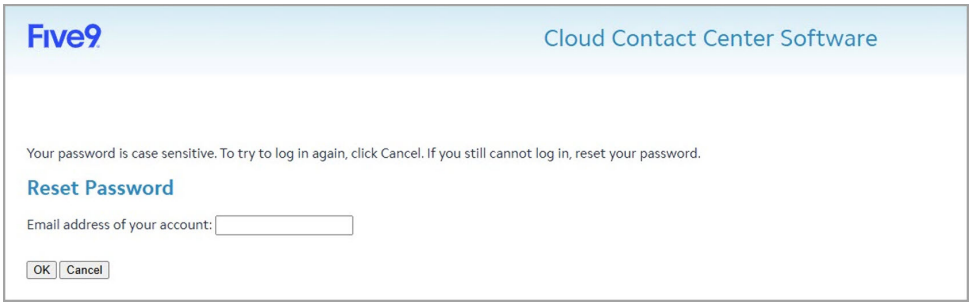
1 Enter your user name.



2 At the bottom of the login window, click **Reset password**.



3 In the Password Reset Form, enter your user name, and click **Reset Password**.

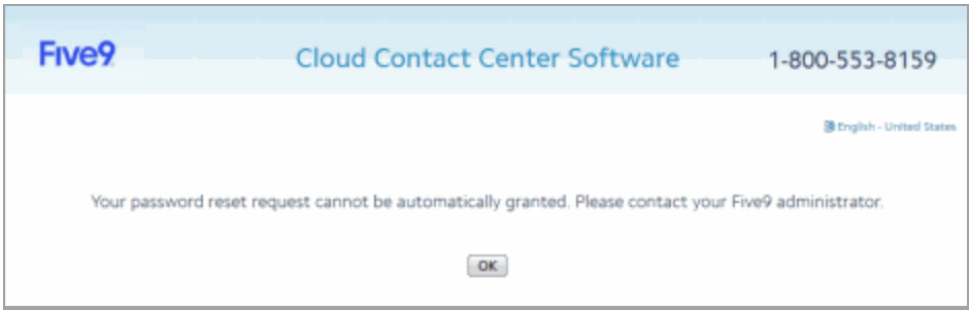


4 Enter your email address, and click **OK**.

If you have permission to reset your password, you see this window. Continue with step 5.



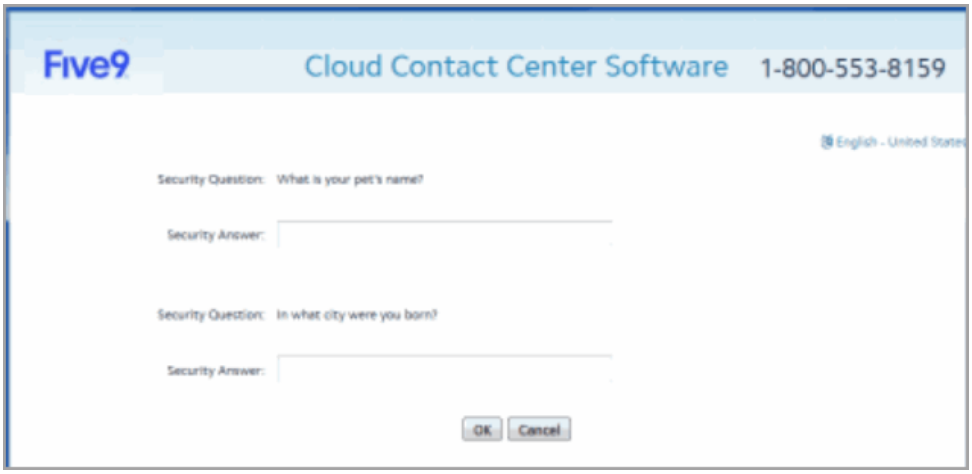
If you do not have permission to reset your password, you see this window. Contact your administrator:



5 Click **OK**.

The login window is displayed.

6 Click the link that was emailed to you.



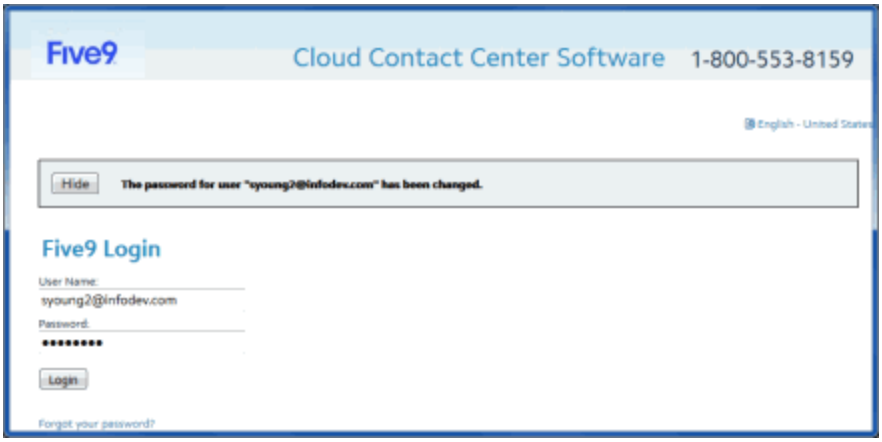
7 Answer the verification questions, and click **OK**.



8 Choose a new password according to the requirements that are displayed, and click **Update**.

The login window is displayed with a note about your new password.

> **Note**
>
> Your current and maximum character count is shown as you enter a password. The **Update** button is enabled once the password requirements are met.



9 Log in with your new password.

Incorrect Password

If you enter an incorrect password while attempting to log into your application, you are notified. If you enter an incorrect password more times than allowed by your administrator, your account is locked. To unlock your account, contact your administrator.

Configuring Automatic Login Settings

To configure your automatic login settings click the **Auto-login** tab.

> **Note**
> If you do not have access to the Java Supervisor or Java Agent applications, you will not see the Auto-login tab.

1 Select your station type.

2 Enter your station number.

3 Click **Update**.

Temporarily Blocking User Accounts

To prevent unauthorized access, users are blocked from accessing applications after several failed authentication attempts as follows:

- A user account is blocked for 15 minutes after five failed authentication attempts within one hour.
- When a user's password is changed, that user account is typically unlocked within one minute.
- Lockout information is not shared between the Digital Channels Administrator and VCC Administrator applications. For example, a user may be locked out of the VCC Administrator application but not locked out of the Digital Channels Administrator application.
- A user that is locked out of the Digital Channels Administrator application may still access digital channel reporting using VCC social reports.

Accessing the Application During Domain Maintenance

If your company uses the Five9 Managed Geographic Redundancy (MGR) feature, and you are logged into your Five9 application when maintenance is required or an outage occurs, your Five9 server is moved to a backup data center. Administrators, supervisors, and agents receive notices about the status of server changes during the switchover process.

Managing Maintenance Moves

During a major service disruption, Five9 may move your application server to a backup data center until the issue is resolved.

Five9 MGR is designed to mitigate major service disruptions that might otherwise result in extended downtime for the Five9 Virtual Contact Center (VCC) platform. Domains are typically operational in the backup data center within 15 minutes.

Once service is restored in the primary domain, Five9 returns affected domains to their primary data center.

Messaging for Domains with Managed Geographic Redundancy

Users who are logged in at the time an outage occurs see messages when maintenance is about to begin. At five minutes and one minute before a data center move, agents on active calls receive additional reminders. Agents who are processing calls are allowed to finish the call and assign a disposition. As soon as the interaction is complete, they are reconnected to their Five9 agent application in the backup data center.

Applications and softphone stations are restarted automatically. Agents receive audible and visual confirmations upon reconnection and their status is set to Ready so that they can resume taking calls.

Planning Your Implementation

When you set up your Five9 Virtual Contact Center (VCC), the configuration tasks differ depending on the particular environment you are defining. Use these road maps to help guide you through your setup.

Creating an Outbound Basic Virtual Contact Center

1. Define **Skill Groups**.
2. Define **Defining User Profiles**.
3. Add **User Accounts**.
4. Set up contacts in **Managing Contact Fields**.
5. Define and reconcile **Call Lists**.
6. Define **Dispositions**.
7. Define **Campaign Profiles**.
8. Configure your campaigns (see **Configuring Campaigns** in the Campaign Administrator's Guide).
9. Associate campaigns and campaign profiles in **Assigning a Campaign Profile to a Campaign**.

Creating an Inbound Basic Virtual Contact Center

1. Define **Skill Groups**.
2. Define **Defining User Profiles**.
3. Add **User Accounts**.
4. Set up contacts in **Adding Contact Records** and **Managing Contact Fields**.
5. Define and reconcile **Call Lists**.
6. Define **Dispositions**.
7. Define and record prompts for your callers in **Prompts**.
8. Create your Interactive Voice Response (IVR) scripts – **Creating Interactive Voice Response (IVR) Scripts**.
9. Define **Campaign Profiles**.
10. Configure your campaigns (see **Configuring Campaigns** in the Campaign Administrator's Guide).
11. Associate campaigns and campaign profiles in **Assigning a Campaign Profile to a Campaign**.

Creating Interactive Voice Response (IVR) Scripts

1. Define and record prompts for your callers in **Prompts**.
2. Define **Skill Groups**.
3. Define **Dispositions**.
4. Create your Interactive Voice Response (IVR) scripts (see Interactive Voice Response (IVR) Administrator's Guide.
5. Set up your campaign IVR schedule (see Campaign Administrator's Guide).

Creating or Implementing International Call Support

Five9 Global Voice offers global contact solutions with local contact center agents, which overcomes latency issues often associated with international dialing. You do not need this feature to make calls throughout the world. However, Five9 Global Voice enables you to have the best quality calls and to have regional agents support local customers and is PCI compliant. You can set skills, IVR scripts, and inbound and outbound campaigns for regional call traffic handled by local agents. You can also configure uninterrupted coverage across multiple time zones and provide overflow call support during peak call conditions. For configuration information and settings, see **Configuring International Service with Five9 Global Voice**. For information about using Five9 Global Voice with WebRTC, see **Using WebRTC for Audio Communication**.

Domain Settings

The settings that you define for a domain are considered *default* because they apply to all campaigns in your domain. When you display the settings of a campaign, *default* is indicated in the definitions table. If you change settings and dispositions in a campaign, these new settings override your default domain settings, for example: two campaigns have a disposition named *Call back later*. In one campaign, the redial timer disposition is set to call back after seven days according to the default settings. To override the default domain setting, you set the callback to occur after 14 days in the other campaign.

- Character Limits in Domain Components
- Configuring Default FTP Settings
- Configuring Dialing Rules
- Configuring International Service with Five9 Global Voice
- Configuring Proxy User Access
- Configuring the Trusted IP Ranges
- Configuring Time Zone Dialing
- Configuring User Extensions
- Defining Additional Default Domain Call Settings
- Defining Audio Settings for Softphone
- Defining Email Notifications
- Defining Global Campaign Settings
- Defining the Maximum Number of Outbound Lines
- Defining Settings for Agent Desktop Plus
- Defining Single Sign-On Identity Providers
- Enabling Access to the REST API
- Enabling Desktop Toolkit Customizations
- Enabling Performance Dashboard
- Enabling Salesforce
- Managing Authorization Profiles
- Managing Automatic Number Identification (ANI)
- Managing Do Not Call (DNC) Lists
- Managing Security Certificates
- Managing Speed Dial Numbers
- Setting KPI and Global Parameters
- Setting Password Policies
- Using Dialing Lists in E164 Format

Character Limits in Domain Components

If you are using text channels in your domain, you must limit the numbers of characters in campaign components. Otherwise, the text server will not communicate with the Virtual Contact Center (VCC) server.

Component	Character Limit
Text Profile and VCC Campaign	32 characters
Text Group and VCC Skill	255 characters
User (*also email address*)	50 characters
Password	64 characters
First Name	32 characters
Last Name	32 characters

Managing Do Not Call (DNC) Lists

If you conduct outbound telemarketing campaigns, you may want to add an in-house or local DNC list to your domain so that as the dialer processes phone numbers, it automatically checks your DNC list. If a number is found in the list, it is not dialed.

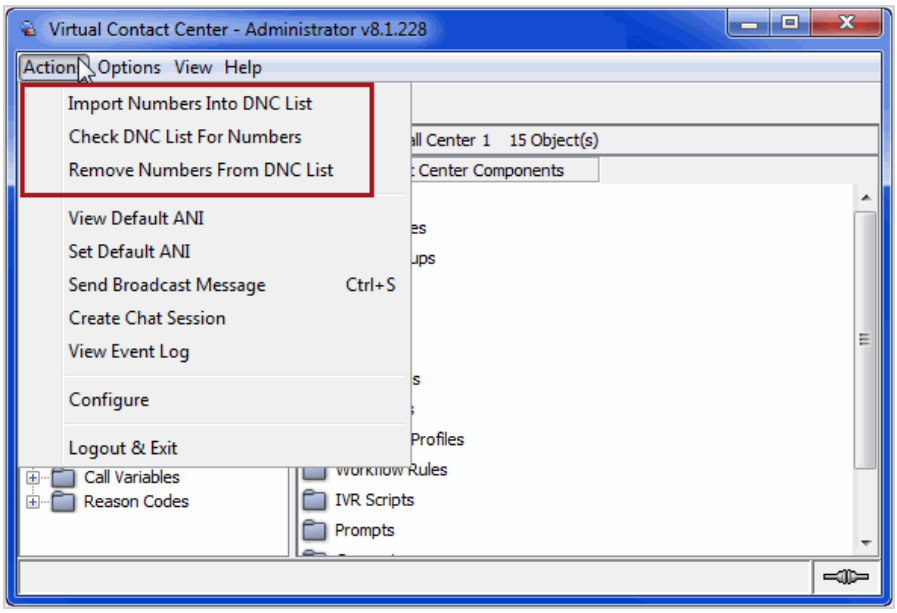
However, your local DNC list is not intended to replace national or regional DNC lists. Before importing call lists into Five9, always check your lists against the proper state or national Do Not Call registry. Suppliers, such as Contact Center Compliance, provide these services.

When your account is set up, the DNC list is empty. You can populate the list by importing a list of numbers, assigning a specific disposition, and using the Set DNC module in your IVR scripts.

Using DNC Lists

Numbers that you want to import into a list or remove from a list must be in TXT format files that contain a single column of phone numbers without any additional characters.

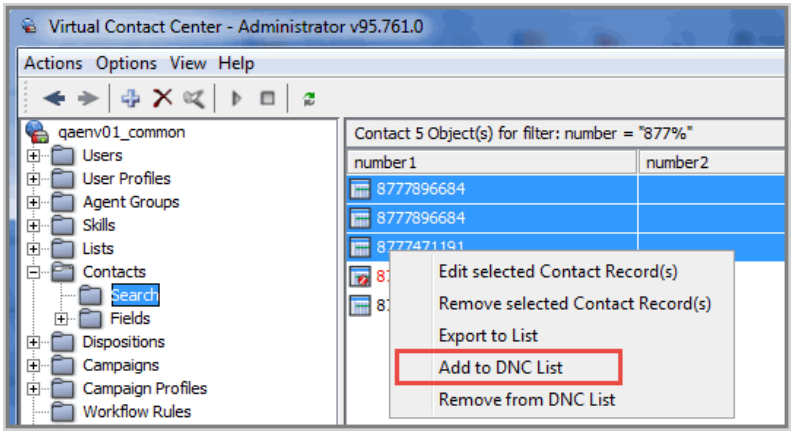
The time to process a list depends on the size of the list. When the process is finished, you see the results. The options are located in the Actions menu.



Because of the large file size of many lists, Five9 limits importing lists to the hours of 11:00 PM to 6:00 AM Pacific Time. Note that Pacific Time can be either Pacific Daylight Time (PDT) or Pacific Standard Time (PST), whichever is set on your domain.

If you try to import files outside these hours, you receive an error message.

You can add five or fewer numbers to the DNC list outside the restricted hours directly from the Contacts folder. To add numbers, select up to five numbers and right-click to access the options menu.

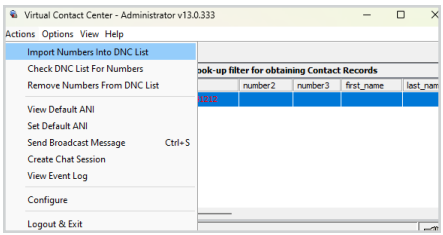


Importing Numbers to the DNC List

Importing numbers into the DNC list restricts the Five9 system to dial the added numbers on a domain level.

> **Important:** Ensure the .CSV file does not exceed 5Mb, which may overload Five9 servers.

1 From **Actions**, choose **Import Numbers Into DNC List**.



The **Import DNC List** dialog appears.

2 Select your DNC file, and then select **Import**.

> **Note:** A maximum of five numbers can be added to DNC during business hours. Adding more than five numbers to the DNC list can be done during off-hours (11 pm to 6 am Pacific).

How to Check the DNC List for Numbers

An administrator can find out what numbers are in the current DNC list for their domain using one of the following two ways:

- Java Admin using the Check the DNC List for Numbers action. See **Checking the DNC List For Numbers**.
- VCC using one of two reporting options. See **Generating DNC Reports**.

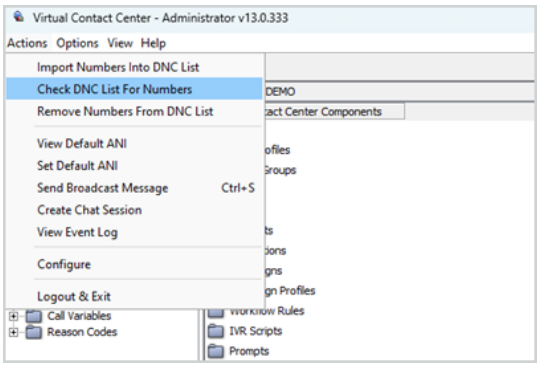
Checking the DNC List For Numbers

When you check numbers that are already on the DNC list, note the following:

- The DNC file should contain a single column of phone numbers only. It must be saved in standard text format (.txt).
- Due to the large file size of many Do Not Call lists, Five9 limits importing to the hours of 11:00 pm to 6:00 am Pacific Time. If you start the import outside these hours, you receive a notification message.
- Microsoft Excel is required.
- Wait until the system goes through the list to remove the numbers. The time depends on the list size. When the system finishes processing the list, you receive a notification indicating the results.

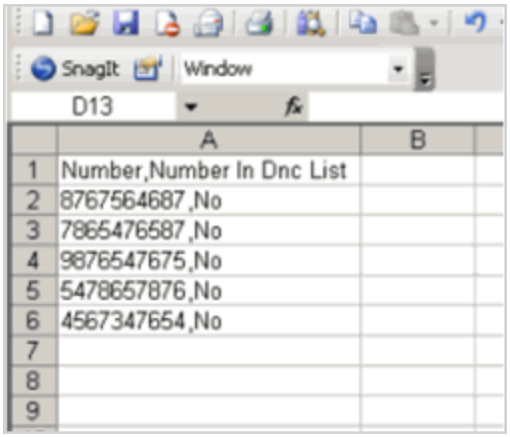
1 Select **Actions**.

2 Select **Check DNC List For Numbers**.



3 Select the file that contains the list of numbers to be checked against the local DNC list, and then click **Check Numbers**.

The **Progress** dialog appears. The results indicate the number of records that you have exported to a CSV file. The file opens with the results, indicating Yes for the numbers that are in your DNC list and No for numbers that are not in your DNC list.

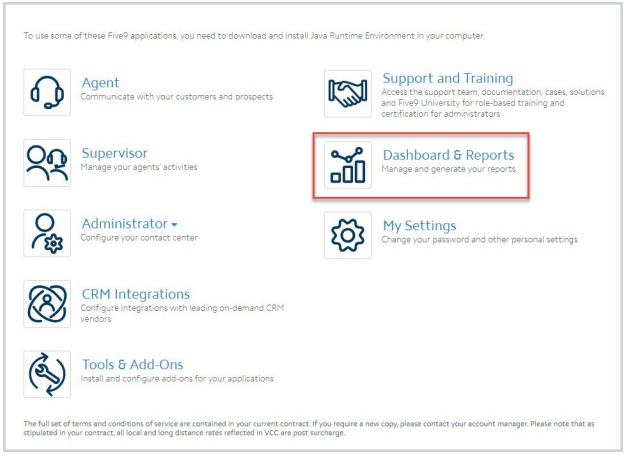


Generating DNC Reports

You can select from two available reports.

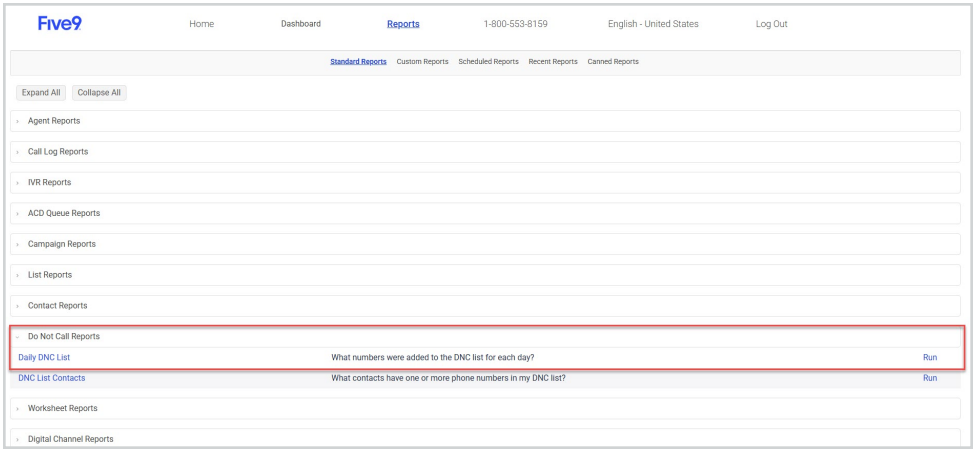
- **Daily DNC List** is the main report that lists the numbers added to the DNC list for each day. You can provide a date range and get the list of numbers in the DNC.
- **DNC List Contacts** lists the contacts who have one or more phone numbers in the DNC list.

1 Click on **Dashboard & Reports**.



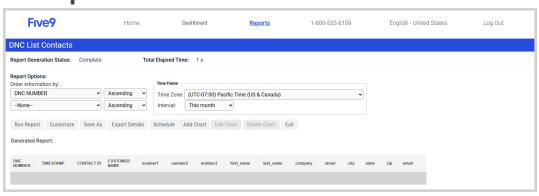
2 Select **Reports**, and navigate to **Standard Report**.

3 Select the report you wish to run, and then select the report and time frame options.

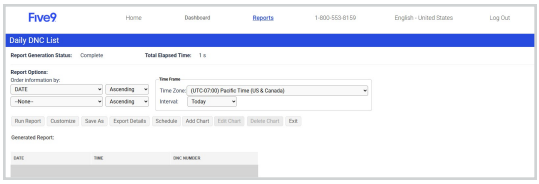


4 Select **Run Report**.

Example: DNC List Contacts



Example: Daily DNC List



Adding Numbers to DNC List using VCC Administrator Application

You can add numbers to the DNC list by importing a text file.

Multiple text files require that they contain five phone numbers per file. Five9 allows a maximum of five numbers to be added to DNC during business hours.

1. Select **Actions**.
2. Select **Import Numbers to DNC List**.
3. Select your text file.
4. Repeat Steps 1 - 3 for all other text files.

> **Example:** The import DNC function only allows numbers in the correct number format. 19225551234 = not allowed 9225551234 = allowed

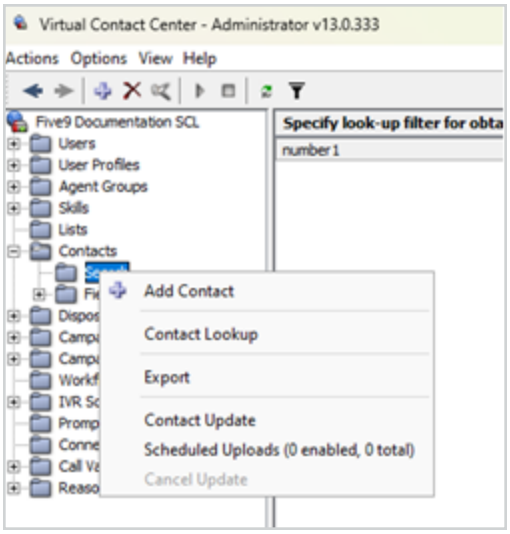
Adding Numbers to the DNC list using Contact Lookup

1. Go to the **Contacts** folder, and right-click on the **Search** folder, and then select **Contact Lookup**.
2. Select a maximum of five numbers by holding the **CTRL/Shift** button.
3. Each phone number in a record is counted by the system even though it has the same value.

   If a record has number1, number2, and number3, then the system already counts it as 3 numbers.
4. Right-click a selected record, and then select **Add to DNC List**.
5. Repeat Steps 1 - 3 for other phone numbers.

Removing a Number from the DNC list using Contact Lookup

1. Login to the Five9 Administrator application.
2. Go to the **Contacts** folder, and right-click on the **Search** folder, and then select **Contact Lookup**.



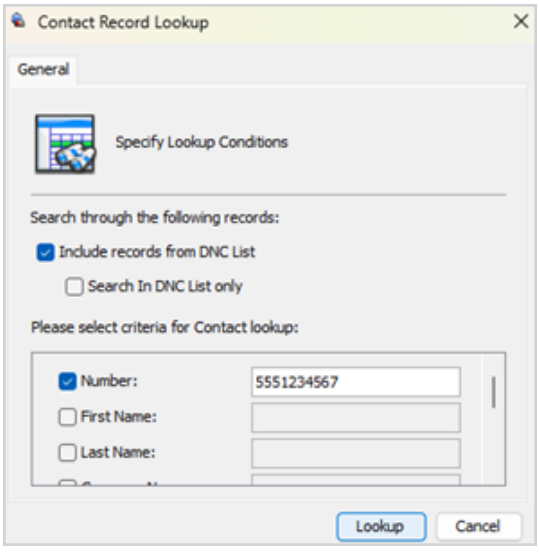
3 Make sure that the **Include records from the DNC list** is checked.

4 Select the criteria that you would like to use for searching the contact records and enter the required data/value.

You may use one or more criteria if needed. If you use multiple criteria, the contact records should have all of the values you entered.

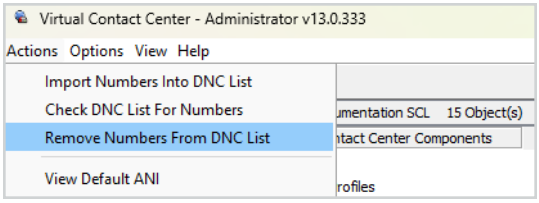
5 Click on the **Lookup** button.

To search all numbers in DNC, simply uncheck all criteria.



A phone number that is on the DNC list appears in Red.

6 Right-click on the **Contact Record**, and then select **Remove from the DNC list**.

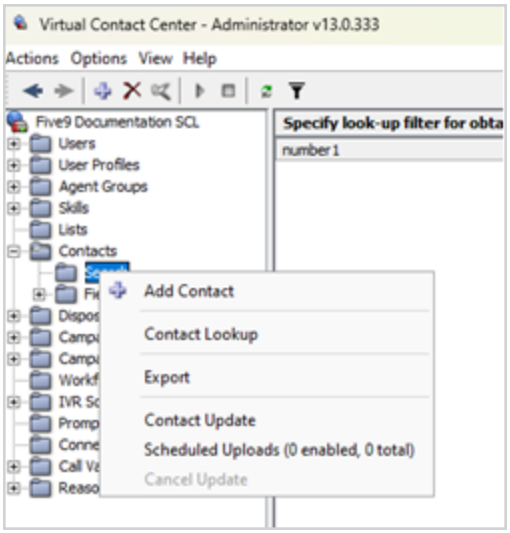


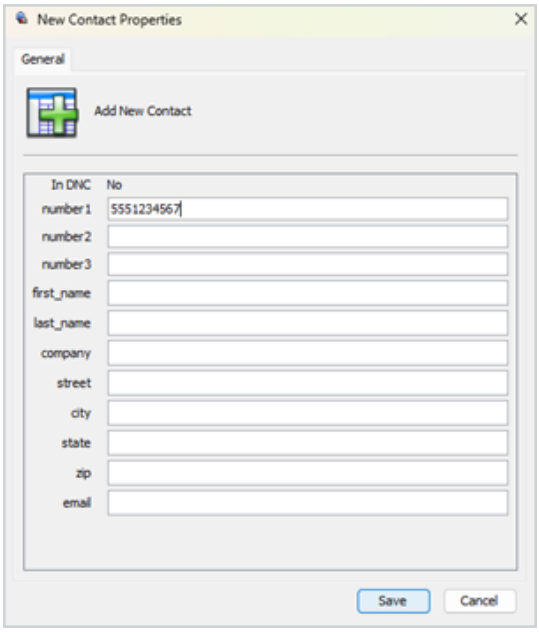
7 To view all contacts in DNC, untick all criteria.

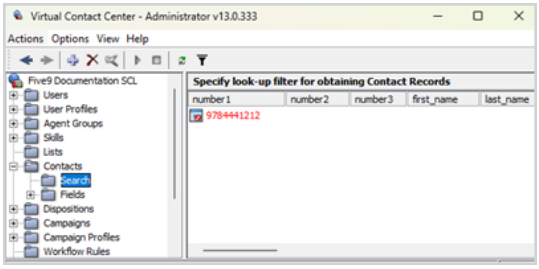
A notification message appears confirming that the phone number has been removed from the DNC list, and the number is no longer red.

8 If the contact record is unsearchable, manually add the number, and then click **Save**.

Once the number is added and saved, check if the number turns red. If it does, it indicates that the number is still on the DNC list.







9 Go back to **Step 6** to remove the number from the DNC list.

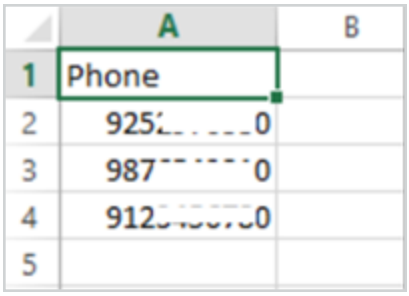
Make sure that the number format is correct. If the domain is in e.164 format, and you searched using e.164 formats, the number does not appear.

10 If you have a list of numbers that you would like to remove from the DNC list, and you want to do it by batch, see **Removing Multiple Number from the DNC List**.

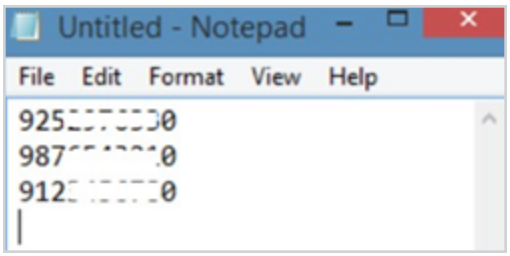
Removing Multiple Number from the DNC List

1 Save the list of numbers to an Excel (.csv) or Notepad (.txt) file.

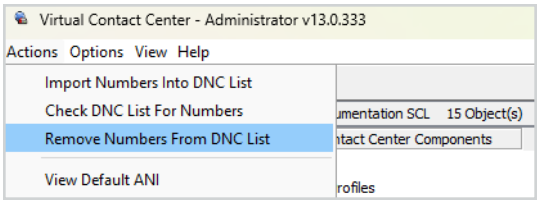
Excel sample:



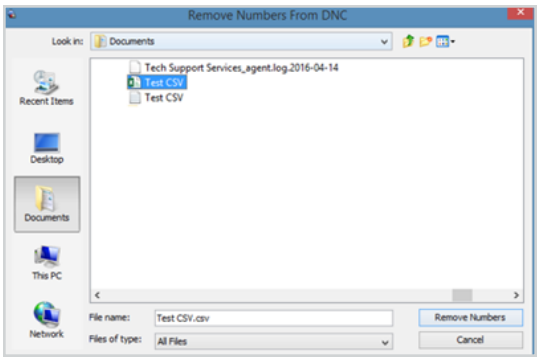
Text example:



2 In the Five9 Administrator application, go to **Actions**, and then select **Remove Numbers from the DNC list**.



3 Locate the file, and then click the **Remove Numbers** button.



A notification confirming how many numbers were removed from the DNC list displays.

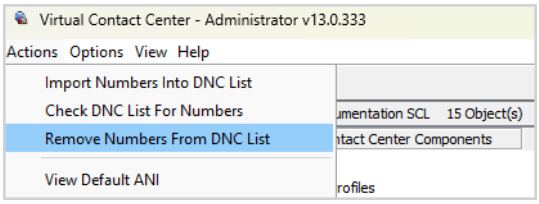
The phone number is on the DNC List but is unsearchable on Contact Lookup when trying to remove it from the list. This happens when a phone number is added to the Do Not Call (DNC) List without creating a contact record.

The DNC list is only a list of phone numbers that the system cannot dial. There are times when numbers are added to it directly and times when they are tagged as a Do Not Call number after a call. The former does not create a contact record, while the latter does.

Therefore, a phone number added to the DNC List directly will be unsearchable through Contact Lookup since it is not a Contact yet. If the administrator wants to remove a number from the DNC list, removing it through Contact Lookup will not be an option.

The administrator has to remove the number from the DNC list by:

1. Prepare a CSV. file with the phone number that must be removed from the DNC list.

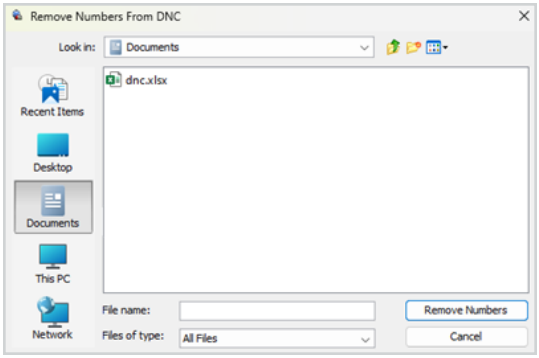


2. Click **Actions**.

3. Click **Remove Numbers from DNC List**.

4. Upload the CSV file containing the phone number, and then click **Remove**

Numbers.



Using Disposition to Add a Number to DNC List

You can configure how an agent can add a number to the DNC list using a disposition. For more information about how to add a number to the DNC list using a disposition, see **Types of Dispositions**.

Enabling DNC-Related Permissions for Agents

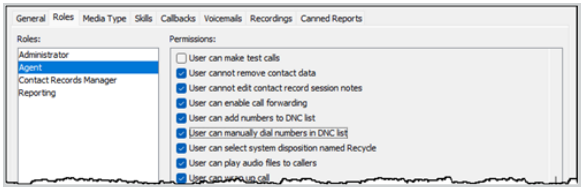
You can permit agents to add numbers to the DNC list or manually dial numbers in the DNC list or both.

1 Open the user properties.

2 Enable the following permissions:

- **User can add numbers to DNC list:** User can add numbers to the DNC list either directly or by using a disposition.
- **User can manually dial numbers in DNC list:** User can manually call the numbers in the DNC list.

> **Note:** The system restricts an agent who doesn't have this permission from dialing a number in the list, it displays a message when a restricted agent attempts to make a call.



3 Select **Save** to apply the changes to the settings.

For more information about agent permissions, see **Agent Permissions**.

Managing Automatic Number Identification (ANI)

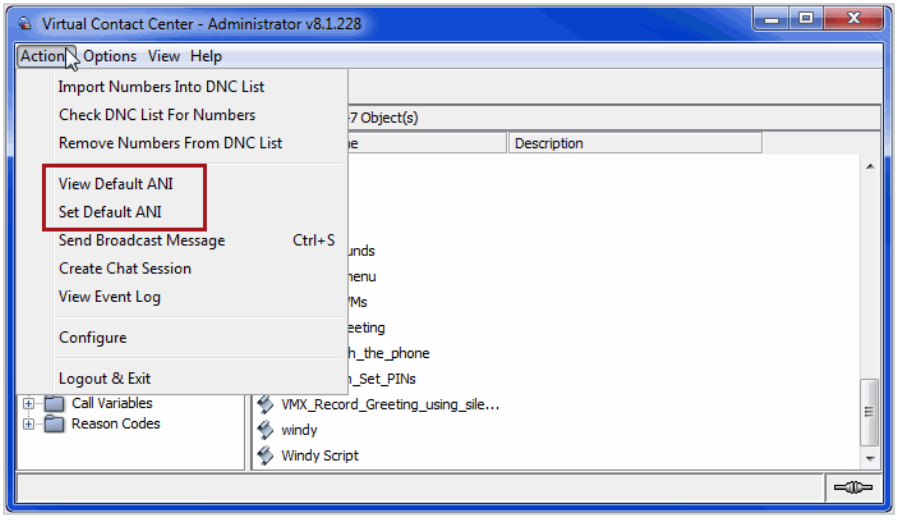
Automatic Number Identification (ANI) allows call recipients to see the phone number from which their call is originating. Set and manage the default Automatic Number Identification (ANI) and ANIs for local presence.

Default ANI

FCC and Telemarketing regulations require that you set a valid default ANI number for your domain. It is also required by Five9 for you to start any campaign. If you leave the default ANI blank, you see an error message when starting an outbound campaign or making an outbound manual call. The ANI tells the call recipients what telephone number made the call. The number appears in the caller ID displayed for outbound calls from your domain.

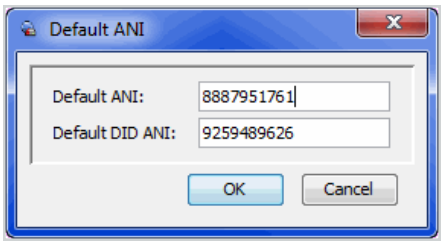
If you have an inbound number assigned to you by Five9, you may use that one, your main office line, or even a mobile phone number. For inbound campaigns, you can use the phone number assigned to that campaign as your default ANI. Be sure to set up the inbound campaign and test it before you try to use it as your default ANI. The default ANI must conform to these requirements:

- Must be reachable by your Five9 inbound campaigns.
- Must give callers an IVR DNC Opt Out option or an agent.
- Must accept callbacks for any outbound or dialed manual calls made from your campaigns.
- Can be superseded by a campaign profile settlings or Local ANI groups in other settings and configuration.
- Satisfies the minimum requirement in case other settings are not used.



Set a Default ANI to Identify Your Contact Center Domain

1 Select **Actions > Set Default ANI**.



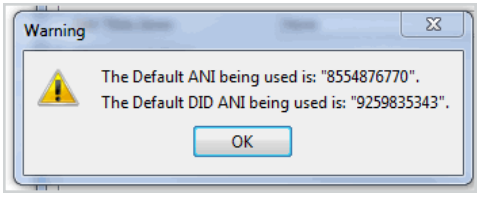
2 Select Default ANI or Default DID ANI, and enter a number.

International numbers can contain a maximum of 17 digits, plus prefix. The prefix may be 011 (for a total of 20 digits) or + (for a total of 17 digits plus a + sign).

3 Click **OK** to save the default ANI definition.

View the Default ANI

Select **Actions > View Default ANI**. The default ANI appears in a message window.



Override the Default ANI for a Campaign

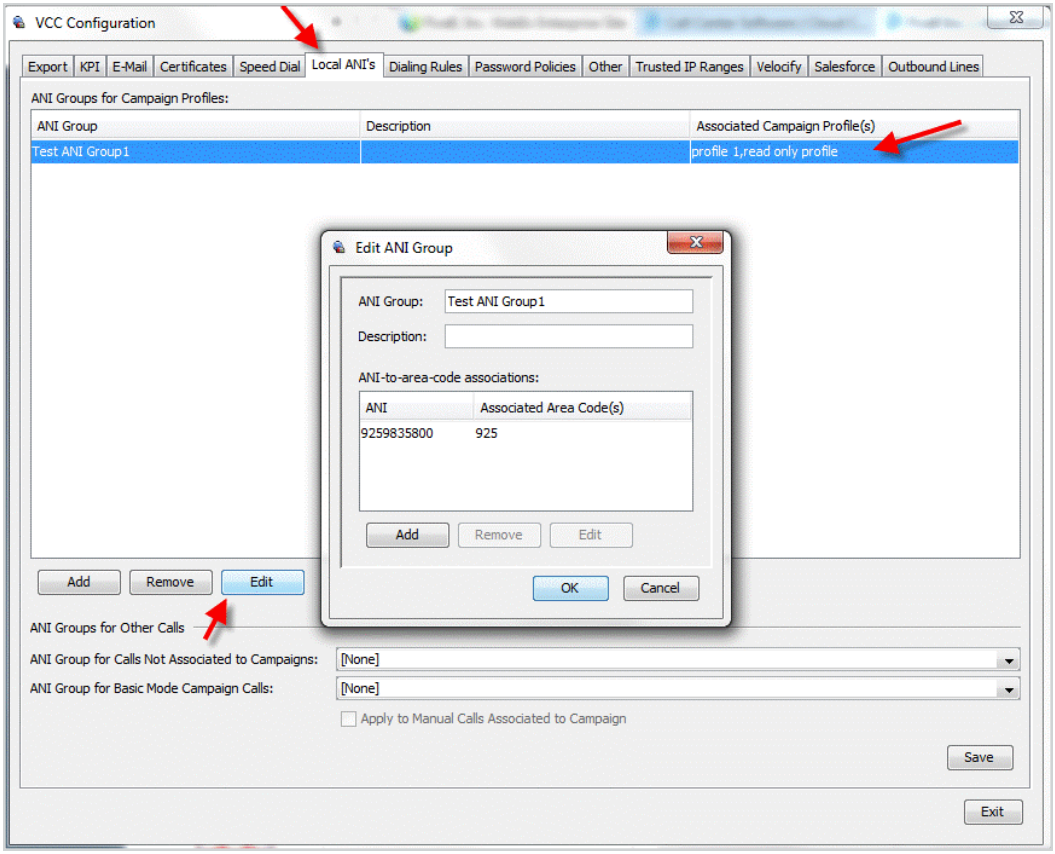
You can specify a number to use for a particular campaign in place of the default number defined for the domain. In a campaign profile, define an ANI in the campaign profile properties. For more information, see **Editing the Properties of Campaign Profiles**.

Map ANIs to Campaigns to Create Local Presence Prefixes

You can define ANI numbers so that they display a prefix local to the contact you are calling. For example, if a caller dials from a number in the 212 area code, you can display one of your numbers as also having a 212 area code. Depending on your corporate business needs, you can purchase and configure as many local presence

numbers as you need. Configure your domain to display the local numbers for the area codes you are calling.

In the configuration menu, open the Local ANIs tab and define the local numbers.



Local ANIs

This section describes how to associate the displayed outgoing phone numbers (ANIs) and the area codes of the outbound calls. This feature enables you to display ANI numbers for return calls that are local to your contacts. Calls to area codes that are not mapped use the ANI set in the campaign profile or your domain's default ANI number. See **Managing Automatic Number Identification (ANI)**.

You can create multiple ANI groups. An ANI group is a set of ANI-to-area-code associations. For each ANI group, only one ANI may be assigned to a prefix. Multiple prefixes may be assigned to each ANI. One ANI that is assigned to multiple area codes counts as multiple ANI-to-area-code associations.

- Maximum number of ANI-to-area-code associations per ANI Group = 100
- Maximum number of ANI groups per domain = 20

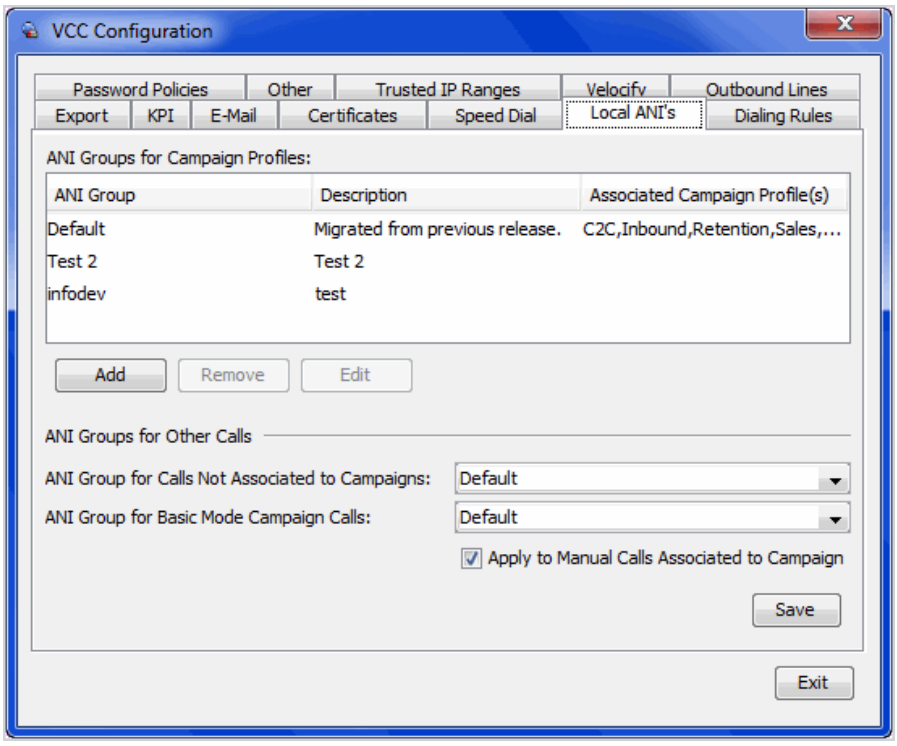
Define an ANI Group and Map the Group to a Campaign

1 Select **Actions > Configure**.

2 Select the **Local ANIs** tab.

This window is divided into two sections:

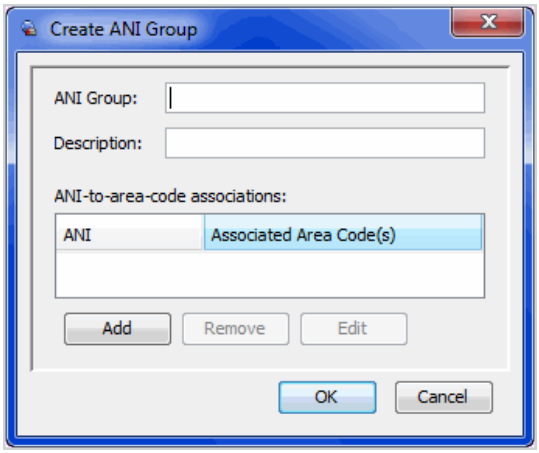
- ANI groups for campaign profiles
- ANI groups for other calls



Map an ANI Group to a Campaign Profile

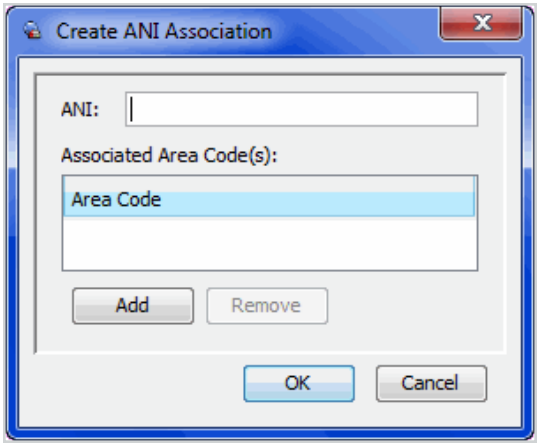
Follow these steps.

1 Name and describe the ANI group.



Once an ANI group is assigned to campaign profiles, the names of the each associated profile appears in the list.

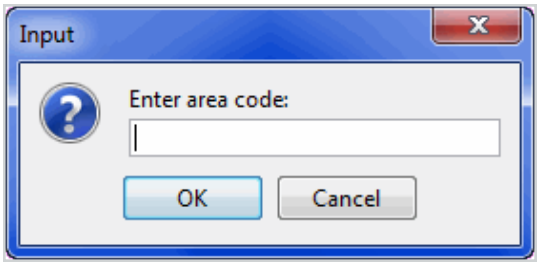
2 Click **Add** to open the **ANI Association** window.



3 In the **ANI** field, enter the phone number to be used as the outgoing caller ID number.

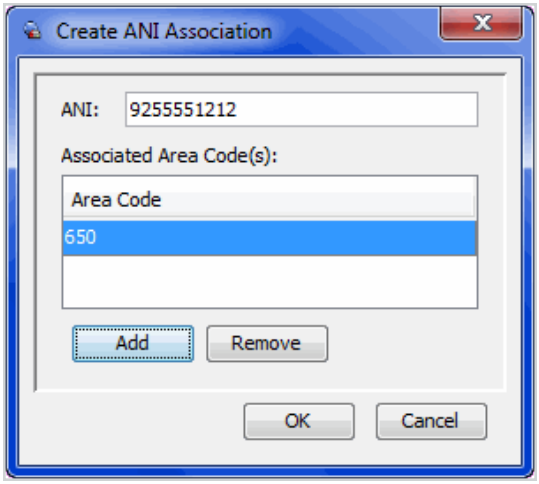
Maximum length for international numbers = 17 digits, plus the prefix. The prefix may be 011 (total = 20 digits) or the plus (+) sign (total = 17 digits and a + sign).

4 Click **Add** to enter the area code.



5 Enter the area code, and click **OK**.

The added area code appears in the list.



6 Repeat Step 3 for each area code you need to add for this ANI number.

7 Click **OK** to save the ANI association.

8 Click **OK** to save the ANI Group.

Assign ANI Groups for Calls Not Associated with Campaigns

If you do not select an ANI group, the default ANI is used.

1 For calls not associated to campaigns, select an ANI group.

This group is used for manual calls for which agents do not select a campaign.

2 For campaign calls in basic mode, select an ANI group.

This group is used by basic mode campaigns that do not have a campaign profile.

3 Click **Save** and **Exit**.

Configuring Default FTP Settings

This section describes how to configure the default FTP settings to transfer call recordings and reports from the Five9 VCC server to your FTP server. In addition to these default settings, you can also configure specific settings for each campaign. Campaign and disposition settings override default settings.

Depending on your business requirements, choose FTP, FTPs, or FTPes. FTP is adequate if the path to the storage location for the recordings is already encrypted, such as when the location is at your site and you have implemented a VPN. Otherwise, to protect recordings in transit, Five9 recommends SFTP. The configuration for each option is similar, except that with SFTP, you can upload an optional security key file. If you intend to use a key, you must obtain a private key file from your SFTP server administrator before starting configuration. For more information on keys, see **Creating Public and Private Keys**.

Exporting Recordings and Transcripts
Configuring FTP Options for Scheduled Reports
Configuring FTP Options for Transcripts
Creating Public and Private Keys

To configure the FTP transfer settings, select **Actions > Configure**.

Exporting Recordings and Transcripts

You can record agent calls. Each recorded call is stored in a single file in WAV format. The recordings are stored for 30 days in the properties of the agent's account (see **Managing User Recordings**). If you have an FTP server, recordings are transferred in real-time to your server.

You can choose to store your recordings at your regional telephony Point of Presence (PoP) rather than a Five9 data center that may be located outside of your region. For more information about this feature for your domain, contact your Five9 representative.

You can also configure FTP settings for each campaign. The campaign FTP settings override the settings on the VCC Configuration page. To configure the campaign, see the Campaign Administrator's Guide, *Outbound Campaign Properties*.

The maximum length for call recordings is one hour for each call. To increase the maximum length up to three hours, contact your Five9 support representative.

By default, the number of simultaneous call recordings is limited to 20% of the provisioned agent seats. When calls are flagged, they are recorded if a port is available. You can transfer recordings of agent calls daily.

Important

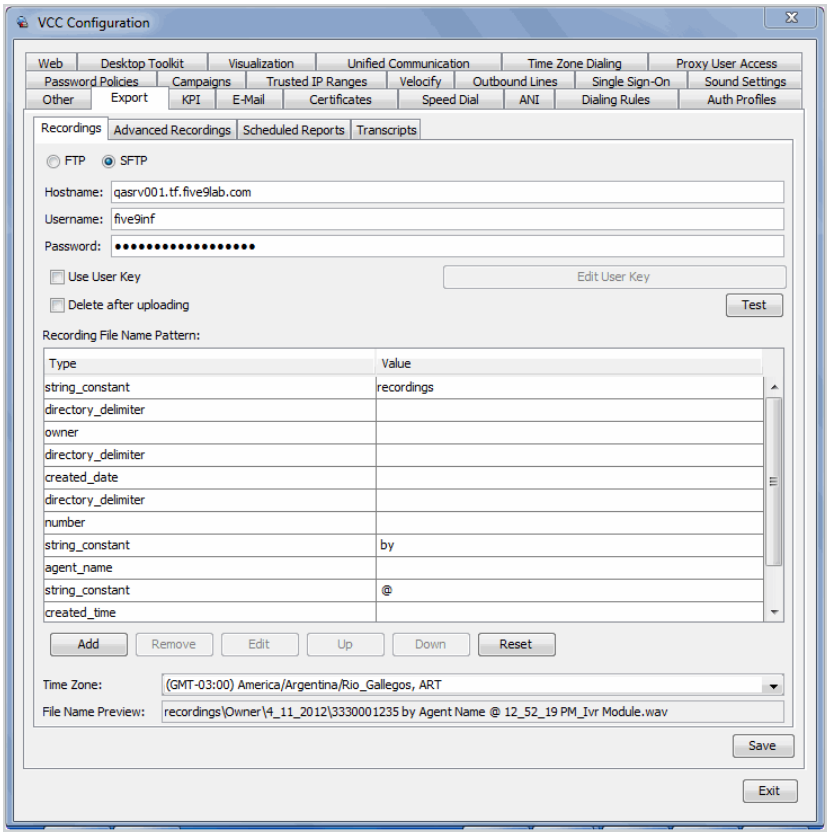
If you plan to use SFTP with a security key, be sure to obtain a private key file from your SFTP server administrator.

Defining Call Recording Settings
Deleting Uploaded Call Recordings

Defining Call Recording Settings

Follow these steps.

1 Select the **Export > Recordings** tab.



2 Select a transfer protocol: **FTP** or **SFTP**.

3 In the top section, enter the settings of your FTP server:

- **Hostname:** Name of the FTP server, which must be either an IP address or a fully qualified domain name (without ftp://).
- **Username** and **Password:** Passwords are masked.
  - FTP: Credentials for accessing the FTP server.
  - SFTP: User name for the server only. Do not enter a password because authentication with the security key supersedes the password of the server.

4 If you use SFTP with a security key, follow these steps. Otherwise, go to step 6.

a Check **Use User Key**.

b Click **Edit User Key**.

c Click **Load from file**.

d Locate the private key file that you obtained from your SFTP server administrator, and click **Open**.

e Click **OK**.

5 To verify the connection, click **Test**.

You see a success message. If not, verify your entries.

6 To set the pattern to the path of the file recordings, follow this example:

`recordings\Owner\4_11_2016\3330001235 by` ***Agent Name*** `@ 12_52_19 PM_ Ivr Module.wav`

The pattern contains these elements:

- Variables extracted from the system, for example: `Agent Name`.

`_ivr_module *`	`disposition_name`	`number1`
`agent_name`	`first_name`	`number2`
`call_guid **`	`ivr_module`	`number3`
`campaign_name`	`last_name`	`owner`
`created_date`	`length`	`session_id`
`created_time`	`number`	`skill_name`

  * IVR path for recordings made in the IVR script only. For example, the Input and Menu modules have an option to record the user's input. If this option is enabled, the name of the module is prefixed with an underscore, for example: the module named Menu3 is added as `_Menu3` to the recording file name.

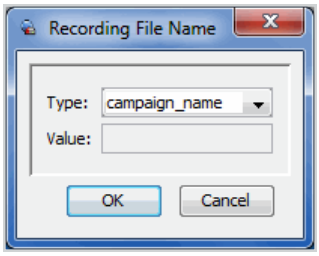
  ** Call ID in the call log reports. If multiple segments of the same call are recorded, all segments have the same `call_guid` but different time stamps, agents, and other attributes.

- `string_constant` is an element that contains an assigned value, such as recordings, by, or @.

- `directory_delimiter` inserts a backslash (\) for the path to the file.

To add an element to the pattern, follow these steps:

a Click **Add**.
The Recording File Name window is displayed.



b Select one of the types, for example: `campaign_name`.

The variables in the menu, such as campaign or agent, enable you to precisely set the file naming convention for call recordings.

If you need a unique identifier for each call, use `session_id`. The types are listed alphabetically. You cannot actually specify the name of a campaign; you can specify only the value of `string_constant`.

c Click **OK**.

d To change the location of an element, click **Up** or **Down** to place your element in the correct position in the name pattern.

You can see the pattern in the File Name Preview field.

To edit an element, follow these steps:

a Click **Edit**.

b Modify the element as needed.

c Click **OK**.

To delete an element:

a Select the element you want to remove.

b Click **Remove**.

c Click **Yes**.

*To undo changes that you do not want to save, click **Reset**.*

a Select your time zone.

b **Save** your changes.

If you do not save your changes before exiting the configuration menu, your changes are discarded.

Deleting Uploaded Call Recordings

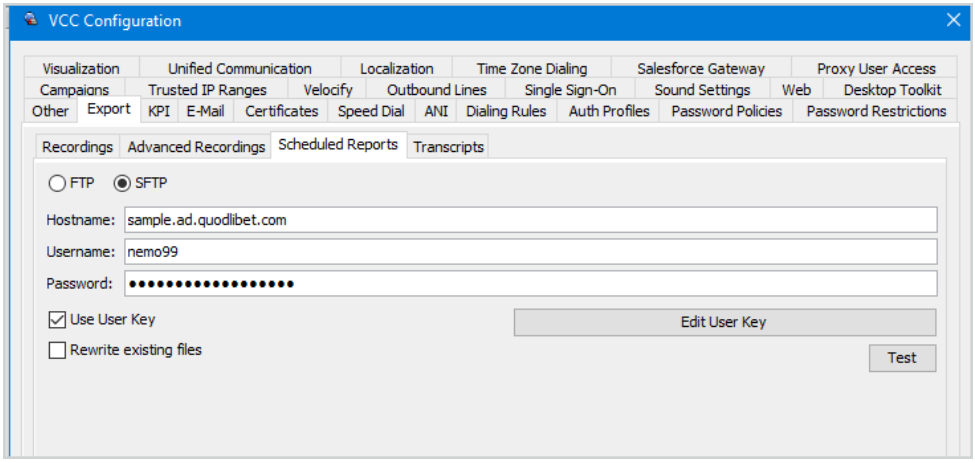
if your privacy policy requires that call recordings be deleted from the Five9 server immediately after they are uploaded to your corporate server, check **Delete after uploading**. The WAV files will be deleted as soon as the file transfer is complete.

Configuring FTP Options for Scheduled Reports

You may schedule reports to be transferred at a specified time. The generated report is sent to an email address and optionally uploaded by FTP in the specified format.

> **Note**
>
> If you export matrix reports to CSV format, the headers are not formatted correctly. Instead, export the report to a spreadsheet program and save the report as a CSV file.

1 Navigate to **Export > Scheduled Reports**.



2 Define the FTP server, see Exporting Recordings and Transcripts.

3 If you want newly exported files to overwrite existing files that have the same name, select **Rewrite existing files**.

If you do not select this option, a suffix is appended to the existing file.

4 Click **Save**.

Configuring FTP Options for Transcripts

You can save and send transcripts of your chat and email interactions. If you have an FTP server, recordings can be transferred daily to your server.

You can also configure FTP settings for each campaign. The campaign FTP settings override the settings on the VCC Configuration page. To configure the campaign, see Campaign Administrator's Guide, *Outbound Campaign Properties*.

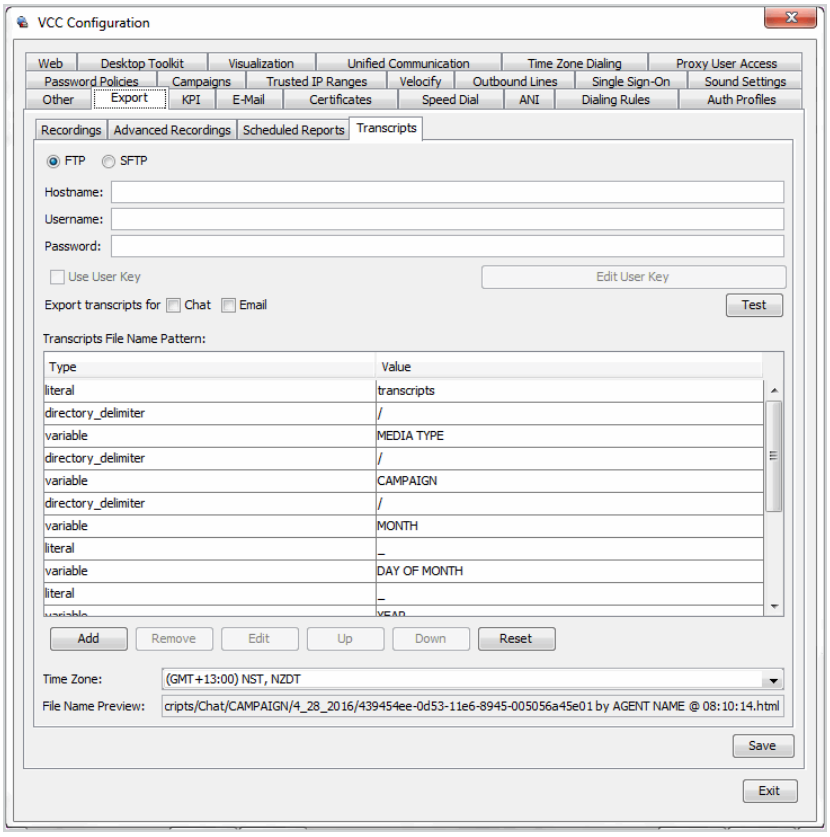
Important

If you plan to use SFTP with a security key, be sure to obtain a private key file from your SFTP server administrator.

Defining Transcript Settings

Follow these steps.

1 Select the **Export > Transcripts** tab.



2 Select a transfer protocol: **FTP** or **SFTP**.

3 Enter the settings of your FTP server:

- **Hostname:** Name of the FTP server, which must be either an IP address or a fully qualified domain name (without ftp://).
- **Username** and **Password:** Passwords are masked.
  - FTP: Credentials for accessing the FTP server.
  - SFTP: User name for the server only. Do not enter a password because authentication with the security key supersedes the password of the server.

4 If you use SFTP with a security key, follow these steps. Otherwise, go to step 6.
   a Check **Use User Key**.
   b Click **Edit User Key**.
   c Click **Load from file**.
   d Locate the private key file that you obtained from your SFTP server administrator, and click **Open**.
   e Click **OK** to save the settings.

5 To verify the connection, click **Test**.

   Verify your entries if you do not receive a success message.

6 Select transcript export for **chat/email**.

Defining the File Name Pattern

1 To set the pattern to the path of the file recordings, follow this example:

```
recordings\Owner\4_11_2016\3330001235 by***Agent Name***@ 12_52_19 PM_Ivr
Module.wav
```

   The pattern contains these elements:

- Variables extracted from the system, for example: `Agent Name`.

_ivr_module *	disposition_name	number1
agent_name	first_name	number2
call_guid **	ivr_module	number3
campaign_name	last_name	owner
created_date	length	session_id
created_time	number	skill_name

* IVR path for recordings made in the IVR script only. For example, the Input and Menu modules have an option to record the user's input. If this option is enabled, the name of the module is prefixed with an underscore, for example: the module named Menu3 is added as `_Menu3` to the recording file name.

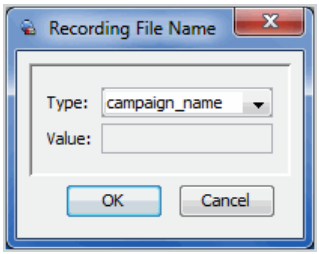
** Call ID in the call log reports. If multiple segments of the same call are recorded, all segments have the same `call_guid` but different time stamps, agents, and other attributes.

- `string_constant` is an element that contains an assigned value, such as recordings, by, or @.
- `directory_delimiter` inserts a backslash (\) for the path to the file.

To add an element to the pattern, follow these steps:

a Click **Add**.

The Recording File Name window is displayed.



b Select one of the types, for example: `campaign_name`.

The variables in the menu, such as campaign or agent, enable you to precisely set the file naming convention for call recordings. If you need a unique identifier for each call, use `session_id`. The types are listed alphabetically. You cannot actually specify the name of a campaign; you can specify only the value of `string_constant`.

c Click **OK**.

d To change the location of an element, click **Up** or **Down** to place your element in the correct position in the name pattern.

You can see the pattern in the File Name Preview field.

To edit an element, follow these steps:

a Click **Edit**.

b Modify the element as needed.

c Click **OK**.

To delete an element, follow these steps:

a Select the element you want to remove.

b Click **Remove**.

c Click **Yes**.

To undo changes that you do not want to save, click **Reset**.

a Select your time zone.

b Save your changes.

If you do not save your changes before exiting the configuration menu, your changes are discarded.

Creating Public and Private Keys

If you plan to use SFTP with a security key, you must first create the keys. Although this example uses OpenSSH, you can use another SFTP server. If so, refer to the documentation of your server.

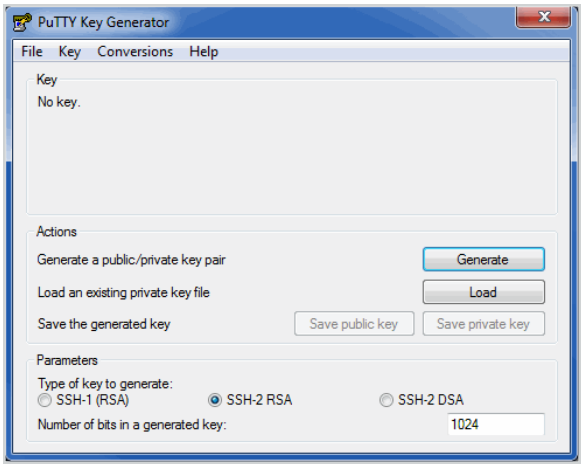
1 Download PuTTygen.

2 Run PuTTygen with these settings:

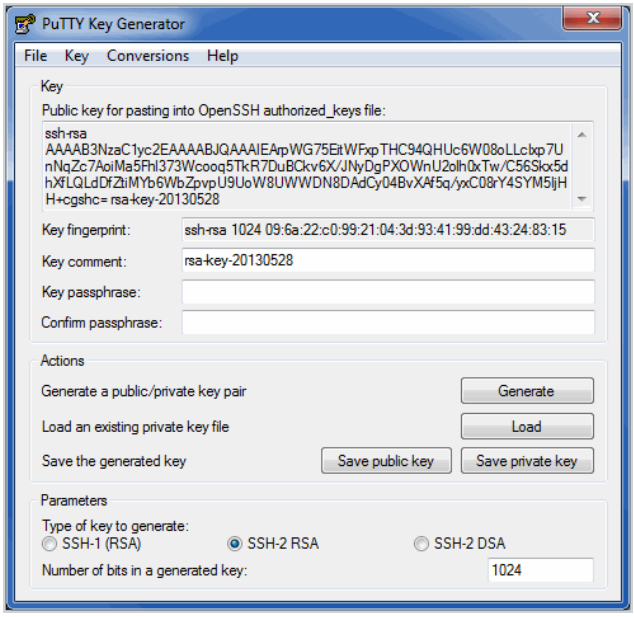
a Keep the default key type (SSH2-RSA) or select another, depending on your preference.

b Keep the default key size (1024 bits) or increase it, depending on your desired security margin.

Five9 has verified 1024 and 4096 bits.



3 Click **Generate**, and move your mouse over the blank area to add randomness to the key.



4 Do not specify a key passphrase.

5 Click **Save public key**, for example: `ssh2-xxxxxxx-public`

6 Click **Save private key**.

A warning window appears about the passphrase.

7 Click **Yes**.

8. Name your private key, for example: `ssh2-xxxxxxx-private.ppk`
9. Optionally, store a copy of the keys for your records.
10. In the menu bar at the top, select **Conversions > Export OpenSSH key**.

    Again, a warning window appears about the passphrase.
11. Click **Yes**.
12. Rename the file: `ssh2-xxxxxxxxx-private_as_openSSH.key`
13. Store the public key on the SFTP server.
    - If you use OpenSSH, place the key in `/user/.ssh/authorized_keys`
    - If you use another SFTP server, see that program's user guide for instructions.
14. Provide the private key to your VCC administrator.

Configuring Advanced Recording Uploads

Advanced Recording Upload (ARU) is an additional feature for real-time call recording uploads. It contains more advanced features like stitching call segments, rules-based upload with flexible criteria, and multiple FTP upload locations. The Advanced Recordings tab is visible only if this option is enabled for your domain. For more information, contact your representative. For more information, contact your Five9 representative.

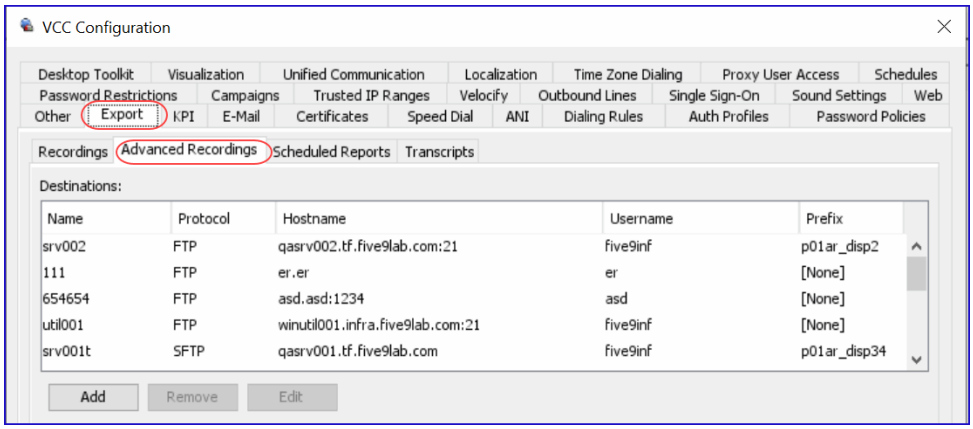
You may define rules to specify the parameters and options for uploading recordings, voicemail messages, and IVR inputs. You can define up to five upload destinations for each rule. When you configure your rules in Advanced Recording Upload, you can pause the uploads until you have completed the configuration. Completed rules are uploaded once you resume uploads.

If you are changing from standard to advanced recording upload, you may run both at the same time, but you should do so only to verify that recordings are uploaded as expected. To verify the upload status of the recordings, use the Recording Log report.

Adding Upload Destinations

To add upload destinations, follow these steps.

1 In the **Export** tab, select **Advanced Recordings**.



2 In the Destinations section at the top of the page, click **Add**.

3 Assign an intuitive name.

4 Select a transfer protocol: **FTP**, **SFTP**, **FTPS**, **Google Drive**, or **Amazon S3**.

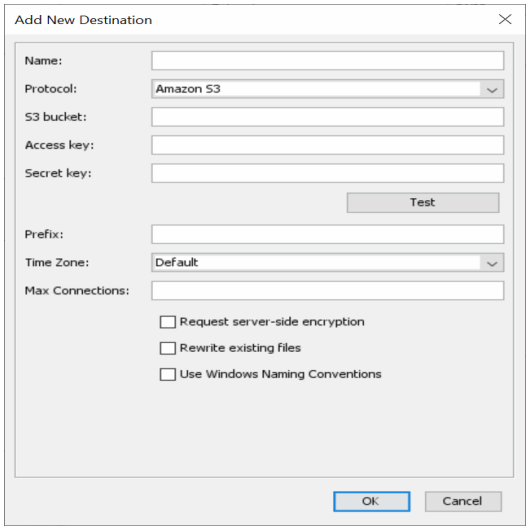
> **Important**
>
> To ensure that your recordings are reliably transferred, select the appropriate transfer method and destination for your business:
>
> - **Amazon S3**: If your contact center has 25 or more agents, select this protocol because bandwidth, ports, and performance monitoring are handled by the vendor.
> - **FTP methods**: To ensure that you have sufficient resources and monitoring to manage the recording upload, consult your FTP administrator.
> - **Google Drive**: This option if meant for small office and home office operations. Although Google offers account with various storage amounts, Five9 does not recommend this option for businesses that have more than a few agents.

5 Configure the protocol that you selected.

Configuring Amazon S3 Settings

> **Important:** While the Amazon Bucket Naming Rules permit the use of dots (.) in the Amazon S3 bucket name, this can be problematic when validating SSL certificates used for virtual host addresses during HTTPS connections to S3. Five9 recommends that you use other indicators, such as hyphens (-), to identify fourth-level domains. See AWS re:Post for more detail.

To configure Amazon S3 settings, follow these steps.



1. Identify your **S3 bucket**.

   > **Note:** If configuring an Amazon bucket with a non-default policy, export requires at least s3:PutObject and s3:ListBucket permissions.

2. Provide your **Access key**.
3. Provide your **Secret key**.
4. To verify the connection, click **Test**.

   If you do not receive a success message, verify your entries.

5. (Optional) Set **Prefix**.

Prefix is the folder to add before all files for this destination. For example: the path `directory/filename.txt` has a prefix that generates **<prefix>/directory/filename.txt**.

6 (Optional) Set **Time Zone**.

> **Important:** Selecting the default timezone option for the Advanced Recording destination uses the timezone specified in the Export > Recording configuration tab, not the default timezone configured for your domain.

7 (Optional) Set **Max Connections**.

Use this option to limit your maximum number of consecutive connections for uploading voice recordings to your destination server. if this value exceeds the maximum number of recording ports configured for your domain, the total number of recording export connections is limited by the maximum number of recording ports configured for your domain.

8 (Optional) Set **Request server-side encryption**.

Use this option to encrypt data that is stored at rest. To encrypt the data that you want to upload, add an additional request header. Decryption happens automatically when the data is retrieved.

9 (Optional) **Rewrite existing files**.

Use this option to overwrite existing file names rather than creating successive files, such as `abc_log (1)`, `abc_log(2)`, and so on.

10 (Optional) Select **Use Windows Naming Conventions**.

Enable this option to ensure that the name of the exported file complies with Microsoft Windows requirements. All forbidden characters, trailing dots, or reserved words are replaced with - (dash).

Example

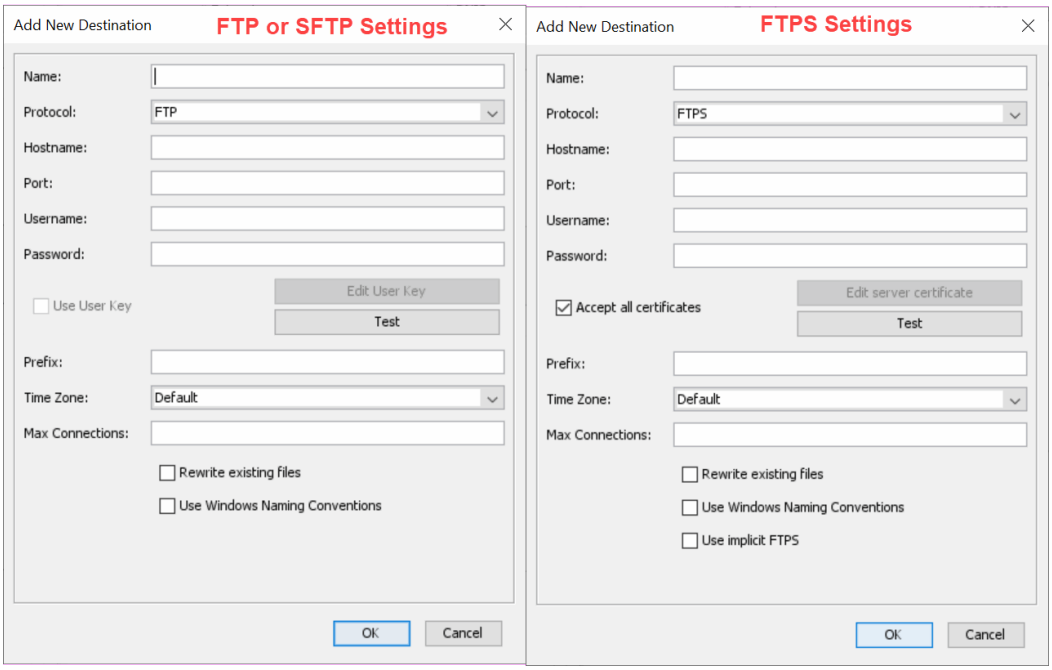
`C:/*/appt./lpt1/123.txt` is replaced by `C-/-/appt-/-lpt1-/123.txt`

11 Save your settings.

Proceed to Adding Upload Rules.

Configuring FTP,SFTP, and FTPS Settings

To configure the FTP/SFTP/FTPS server, enter the following settings.



Configure the Credentials. Configure the common access credentials, follow these steps.

Hostname	Name of the server, which must be either an IP address or a fully qualified domain name. The URL is identified automatically, based on the protocol that you select.
Port	Port number of the server.
Username	FTP or SFTP: Credentials for accessing the server. The password is masked.
Password	FTPS: User name of the server only. Do not enter a password because authentication with the security key supersedes the password of the server.

For FTPS certificates, **Accept all certificates** is the default setting. Deselect this option to edit your security certificate, and proceed to configuring optional settings.

Configure the SFTP User Key. To configure your SFTP user key, follow these steps.

1 Click **Edit User Key**.

2 Click **Load from file**.

3 Locate the private key file that you obtained from your SFTP server administrator, and click **Open**.

4 Click **OK**.

5 To verify the connection, click **Test**.

If you do not receive a success message, verify your entries.

6 Save your settings.

Configure the Optional Settings. To configure the optional settings, follow these steps.

1 Set **Prefix**.

Prefix is the folder to add before all files for this destination. For example: the path `directory/filename.txt` has a prefix that generates **<prefix>/directory/filename.txt**.

2 Set **Time Zone**.

> **Important:** Selecting the default timezone option for the Advanced Recording destination uses the timezone specified in the Export > Recording configuration tab, not the default timezone configured for your domain.

3 Set **Max Connections**.

Use this option to limit your maximum number of consecutive connections for uploading voice recordings to your destination server. Your maximum number consecutive connections is limited by the total number of recording export connections allotted for your domain.

4 Select **Rewrite existing file**.

Use this option to overwrite existing file names rather than creating successive files, such as `abc_log(1)`, `abc_log(2)`, and so on.

5 Select **Use Windows Naming Conventions**.

Enable this option to ensure that the name of the exported file complies with Microsoft Windows requirements. All forbidden characters, trailing dots, or reserved words are replaced with - (dash).

Example

`C:/*/appt./lpt1/123.txt` is replaced by `C-/-/appt-/-lpt1-/123.txt`

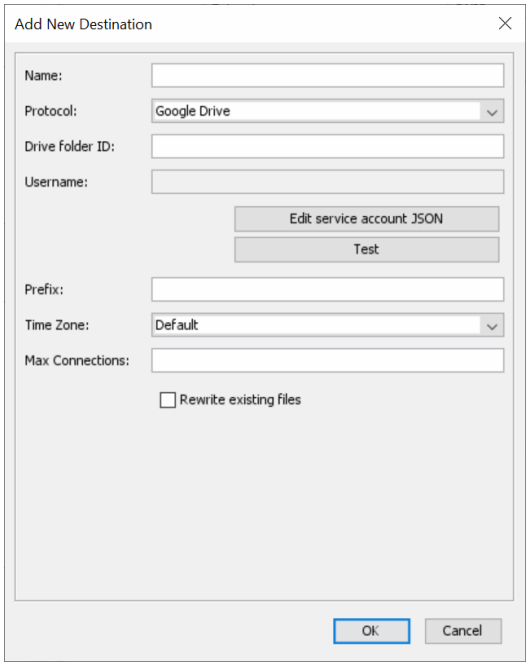
6 (Optional - FTPS only) **Use implicit FTPS**.

7 Save your settings.

Proceed to Adding Upload Rules.

Configuring Google Drive Settings

To configure Google Drive settings, follow these steps.



1 Identify your **Drive folder ID**.

2 Provide your **Username**.

3 To load your user key, click **Edit service account JSON**.

4 To verify the connection, click **Test**.

If you do not receive a success message, verify your entries.

5 (Optional) Set **Prefix**.

Prefix is the folder to add before all files for this destination. For example: the path `directory/filename.txt` has a prefix that generates **<prefix>/directory/filename.txt**.

6 (Optional) Set **Time Zone**.

> **Important:** Selecting the default timezone option for the Advanced Recording destination uses the timezone specified in the Export > Recording configuration tab, not the default timezone configured for your domain.

7 (Optional) Set **Max Connections**.

Use this option to limit your maximum number of consecutive connections for uploading voice recordings to your destination server. Your maximum number consecutive connections is limited by the total number of recording export connections allotted for your domain.

8 (Optional) Select **Rewrite existing files**.

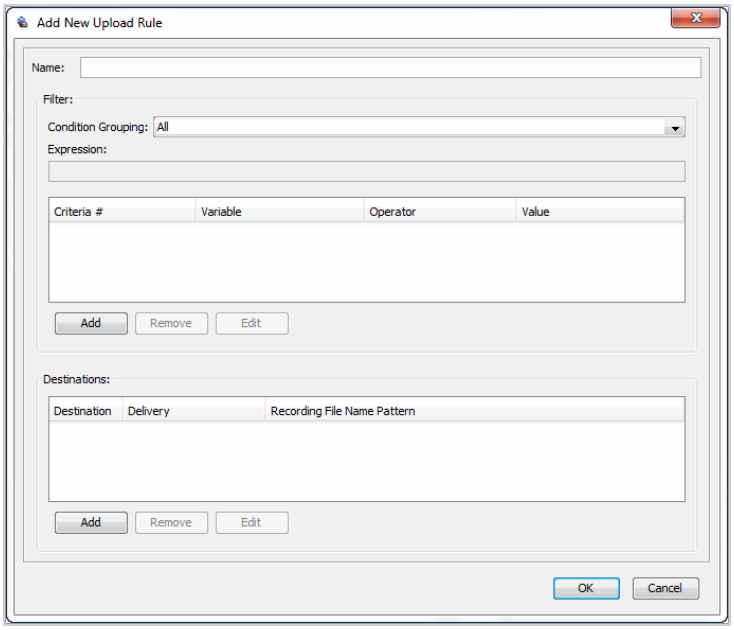
Use this option to overwrite existing file names rather than creating successive files, such as `abc_log(1), abc_log(2)`, and so on.

9 Save your settings.

Adding Upload Rules

Upload rules define the particular details of your recording uploads, such as your delivery option and file name pattern. Five9 recommends that you apply a maximum of five upload rules for each destination.

1 In the rules section, click **Add**.



2 Provide an intuitive name.

> **Note:** Refrain from using a Call-Attached Variable (CAV) that includes a colon (:) in the value, such as `timestamp`. You may use a recording variable such as `createddate` or `createdtime` instead, as these use an underscore (_).

3 Select a **Condition Grouping** from the list.
- **All**: When all rule conditions apply.
- **Any**: When any rule conditions apply.
- **Custom**: Provide a custom expression for your rule conditions.

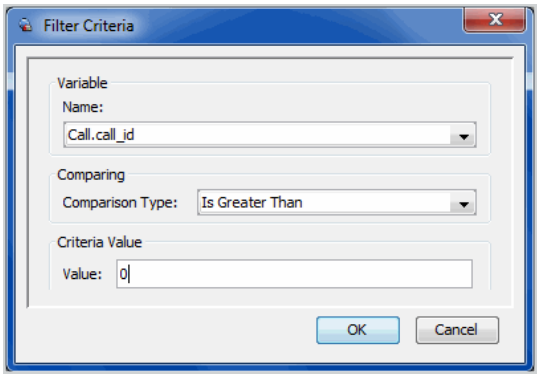
4 (Optional) Provide a custom **Expression** for your rule conditions.

Agent and recording variables are among those evaluated once a disposition is assigned to the interaction.

5 To add filter criteria, click **Add** in the filter section. Agent and recording variables are among those evaluated once a disposition is assigned to the interaction.

Important

You must specify criteria to enable upload. For example, if you want every call recording you can specify a criteria for `Call.call_id>0`, shown below.



a Select a variable name.

b Choose a comparison type.

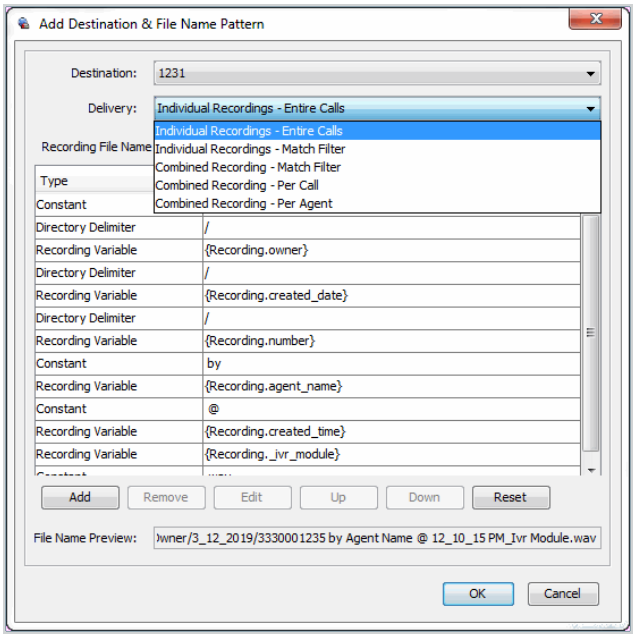
c Specify a criteria value.

d Click **OK**.

6 To add a destination and file name pattern, click **Add** in the destination section.

Important

The file name is limited to 250 characters. The complete remote path and file is limited to 10240 characters. You can use a variable, such as `recording.id`, to identify specific recording segments.



7 Select a destination.

8 Select a delivery option.

Call variables are evaluated once a disposition is set for the interaction. Calls may be transferred among agents. These variables are used in the delivery filter expressions.

Multiple lists begin with en dashes. No style completes this list, with it also left aligned with above paragraph.

- **Individual Recordings – Entire Call**: The entire interaction is recorded in individual segments.
- **Individual Recordings – Match Filter**: Portions of your interaction match your filters in individual segments.
- **Combined Recording – Match Filter**: Portions of your interaction match your filters in a single file.
- **Combined Recording – Per Call**: The entire call is exported in a single file.
- **Combined Recording – Per Agent**: When filter criteria match at least one recorded call segment, all recorded segments are exported and grouped by the **Recording.agent** variable. Although this behavior is identical to that of Combined Recording – Per Call, this behavior is used for calls that have been transferred between agents.

9 Choose a destination from the menu, or click **Add** to create a destination.

10 Click **Add**, **Remove**, **Up**, **Down**, or **Rest** to modify the path and file name of the call recording.

11 Click **OK** to save your destination settings.

12 Click **OK** to save your upload rule.

13 Click **Save** to save your work.

Running the Recording Log Report

A Recording Log report is available in the standard Call Log reports. This report lists the upload status of your advanced recording configurations and includes the following fields:

- **Recording ID:** Five9 unique identifier for each leg of the call recording.
- **Agent:** Username of the agent that handled the call.
- **File Path:** The configured file path pattern where the file is uploaded.
- **Filename:** The configured filename pattern.
- **File Size:** Size of the file in bytes.

> **Note**
> The file size field shows information only when the Status field shows UPLOADED. When the file status still shows NEW, the file size field is blank.

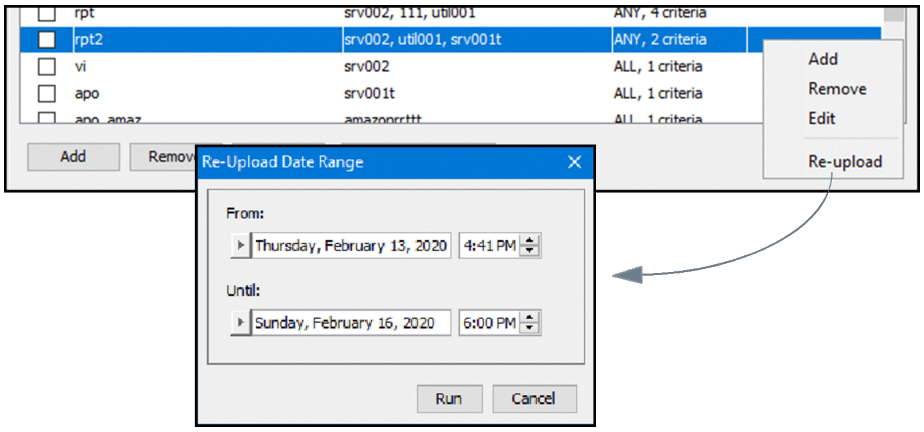
- **Length:** Call recording length.
- **Status:** Status of the upload.
- **Hostname:** (S)FTP User, Host, and Prefix.
- **Stitched:** Displays the configured delivery options.
- **Deleted:** Boolean. True = 1, False = 0.
- **Upload Attempts:** Number of attempts until successful upload.
- **Upload Timestamp:** Timestamp of the successful upload.
- **Error Message:** Error message for failed upload attempt.

Re-Uploading

You can upload a set of recordings for a specific date range as in these examples:

- To export recordings that were not previously selected for upload.
- To resend recordings with an updated file name pattern.

1 Right-click an upload rule.



2 Select **Re-upload**.

3 Select a start and end date.

4 Click **Run**.

The **Re-Upload Status** column for this rule displays one of these statuses:

- **Running:** The upload is in process.
- **Pending:** The upload was requested but has not started.
- **Interrupted (reason):** The upload has been interrupted for one of these reasons:
  - **Unknown**
  - **Canceled by a user**
  - **Run error**
- **Completed:** The upload is finished.

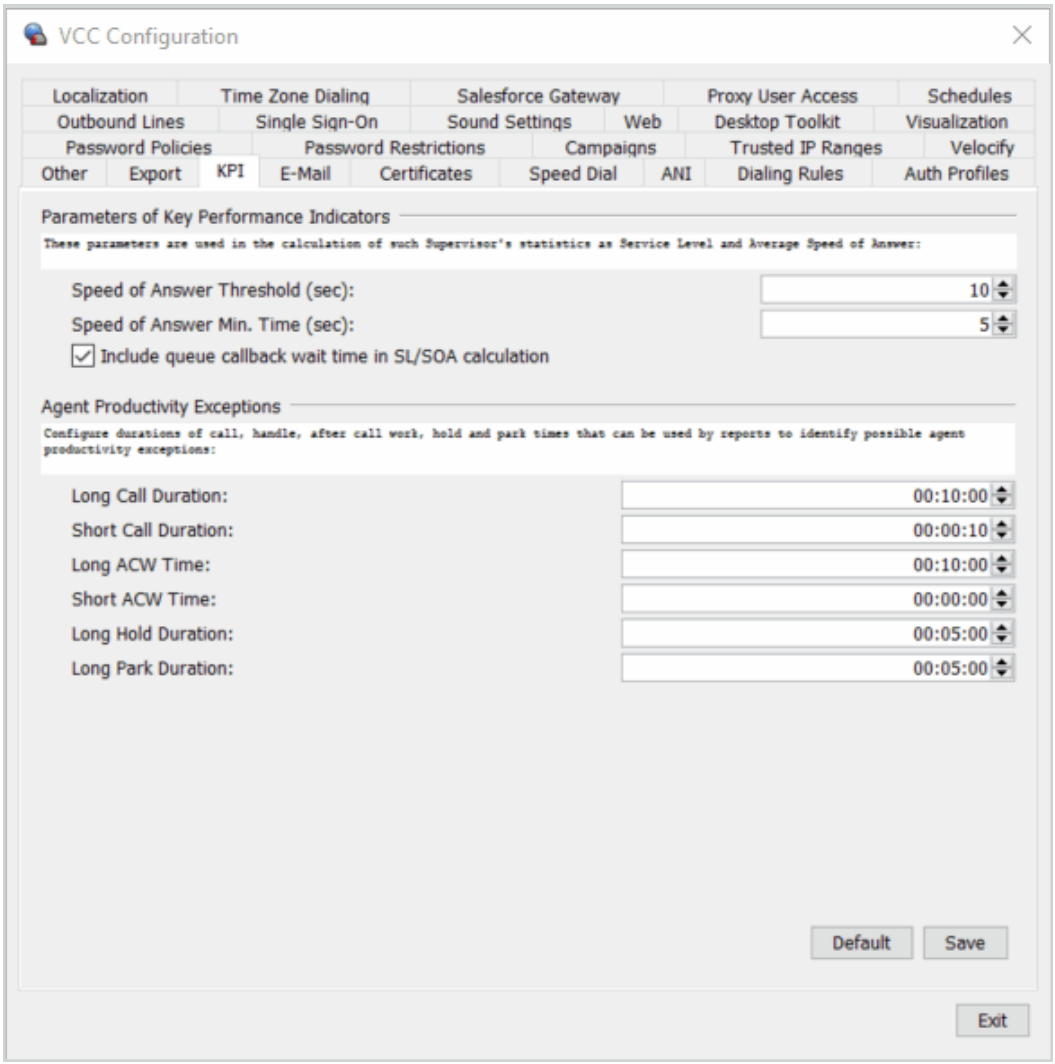
To cancel the upload process, right-click and select **Cancel**.

Setting KPI and Global Parameters

> **Note:** This section is optional.

To customize some of the service level statistics available in the Supervisor application and in reports, set limits in the **KPI** tab. To use default values, click **Default** at the bottom of the **KPI** window.

In reports, the service level is calculated for each call whether or not the service level was met. Service levels are expressed as percentages.



Defining Service Level

Setting the Speed of Answer Threshold (seconds). This threshold value determines the service level for a call. If you want calls to be answered within 30 seconds, set the threshold value to 30. The default value is 20 seconds.

For inbound calls, the speed of answer is the interval between the call entering an ACD queue and being connected to an agent. Service level is measured by comparing the speed of answer (SOA) value to the threshold value. Service level is boolean and set as follows:

- 1: SOA <= SOA threshold; the agent answered the call in time.
- 0: SOA > SOA threshold; the agent did not answer the call before the threshold.

Calls that are disconnected while in the queue for less than the threshold value are excluded.

Setting the Speed of Answer Minimum Time (seconds). Calls shorter than this setting, such as abandoned calls and wrong numbers, are excluded from statistics. This parameter is not used in outbound campaigns because these campaigns do not use the ACD. The default value is five seconds.

Including queue callback wait time in SL/SOA calculation. When enabled, waiting time for queue callback is included in the service level calculation that is shown in reports and Supervisor Plus applications. This option is disabled by default.

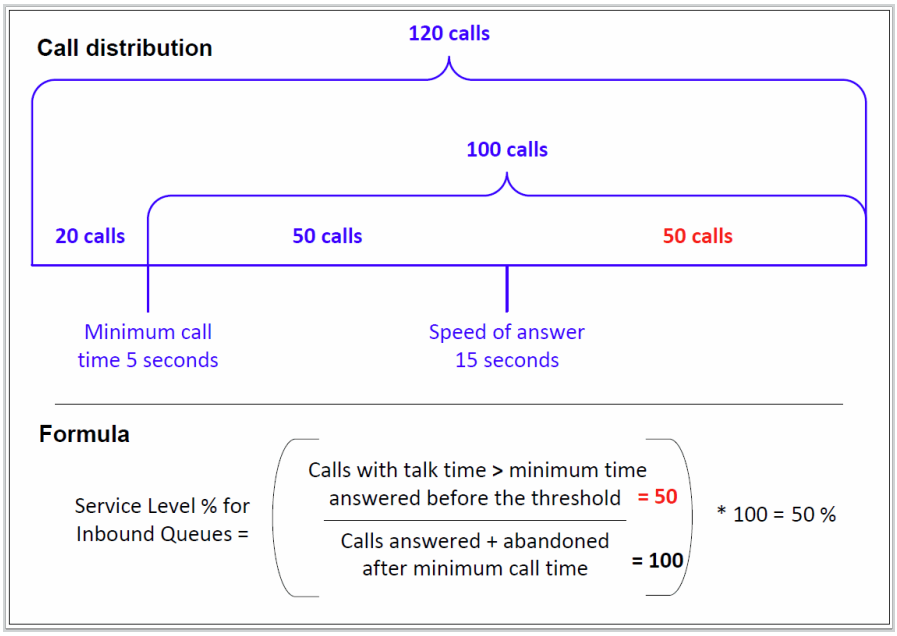
Examples

This topic describes how service level is calculated in different scenarios. For inbound examples, the speed of answer and the minimum call length are set. For outbound calls, the speed to answer is set. In all cases, statistics are calculated for one hour, for example: 1:00 – 1:59 PM. Abandoned calls are excluded from calculations. Statistics are specific to either inbound or outbound calls. Statistics for calls that are answered must have talk time.

> **Note:** The abandon rate 2-second rule calculation option allows you to use a queue time of 2 seconds or higher to identify outbound calls as abandoned. The **Outbound Campaign Abandon Rate % 2 Seconds Rule** standard report shows these values.

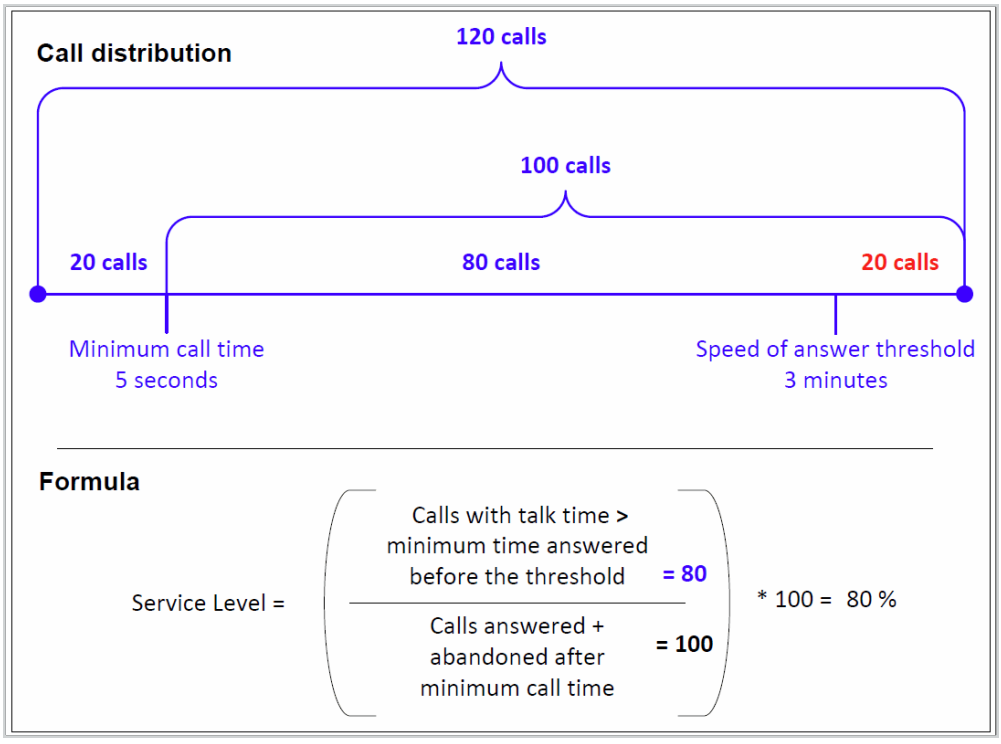
Inbound Queues. Speed of answer for the queue measures how fast the agent answers the call. This formula calculates the percentage of calls in a queue that met the service level because they were answered before the speed of answer threshold.

- 120 calls in the queue.
- 20 calls were abandoned before the five-second minimum duration.
- 120 - 20 = 100 calls in the queue for longer than five seconds count towards the service level agreement.
- 50 calls were answered in fewer than 15 seconds.



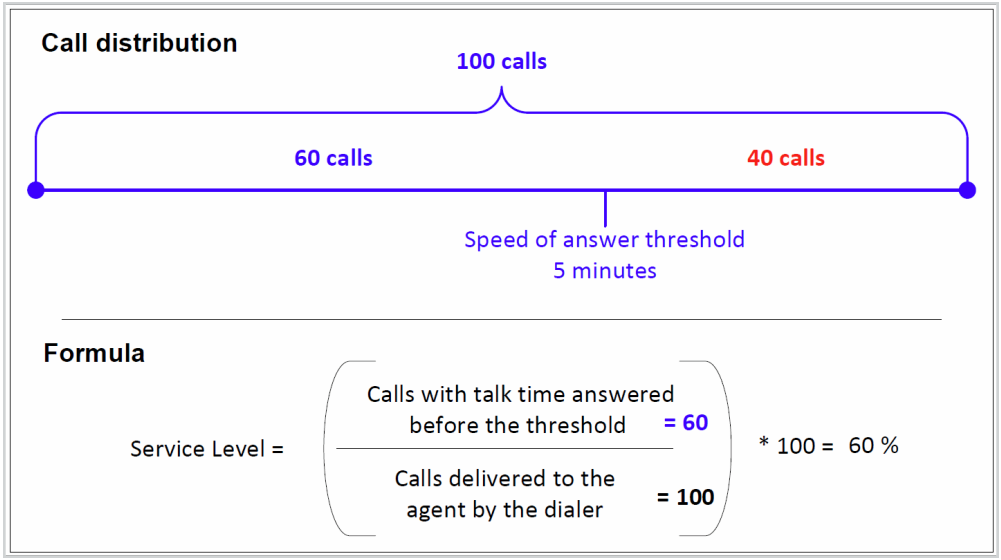
Inbound Talk Time. Speed of answer for talk time measures how fast the agent handles the call to resolve the customer's problem (was talk time shorter or greater than minimum time?). This formula calculates the percentage of calls that met the service level because they were answered within the specified speed of answer and lasted longer than the minimum set call duration.

- 120 calls in the queue.
- 20 calls were considered abandoned because their duration was shorter than the five-second set minimum.
- 120 - 20 = 100 calls in the queue count towards the service level agreement if they are answered before the speed of answer threshold.
- 80 calls were answered before the speed of answer threshold.



Outbound Talk Time. In this example, the speed of answer is set to five minutes (300 seconds).

- 100 dialed calls were delivered to agents.
- 60 calls with talk time were answered before the speed of answer threshold.
- 40 calls were answered after the speed of answer threshold.



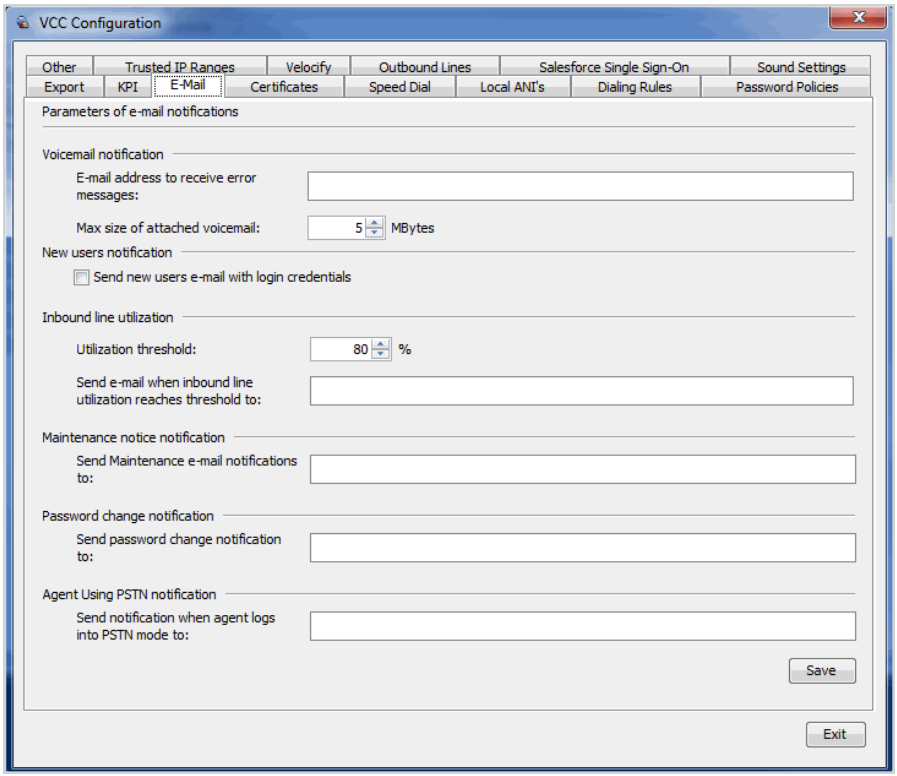
Agent Productivity Exceptions

These thresholds are used in reports because they can indicate a deviation from the expected agent performance. ACW represents the after-call work time spent in the wrap-up state.

- Long Call Duration
- Long ACW Time
- Long Hold Duration
- Short Call Duration
- Short ACW Time
- Long Park Duration

Defining Email Notifications

This section is optional. Navigate to **Actions > Configure > E-Mail** tab.



Field	Description
Voicemail Notification	Optional email notification when users receive a voicemail message. This address is also used for bounced email messages and as the *reply to* address. Configure voicemail notification in the properties of each user account. See also, **Managing Voicemail**. Max size of attached voicemail: The email can include the voicemail message as an attachment, which can be very large. If an attachment is larger that the specified size, the email is sent without the attachment.
New users notification	Email address of new users for login credentials.
Inbound line utilization	Line usage threshold in percentage. Notify email recipient when inbound line usage reaches threshold. Email is generated nightly; not a real-time notification.
Maintenance notice notification	Email address of the recipient.
Password change notification	Email address of the recipient.
Agent Using PSTN notification	Email address of the recipient.

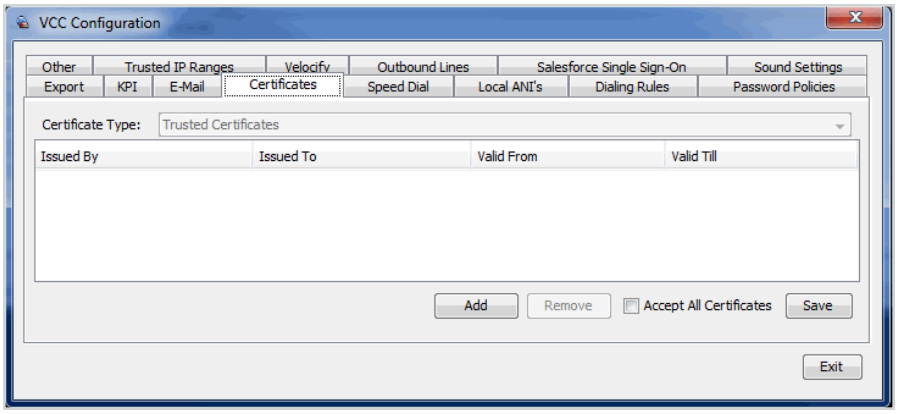
Managing Security Certificates

When configuring an IVR script to retrieve data from an external data source, you can use a secure connection. You may upload a security certificate for additional server authorization. Certificates can also be used for system disposition connectors.

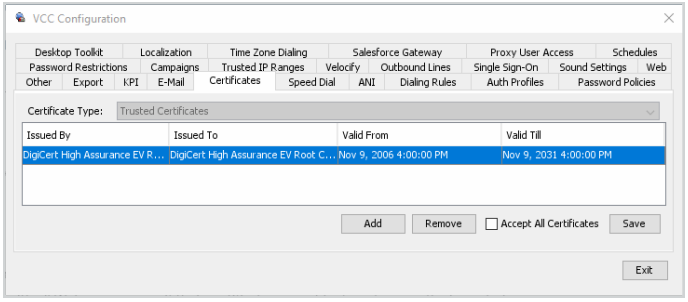
Installing a Certificate

You need to import certificates only for unsigned certificates. Certificates signed by an authority such as VeriSign or Thawte are automatically accepted by the VCC. If you try to import a signed certificate, you receive a corrupted file error. The default file extension is CRT.

Navigate to **Actions > Configure > Certificates**.



Click **Add** to display the list of certificates available. Scroll to the certificate you want to add, and click **Open** to add the certificate to the list.



Optionally, check **Accept All Certificates** to allow the system to trust the certificates from all servers.

- The system allows connection with all Web servers even if their certificates cannot be found among the imported ones.
- The system allows connection with only the Web servers with certificates already in the list or signed by a certificate authority.

Click **Save**, then **Exit** to save the certificates

Testing the Imported Certificates

Send test HTTPS requests to the server from a Web browser. If you are successful, your setup is completed. If you see a browser message about the certificate, most likely you need to import it.

Removing a Certificate

To remove a certificate, select it in the certificates list and click **Remove**.

You will be prompted to confirm the operation.

Generating an Unsigned Certificate

Use a utility such as `keytool` with this command to generate an unsigned certificate:

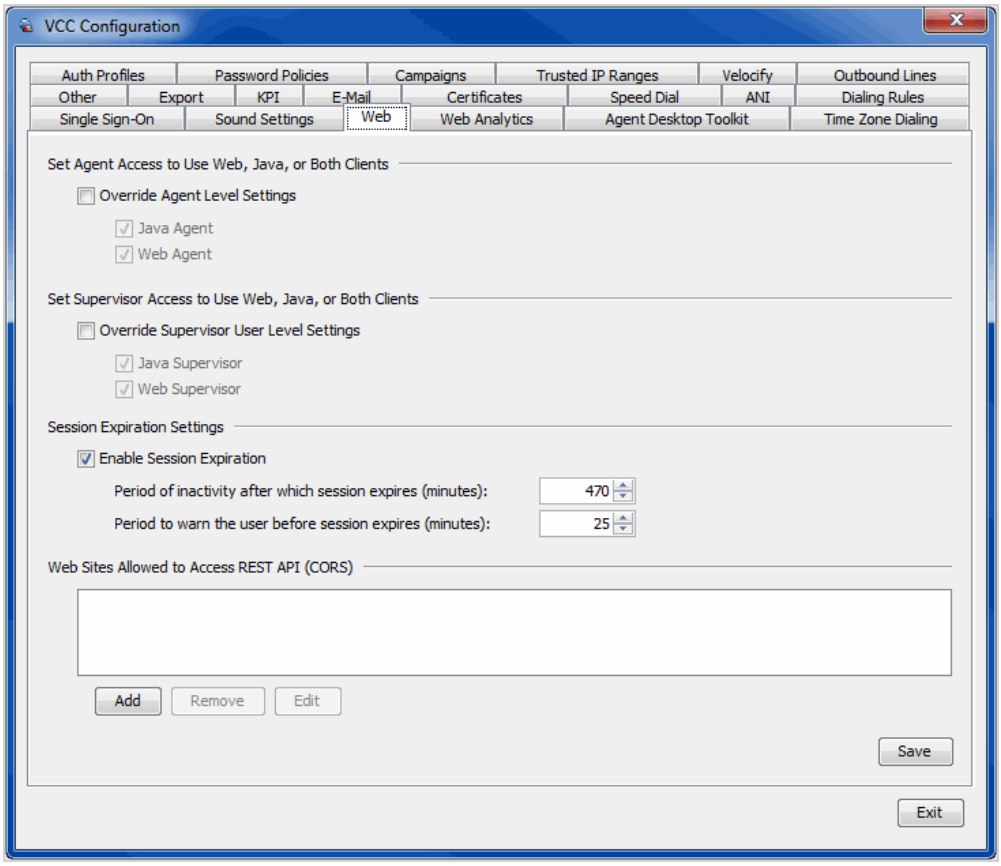
```
keytool -genkey -alias mykey -keyalg RSA -validity 3650 -keystore
mykeys.keystore
```

Defining Settings for Agent Desktop Plus

If your domain is licensed for Agent Desktop Plus, you can configure global settings for your web-enabled agents in the Web tab of the VCC Global Configuration Settings. Navigate to **Actions** > **Configure** > **Web**.

You can change and set the duration for the period of inactivity (specified in minutes) to your desired setting. You can also set the period (set in minutes) to warn the user before the session expires.

> **Note:** The default setting is 480 minutes for inactivity and 20 minutes for the warning notification.



Field	Description
Override Agent Level Settings	Overrides for all agents the permissions in the user's properties for the Java and Web agent interfaces. This setting forces agents to use the option(s) that you select here.
Override Supervisor User Level Settings	Overrides for all supervisors the permissions in the user's properties for the Java and Web supervisor interfaces. This setting forces supervisors to use the options that you select here.
Enable Session Expiration	Number of inactive minutes allowed before the session expires and before the session expiration warning. The session expiration timer continues regardless of the application's state, whether it is fully open and visible or hidden behind another tab. Session expiration will not occur if the agent is on an active call. To disable it, uncheck **Enable Session Expiration**. • Assuming the "Period to warn the user before session expires

Field	Description
	(minutes)" is set to five minutes. • Assuming the "Period of inactivity after which session expires (minutes)" is set to 20 minutes. After 15 minutes of inactivity, a warning appears, indicating that five minutes remain before the actual expiration, which occurs after 20 minutes of inactivity. Inactivity is defined as the absence of use or interaction with the mouse or keyboard on a control within the application, as opposed to general computer activities. The timer does not reset when you click anywhere on the user interface.

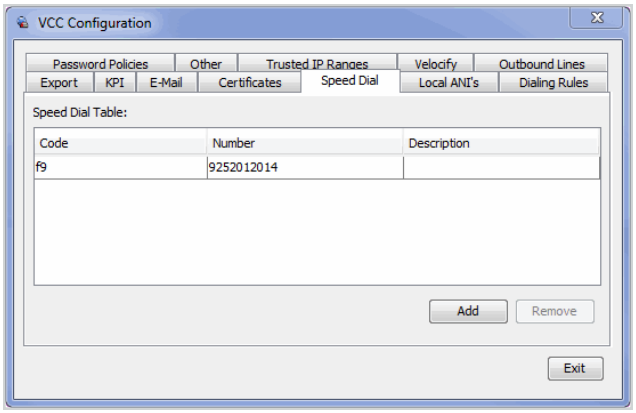
Managing Speed Dial Numbers

Speed Dial numbers provide fast access to the most frequently dialed outbound numbers in the **Make Call**, **Add Conference Participant**, and **Transfer Call** menus of the Agent application. You can define short codes for agents to enter instead of entering full-length phone numbers each time. Agents may see **(Emergency)** appended to numbers that are designated as emergency contact.

> **Note:** Speed dial numbers can be combinations of three character strings that can contain any combination of letters (A-Z) and digits (0-9).

Adding Speed Dial Numbers

1 Navigate to **Actions > Configure > Speed Dial**.



2 Click **Add** to define the speed-dial number

- **Code:** Shortcut code up to three digits or letters to provide quick access to the phone number.
- **Number:** Complete valid phone number. You can enter international numbers with up to 20 digits.
- **Description:**

  Short description of the speed-dial number.

3 Click **OK** to save your changes.

Delete Speed-Dial Numbers

1 Select one or more numbers you want to remove from the list.
2 Click **Remove**.
3 Click **Yes** to verify that you want to remove the selected numbers.

Configuring Dialing Rules

Dialing rules prevent the VCC from calling contacts in specified states or regions during a specified time range. You can apply the rule to the time zone of a phone number or

to a fixed time zone. The rules may be applied to manual calls. You can define time zone rules as follows:

- Area code + prefix of phone number to be dialed.
- Alphanumeric postal code.
- State

To apply dialing rules to campaigns, enable **Follow the restrictions on state dialing hours/dates** in the Time Zone Dialing tab of the campaign properties. For more information, see **Configuring Time Zone Dialing**.

Adding Dialing Rules
Deleting Dialing Rules

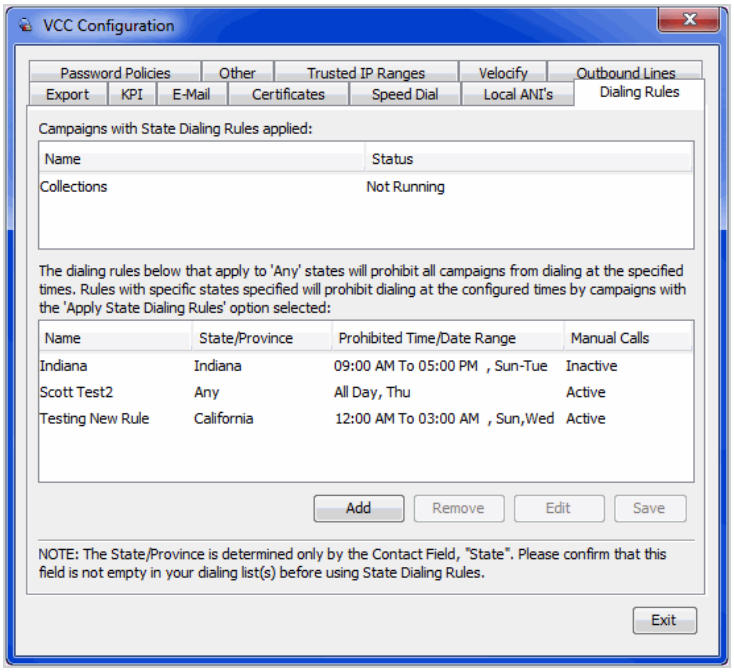
Adding Dialing Rules

Dialing rules are applied based on the contact's state. See **Configuring Time Zone Dialing** for information on setting the way that the state is determined

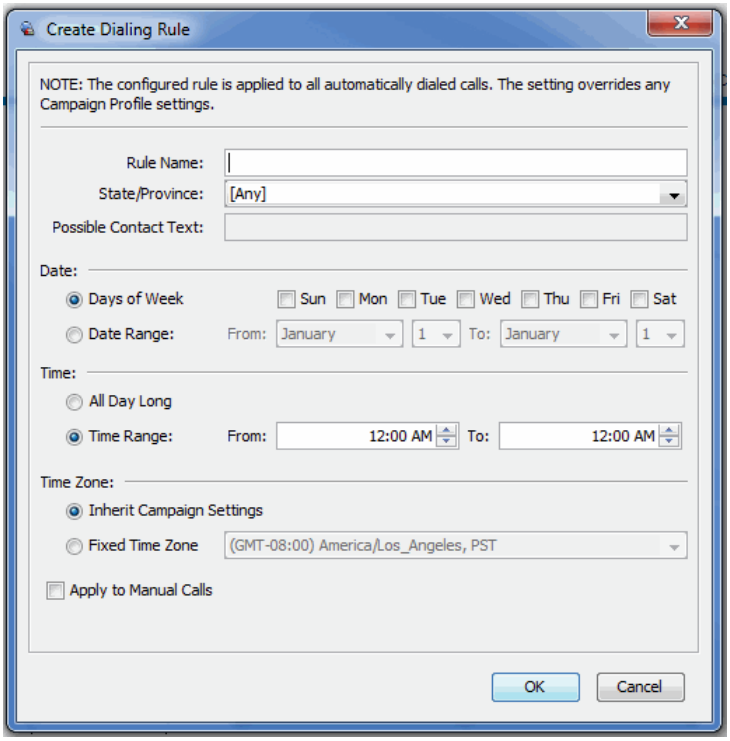
. You can add as many rules as you need.

1. Select **Actions > Configure**.
2. Select the **Dialing Rules** tab.

   The upper section contains the campaigns that follow these dialing rules. The lower section contains the rules.



3 Click **Add** to open the Create Dialing Rule window and define a new rule.



Field	Description
Rule Name	Name that appears in the dialing rules table.
State/Province	U.S. state, Washington, DC, Puerto Rico, or Canadian province. The Other option has no configured possible contact text (next item), which enables you to create a rule for arbitrary text values that may be entered in the state contact field.
Possible Contact Text	Comma-separated list of how this state might be indicated in the calling list. Additional text can be contained in the State contact field (for example, Alabama, AL indicates that this dialing rule applies to contact records using either Alabama or AL in this field).
Date	**Days of Week**: Apply the state dialing rules based on days of the week instead of a date range. Select this option to comply with telemarketing laws in each state, without any manual intervention with campaigns. **Date Range:** Applies to specific dates, during which campaigns should not dial to the specified state. For example, such a rule can exclude state holidays from your dialing activity. You can specify a date range which contains one or multiple days.
Time	**All Day Long**: Apply the dialing restriction to the entire day. Select this option if you do not need to dial customers on the specified days. For example, such a rule can be used to exclude holidays from dialing. **Time Range**: Apply the rule to the specified time range. For example, you may not want to dial after 8 PM every

Field	Description
	day or on Sundays before 10 AM. Campaign dialing time options can also be specified in Profile properties. See Editing the Properties of Campaign Profiles.
Time zone	Select inherit campaign settings or fixed time zone. Time zones with DST shifts are automatically adjusted.
Apply to Manual Calls	To apply the rule to manual calls in addition to automatically dialed calls, check **Apply to Manual Calls**. To enforce that queue callbacks follow your defined dialing rules, enable this feature.

4 Click **OK** to save your changes.

> **Note**
>
> In Five9 CRM integrations, dialing rules are not applied in the following scenario:
>
> - Two contact records have the same number: Record A specifies a state that has an associated dialing rule, while Record B does not specify any state.
> - A skill voicemail or missed call is arbitrarily associated with Record B.
> - An agent returns the call at a time prohibited by the dialing rule.
> - The call is permitted because it is associated with Record B.

Deleting Dialing Rules

To delete rules, select one or more numbers in the list, click **Remove** and **OK**.

Configuring Time Zone Dialing

The Time Zone Dialing tab contains options that set, for your entire domain, how a contact's time zone and state are determined for use in dialing rules. These settings can be overridden for specific campaigns. For more information, see the Campaign Administrator's Guide, *Configuring Time Zone Dialing Options*.



Time Zone Assignment

Use these options to set how time zone is determined:

- Use the Phone Number Area Code + Prefix.
- Use the ZIP/Postal Code of Contact. If that is not available, use Phone Number Area Code + Prefix. Applies only to U.S. and Canada.
- Use State of Contact Record. If that is not available, use Phone Number Area Code + Prefix.

> **Note:** Manual outbound calls do not use the state assigned to the contact record. They always follow the time zone assignment based on the phone number's area code and prefix.

When setting time zone assignment and state dialing rules, be sure to consider what location data is available. For example, the contact's state may not always be specified. Consider also what works best for your contact center's business.

State Dialing Rules

Use these options to set how the state is determined:

- Use the contact's state only.
- Use the contact's state. If that is not available, use the contact's phone number, area code, and prefix to search for the state.
- Use the contact's state. If that is not available, use the ZIP or postal code of the contact record to search for the state. ZIP, postal code, or state apply only to the U.S. and Canada.

Configuring Schedules

The Schedules tab enables you to create schedules to be shareable and reusable among your campaigns and IVR scripts rather than creating these uniquely for each use.

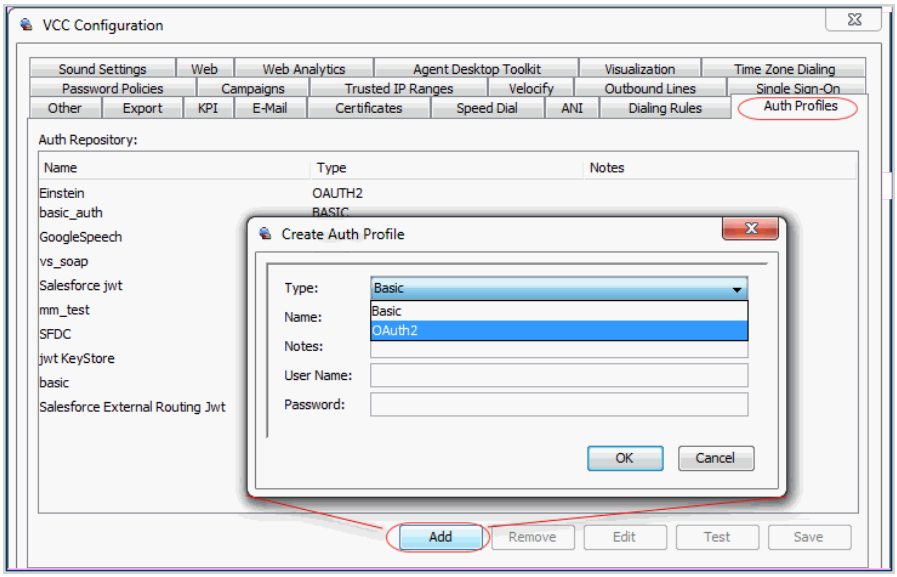
Creating Schedules

To create a new schedule, follow these steps.

1. Navigate to VCC Configuration > Schedules.
2. Click **Add**.
3. Provide a unique name for this schedule.
4. Provide a schedule description.
5. To add schedule events, click **Add**.
6. For each schedule event, populate the day and time information.
7. To save that event, click **OK**.
8. Associate an IVR script to which this schedule applies.
9. To save this schedule, click **OK**.

Managing Authorization Profiles

You can use the **Auth Profiles** tab to manage your authorization profiles in a single repository.

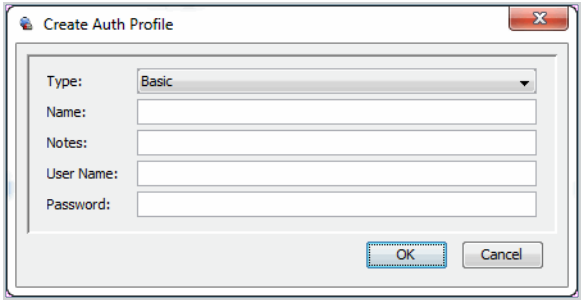


Creating Authorization Profiles

The following authorization profile types and testing are available.

Basic Authorization Profile

Basic authorization profiles require the minimal level of access grant credentials. A unique profile name, user name, and password are required. Descriptive notes are optional.



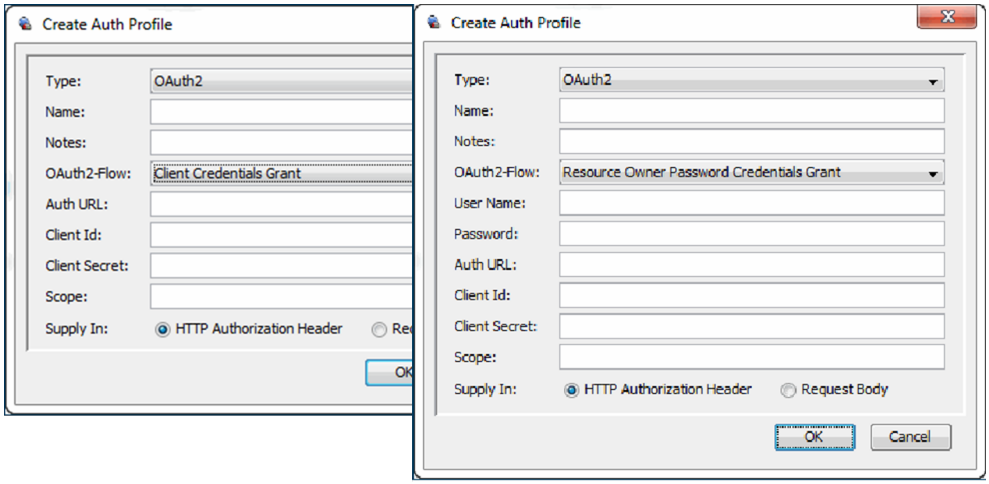
To add a profile using basic authorization credentials, follow these steps:

1. Click **Add**.
2. Select **Basic** from the **Type** selection list.
3. Provide a unique **Name** for this profile.

4 Add any **Notes** to describe this profile.
5 Enter the profile **User Name**.
6 Enter the profile **Password**.
7 Click **OK**.

OAuth2 Client or Resource Owner Password Credentials Grants

OAuth2 client credentials grant enables an application to make protected resource requests on behalf of the resource owner with authorization.

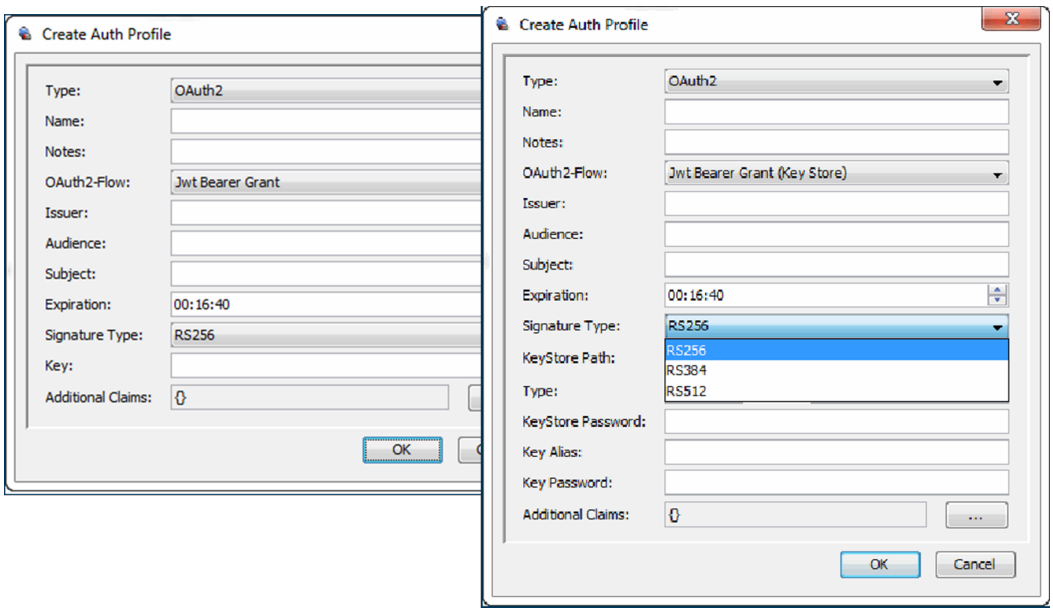


To add a profile using OAuth2 client credentials grant, follow these steps:

1 Click **Add**.
2 Select **OAuth2** from the **Type** selection list.
3 Provide a unique **Name**, and add **Notes** to describe this profile.
4 From the **OAuth2-Flow** list, choose **Client Credentials Grant** or **Resource Owner Password Credentials Grant**.
5 Enter the **User Name** for the Resource Owner Password credentials grant.
6 Enter the **Password** for the Resource Owner Password credentials grant.
7 Enter the **Auth URL** address.
8 Enter the **Client ID**.
9 Enter the **Client Secret**.
10 Enter the **Scope**.
Enter multiple scopes as a space-delimited list.
11 Select **HTTP Authorization Header** or **Request Body** to **Supply** your credentials.
12 Click **OK**.

OAuth2 JWT Bearer Grant and Key Store

OAuth2 JWT bearer grant enables applications with the appropriate scope to access resources and perform actions in Jira and Confluence on behalf of users.



To add a profile, follow these steps:

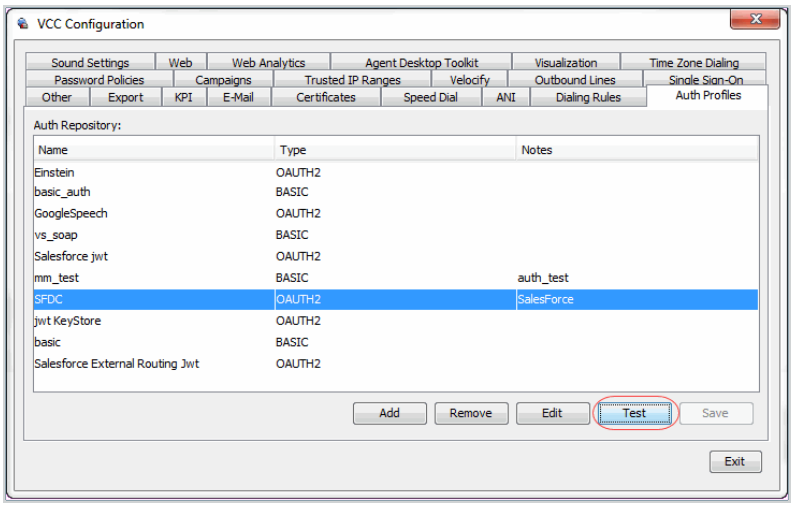
1. Click **Add**.
2. Select **OAuth2** from the **Type** selection list.
3. Provide a unique **Name** for this profile.
4. Add any **Notes** to describe this profile.
5. Choose **Jwt Bearer Grant** or **JWT Bearer Grant (Key Store)** from the **OAuth2-Flow** selection list.
6. Enter the **Issuer** for this profile.
7. Enter the **Audience** for this profile.
8. Enter the **Subject** for this profile.
9. Enter the **Expiration** for this profile in HH:MM:SS format.
10. Using the **Signature Type** selection list choose RS256, RS384, or RS512.
11. Enter the profile **Key** specific to JWT Bearer Grant with no key store.
12. Enter the **KeyStore Path**.
13. Enter the **KeyStore Type**.
14. Enter the **KeyStore Password**.
15. Enter the **Key Alias**.
16. Enter the **Key Password**, and click **OK**.

Testing Authorization Profile Credentials

Important

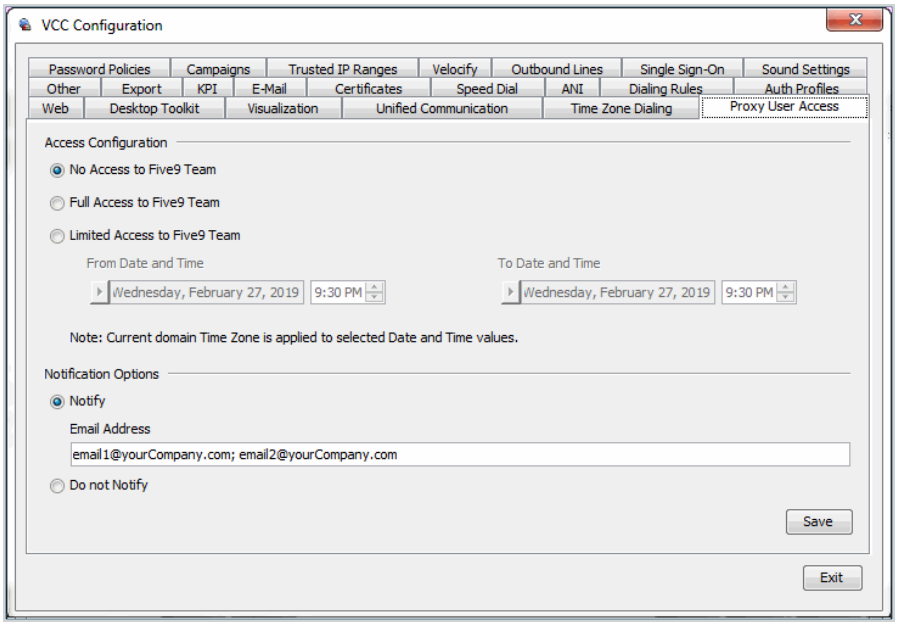
Five9 does not currently support JWT Bearer Tokens. However, you can use this authorization profile.

To test your credentials, click **Test**.



Configuring Proxy User Access

Proxy access enables Five9 personnel to access your domain without entering your personal credentials. This feature is useful for troubleshooting. Proxy user access is disabled by default.



1 Select **Actions > Configure**.

2 Select the **Proxy User Access** tab.

3 Choose an access configuration:

- **No Access to Five9 Team**: (Default) Access is denied.
- **Full Access to Five9 Team**: Access is granted for any user with a profile in your domain.
- **Limited Access to Five9 Team**: Access is granted for a defined time period for users who have a profile in your domain.

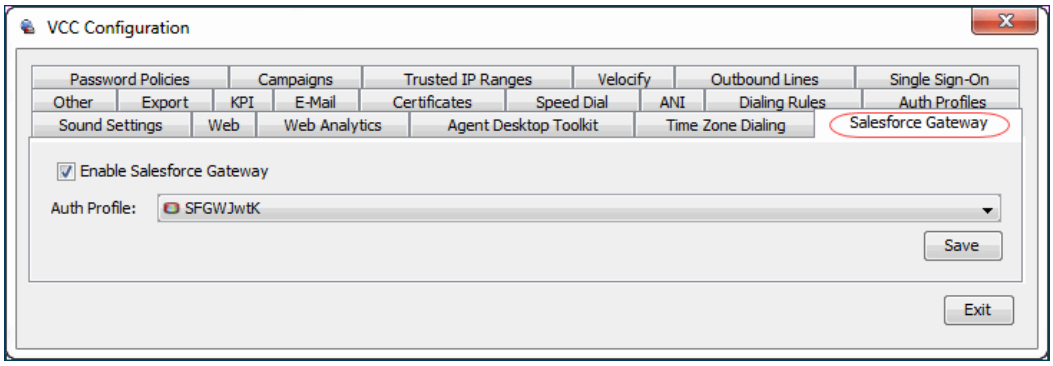
4 Configure your notification options to receive email notification for proxy user login/logout events.

- **Notify**: Enter semicolon-delimited email addresses for email notification of proxy user login/logout events.
- **Do Not Notify**: You are not notified for proxy user login/logout events.

5 **Save** your settings.

Enabling Salesforce

If your domain is enabled for Five9 Engagement Workflow, this menu enables you to manage external routing of Salesforce chat and case objects with the configured Salesforce authorization profile (see Managing Authorization Profiles).



Defining the Maximum Number of Outbound Lines

When all outbound lines are in use by campaigns, agents may encounter problems when attempting to make transfers, callbacks, manual calls, or outbound calls. To avoid this problem, reduce the maximum number of lines used for automated campaign calls to save outbound lines (100% minus the configured setting) for other activities.

This setting reduces the number of lines which may be used by outbound campaigns in predictive, power, or progressive dialing modes, and by autodial campaigns. Preview dialing campaigns, third-party transfers, and manual calls associated with campaigns share the defined outbound line utilization percentage.

The number of reserved lines is rounded to the nearest whole number, and the effective maximum number of maximum lines for automated dialing is shown to the right of the percentage setting. If the total number of provisioned outbound lines for the account changes in the future, the maximum number of lines for automated dialing is automatically reduced or increased.

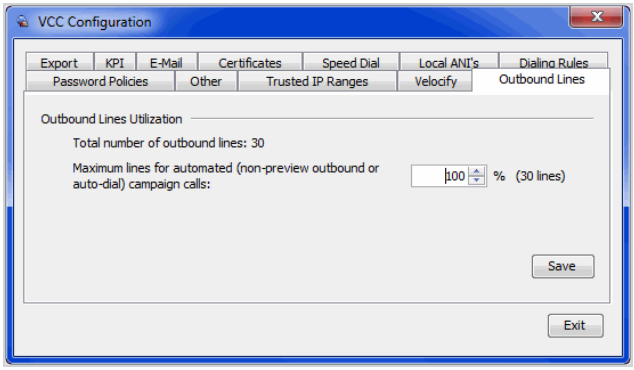
New accounts are created with a setting of 95%. The minimum possible percentage is 25%. If an account has fewer than 4 outbound lines, or if outbound campaigns are disabled, the option is disabled.

If the maximum number of outbound lines for automated campaign calls is changed to a number that is lower than the maximum in an autodial campaign, the VCC Configuration setting takes precedence: the lower number is used. A warning appears the next time you access the campaign properties to change settings.

1 Select **Actions > Configure**.

2 Select the **Outbound Lines** tab.

You can see the total number of outbound lines provisioned for the account.



3 Define the maximum percentage of lines for automated campaign calls.

4 Click **Save** and **Exit**.

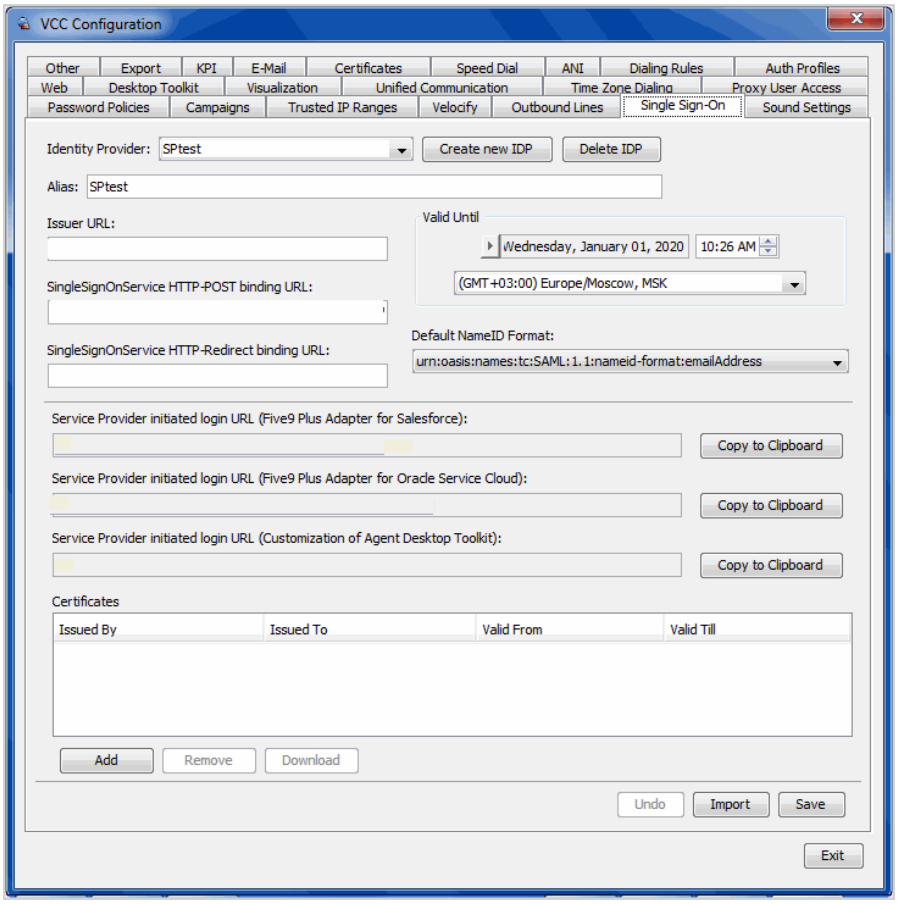
Defining Single Sign-On Identity Providers

For detailed SSO configuration and administration details, see the Single Sign-On Administrator's Guide.

For single sign-on, you may configure and use simultaneously multiple identity providers in each domain. To enable users to be recognized by all the identity providers that you configure, you must assign to each user a unique Federation ID in the user's properties.

> **Note**
>
> Configuration changes may take up to 10 minutes to take effect.

In this section, you define the parameters of your single sign-on providers and certificates.

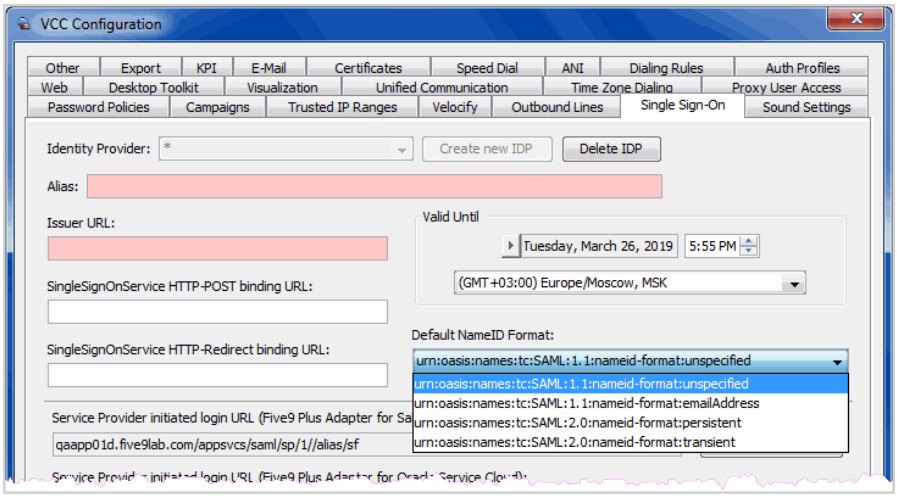


Defining Identity Providers

You create, edit, or delete defined identity providers in the upper section of the Single Sign-On tab.

Defining a New Identity Provider

To create a new identity provider, follow these steps:



1 Navigate to **Actions > Configure > Single Sign-On**.

2 Click **Create new IDP**.

3 Populate the resulting fields.

Field	Description
Alias	Provide an intuitive name.
Issuer URL	Provide the URL to the IdP that will issue the security token.
SingleSignOnService HTTP-POST Binding URL	Provide SAML POST binding URL.
SingleSignOnService HTTP-POST Redirect URL	Provide SAML POST redirect URL.
Valid Until	Provide termination date/time/time zone for expiration of this set of metadata. This date defined may be up to the certificate validity date.
Default Name ID Format	Select the format for your default Name ID.

4 Click **Save**.

Deleting a Defined Identity Provider

To delete defined identity providers, click **Delete IdP**.

Defining Service Provider Initiated Login URLs

Using a service provider Initiated login URL enables your users to utilize SSO credentials managed by a third-party IdP. The service provider (SP) sends an authentication request to the IdP. Both the request and the returned SAML assertion are sent through the agent's browser via HTTP POST. In this section, you can populate login URLs distinctly for: Five9 Plus Adapter for Salesforce, Five9 Plus Adapter for Oracle Service Cloud, and customization of Agent Desktop Toolkit (ADT).

Defining Certificates

You need to import certificates only for unsigned certificates and SAML authentication. Certificates signed by an authority such as VeriSign or Thawte are automatically accepted by the VCC. Any certificates used for SAML authentication, regardless of the certificate source public key provided by the IDP, must be imported into VCC. If you try to import a signed certificate, you receive a corrupted file error. The default file extension is CRT.

You may have unique certificates for each application or you may refer to a single certificate metadata to create unique IDP entries for each application. You may define multiple certificates for an IDP with different expiration dates to prevent SSO service interruption due to certificate expiration.

To add or import a security certificate, follow these steps:

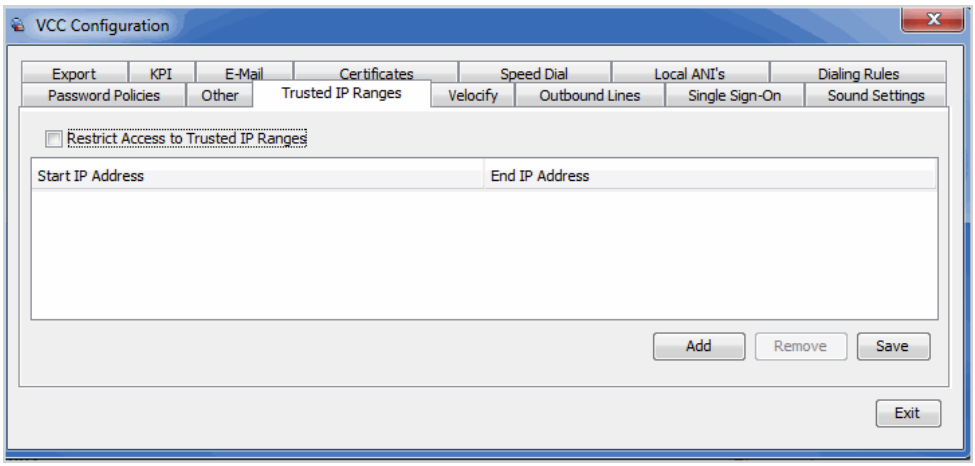
1. Click **Add** to display the list of certificates available.
2. Scroll to the certificate you want to add, and click **Open** to add the certificate to the list.
3. Click **Save**.

Configuring the Trusted IP Ranges

You can configure the IP ranges that allow access to VCC applications. Users must access the VCC applications from a computer with an IP address in one of the configured ranges.

1 Select **Actions > Configure**.

2 Select the **Trusted IP Ranges** tab.



3 Click **Add** to add a new line in the list where you may specify an IP range (with Start and End IP Addresses).

For each line, follow these steps:

a Double-click the start IP address line, and enter your value.

b Double-click the end IP address line, and enter your value.

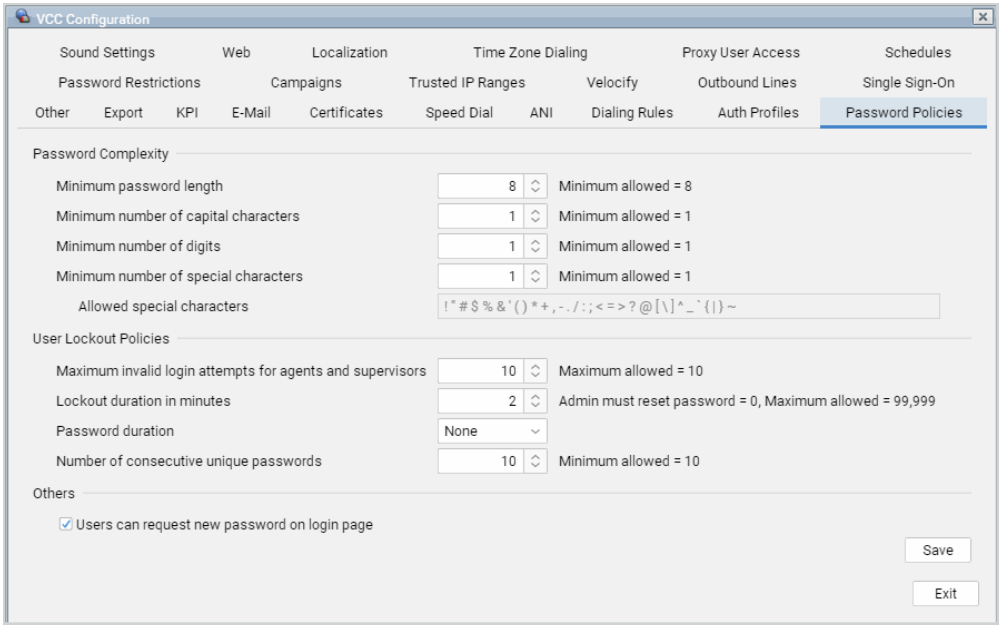
4 Repeat step 3 as needed to add other ranges.

5 Enable **Restrict Access to Trusted IP Ranges**.

6 **Save** changes and **Exit**.

Setting Password Policies

In this section, you set the password policies for your domain and enable the permissions that apply to passwords. Select the **Actions > Configure > Password Policies** tab.



Password Complexity

You can set these password complexity requirements.

Minimum password length	Shortest possible password. The default minimum allowed is 8. For stronger passwords, increase this number. You can set any length from 8 to 100.
Minimum number of capital characters	Minimum number of uppercase letters. The default minimum allowed is 1. For stronger passwords, increase this number. You can set any value from 1 to 25.

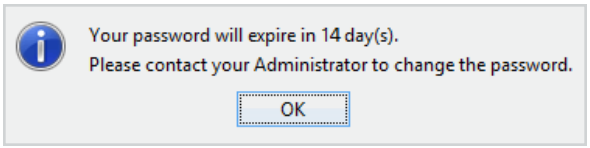
Minimum number of digits	Minimum number of numerical characters. The default minimum allowed is 1. For stronger passwords, increase this number. You can set any value from 1 to 25.
Minimum number of special characters	Special characters, such as punctuation marks, $, %, and so on. The default minimum allowed is 1. You can set any value from 1 to 25. See the complete list below.
Allowed special characters	Not editable. Set of special characters allowed for in password: `! " # $ % & ' ( ) * + ,- . / : ; < = > ? @ [ \ ] ^ _ ` { | } ~`

User Lockout Policies

When your domain is created by Five9, two options are added to your configuration:

- Start date and time of the security reminders for all users
- Number of days to show reminders

Maximum invalid login attempts for agents and supervisors	Largest number of unsuccessful login attempts before an agent or supervisor user account is locked. The default value is 5; the maximum is 10. This setting applies to individual applications and the customer portal. However, the lockout process is displayed differently in each. After an account is locked, further login attempts are ignored. See **Unlocking Users**.
Lockout duration in minutes	Number of minutes that a user lockout is enforced. This value is displayed on the user property sheet for locked out users and updates when you change tabs or open the page. A value of zero (0) minutes requires an administrator to reset user passwords. The maximum value is 99,999 minutes.
Password duration	Expiration period in months. The default value is 1 month; the maximum is 12 months. Password expiration notifications are sent to Java users starting at 20% remaining time, such as 18 days remaining for a 3-month expiration policy. Web application users are notified beginning at less than 8 days remaining. Different messages display for less than 8 days, 1 day, and zero (0) days remaining. After the expiration date, users must contact their administrator to change their password.

	
Number of consecutive unique passwords	Set this value to prevent the reuse previous passwords. The default value is 10, the maximum value is 25. For stronger security, increase the value.

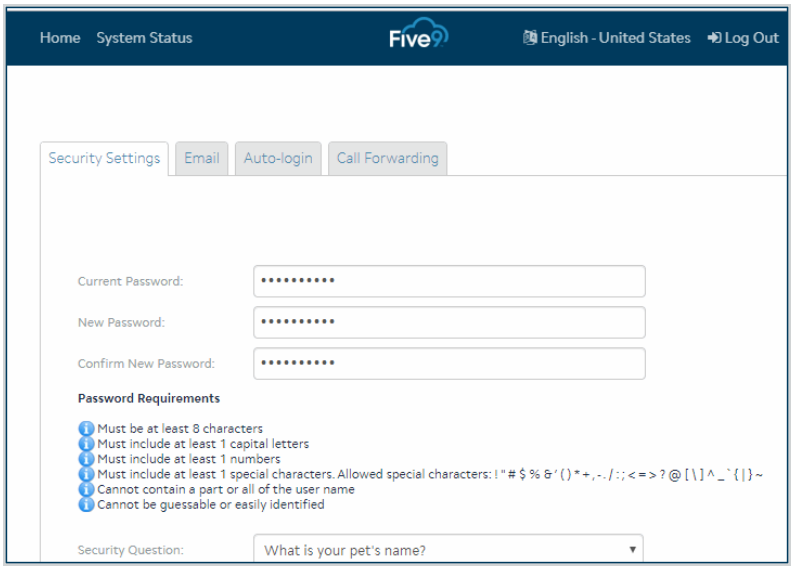
Password Reset Permissions

Users can request new password on login page	Enables users to reset their password from the login page and to see the security questions. This is selected by default. If you disable this option, users must contact an administrator to reset their password.

Note: Be sure to manage the accounts of API users and other users who are not allowed to change their password. The Administrator application presents the list when you log in.

Password Requirements

Your password requirements are displayed in the **Change Password** window of My Settings and in the user applications. The **Update** button is enabled when the password requirements are met.

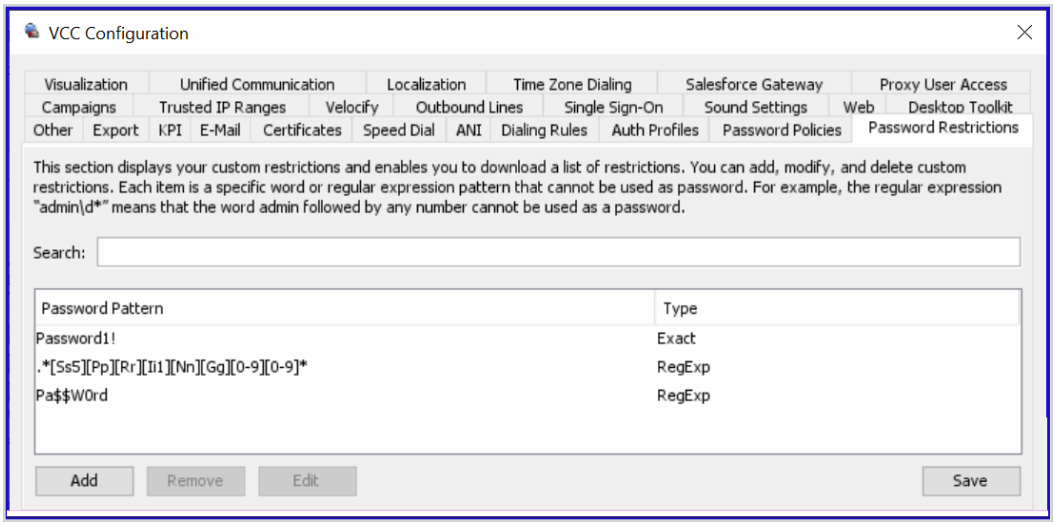


Configuring Password Restrictions

Restricting common or easily-guessed passwords form use enhances your security.

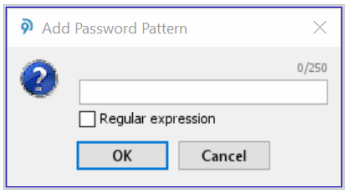
Five9 populates a list of mandatory password exclusions. You can also define custom password exclusions for your domain. You can use regular expressions or define password patterns. Restricted strings are not case sensitive. For example, `MyCompany`, `mycompany`, and `myCompany` are all forbidden by a single restriction.

Manage password restrictions in the Password Restrictions tab:



To add password restrictions for your domain, follow these steps:

1. In the Password Restrictions tab, click **Add**.

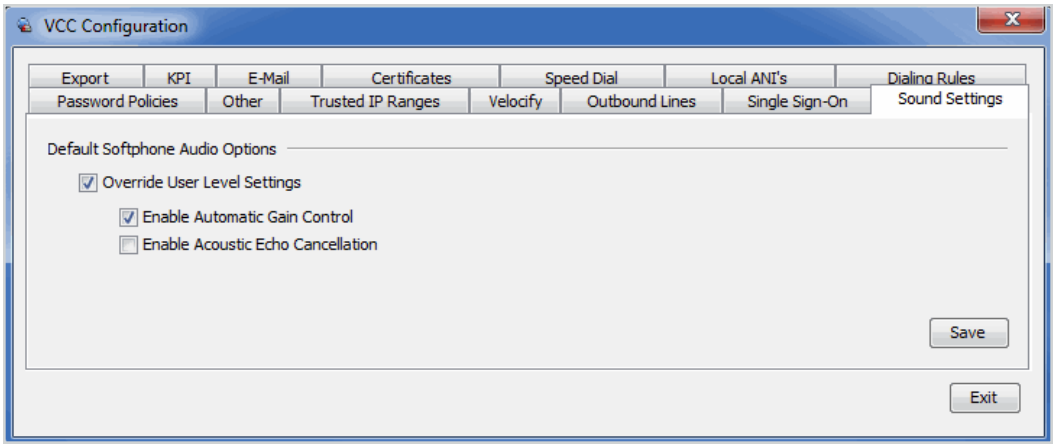


2. Enter the password or regular expression to restrict.
3. Click **OK**.
4. Click **Save**.

Defining Audio Settings for Softphone

If you are using Five9 Softphone with your integration, you can define settings at the domain level to override settings an individual user might have set to manipulate sound quality. Individual users can adjust the amplification of the microphone to improve voice quality or attempt to prevent echoing in the call.

To open the Sound Settings tab, navigate to **Actions** > **Configure** > **Sound Settings**.

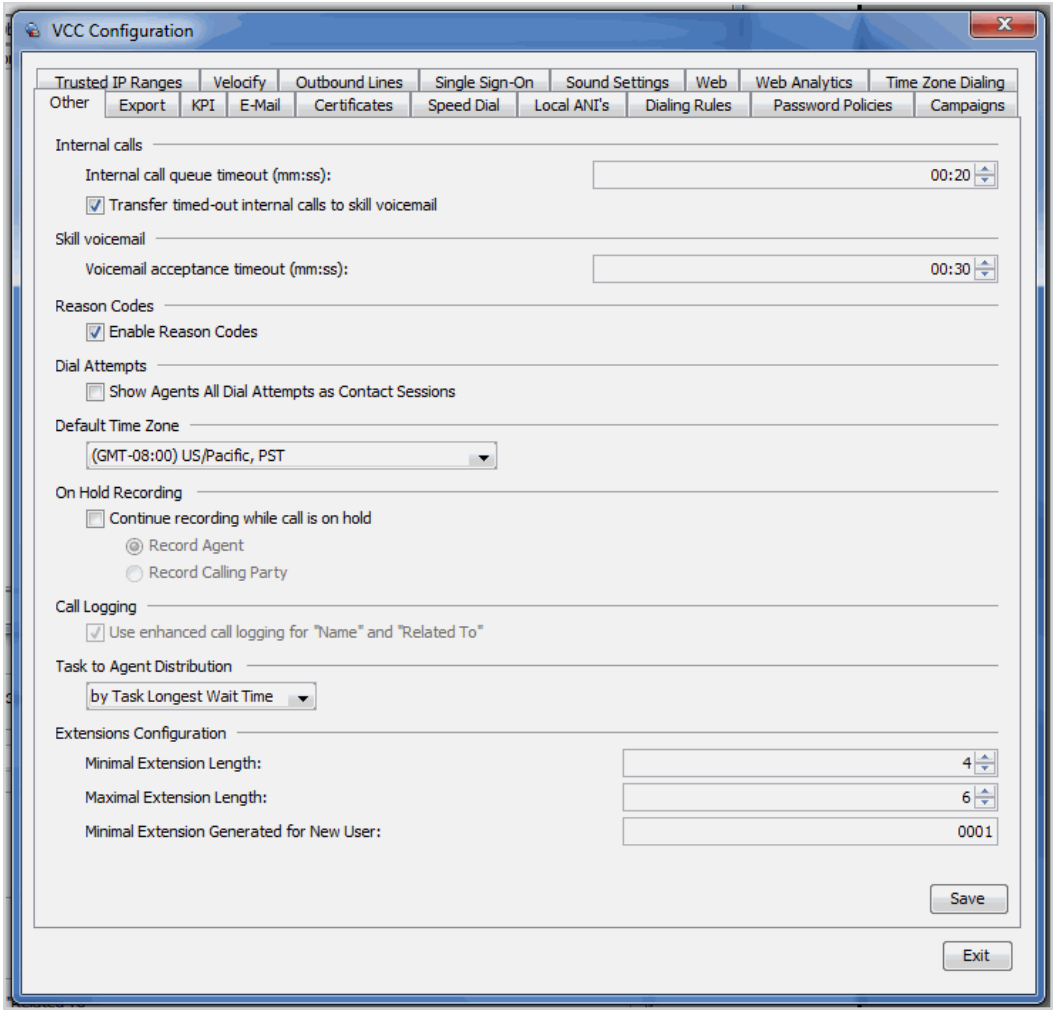


Field	Description
Override User Level Settings	To override any settings an individual user might have set when they adjusted Five9 Softphone settings from their station.
Enable Automatic Gain Control	Adjusts the amplification of the microphone so that the sound is more consistent throughout a call.
Enable Acoustic Echo Cancellation	Improves voice quality by preventing or removing echoes in a call.

Defining Additional Default Domain Call Settings

You can define additional call settings in the tab named **Other** in the VCC Configuration window. The options configured in the **Other** tab apply to all agents in the domain. Some of the options, such as reason codes, are described in that section.

[Defining Internal Calls and Skill Voicemail Settings](#)
[Defining Time-Out Settings for Cold Transfers](#)
[Showing Dial Attempts as Contact Sessions](#)
[Setting Domain Locale and Translations](#)
[Defining the Default Time Zone for Your Domain](#)
[Setting Call Recording Options for On-Hold Calls](#)
[Enabling Enhanced Call Logging](#)
[Setting the Distribution of Interactions](#)



Defining Internal Calls and Skill Voicemail Settings

Internal call and skill voicemail settings apply to agent-to-agent or agent-to-skill group calls.



1 Select **Actions > Configure**.

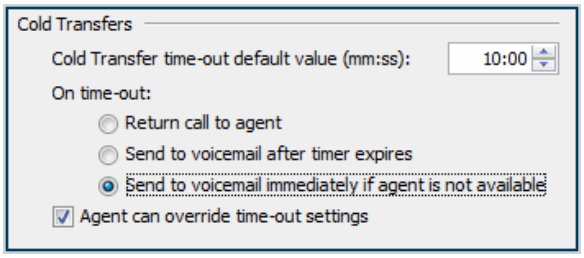
2 Select the **Other** tab.

Specify Time-Out Period for Internal Calls	◦ **Internal Call Queue Time-out:** Specify in mm:ss format how long an internal call can remain in the call queue before a time-out occurs. ◦ **Transfer time-out internal calls to skill voicemail:** Check if internal call should be transferred to the related skill voicemail when time-out period is reached.
Skill Voicemail	**Voicemail acceptance time-out:** Indicate in mm:ss format the length of time before voicemail time-out when a call is transferred.

3 Click **Save**.

Defining Time-Out Settings for Cold Transfers

You can globally specify the waiting time allowed and the action to be taken once the timer has expired or enable agents to adjust these settings for each call. Changes override the agent settings and take effect at their next login.



Important

When call recording continues when agent transfers the call to a third party, you are responsible for notifying the third party that the call is being recorded and for obtaining consent when required by law.

Understanding Cold Transfer Time-Out Setting Results

The results of your agent's cold transfer time-out attempts vary depending on your target availability, timer setting, and the time-out action that you choose. The following tables describe the possible outcomes of your setting combinations.

- T = Cold-transfer time-out setting: (00:00 = infinite time-out, 00:30 = 30-second time-out)
- A = Action taken when time-out expires
- VM = Voicemail

Destination = Agent **Call Transfer Result When the Receiving Agent is:**					
Settings	**Logged Out**	**Not Ready**	**Ready** **(auto-accept calls)**	**Ready** **(manually accept calls)**	**Ready** **(on an active call)**
T = 00:00 **A = Send to VM after timer if no agents are available**	Call sent to agent's VM	Added to personal queue - no time-out	Agent gets call	Agent station rings until call is answered or abandoned	Added to personal queue - no time-out
T = 00:00 **A = Send to VM immediately if**	Call sent to agent's VM	Call sent to agent's VM	Agent gets call	Agent station rings until call is answered or abandoned	Call sent to agent's VM

Destination = Agent Call Transfer Result When the Receiving Agent is:					
Settings	**Logged Out**	**Not Ready**	**Ready** **(auto-accept calls)**	**Ready** **(manually accept calls)**	**Ready** **(on an active call)**
no agents are available					
T = 00:30 **A = Send to VM after timer if no agents are available**	Call sent to agent's VM	Personal queue for 30 seconds, then VM	Agent gets call	Personal queue for 30 seconds, then VM	Personal queue for 30 seconds, then VM
T = 00:30 **A = Send to VM immediately if no agents are available**	Call sent to agent's VM	Call sent to agent's VM	Agent gets call	Personal queue for 30 seconds, then VM	Call sent to agent's VM
T = 00:30 **A = Return call to originating agent**	Return call to orignal agent	Personal queue for 30 seconds, then return to original agent	Agent gets call	Personal queue for 30 seconds, then return to original agent	Personal queue for 30 seconds, then return to original agent

Destination = Queue	**Call transfer result to VCC Queue:**	
Settings	**Queue With Ready Agents**	**Queue Without Ready Agents**
T = 00:00 A = Send to VM immediately if no agents are available	Agent gets call	Added to queue with no time-out
T = 00:30 A = Send call to VM after timer expires	Agent gets call	Added to queue for 30 seconds then returned sent to VM
T = 00:30 A = Send to VM immediately if	Agent gets call	Immediately sent to VM

Destination = Queue Settings	Call transfer result to VCC Queue:	
	Queue With Ready Agents	Queue Without Ready Agents
no agents are available		
T = 00:30 A = Return call to agent	Agent gets call	Added to queue for 30 seconds then returned to originating agent

Calls forwarded to external numbers do not return to your contact center.

VCC Configuration

To configure your cold transfer timeout settings, follow these steps.

1 Select **Actions > Configure**.

2 Select the **Other** tab.

Specify Time-out Period and Actions for Cold Transfers

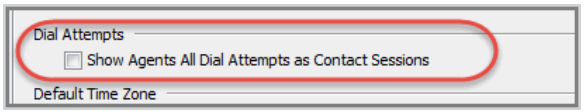
Field	Description
Cold Transfer time-out default value	Default is 10:00 minutes. Specify in mm:ss format how long the transferred call can remain awaiting connection before a time-out occurs.
On time-out	Action to be taken on timer expiration: ◦ Return call to agent. ◦ Send to voicemail after timer expires. ◦ Send to voicemail immediately if agent is not available. This option does not apply to external phone numbers.
Agent can override time-out settings	If enabled, agents can override the domain-specific cold transfer time-out settings

3 Click **Save**.

Showing Dial Attempts as Contact Sessions

This feature enables agents to see call attempts that were automatically assigned a disposition by the dialer in the Contact Sessions panel of the Contacts screen in the

Agent application.



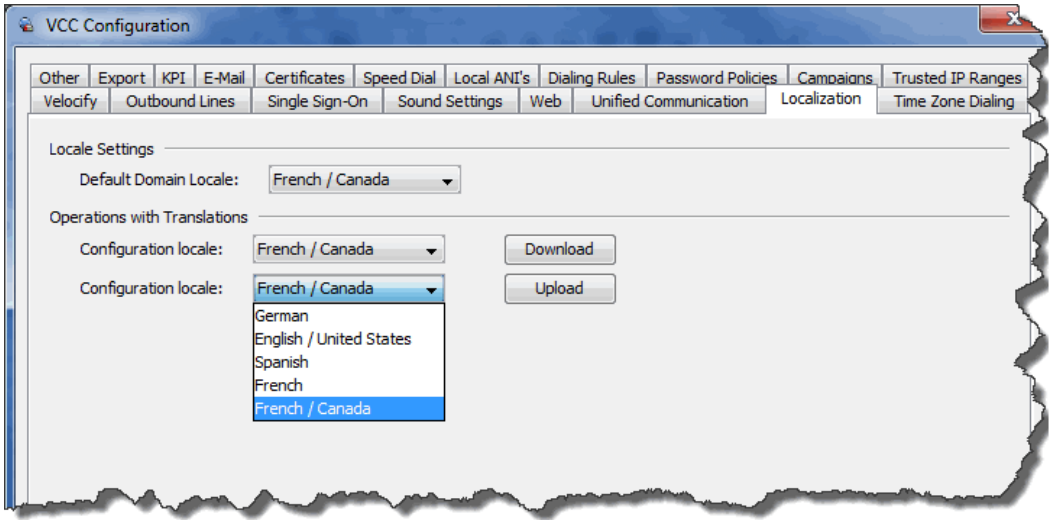
Setting Domain Locale and Translations

This option only displays if your domain is enabled for multiple languages. This feature applies to all Five9 Plus applications in both Classic and responsive modes. In reports, data sources and standard and custom reports are translated. For more information, contact your account representative.

This application supports these languages:

- English
- French (Canada)
- French (France)
- Spanish
- German
- Japanese
- Polish
- Brazilian Portuguese
- Dutch
- Norwegian
- Swedish
- Danish
- Finnish

If your account is enabled for multiple languages, select **Actions > Configure > Localization** to access the features. You can select the languages for your environment and assign to specific agents a language permission. Agents and supervisors can then select their preferred language from the list of languages.



You can also change the language in the Options menu (next to the Actions menu) at the top of the Administrator application. To apply the changes, log out and back in.

Setting Domain Default Locale

To assign a default domain locale, select a language.

Using Translated Files

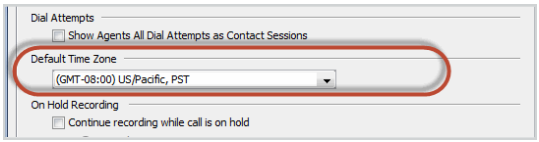
You can add to the Administrator application translated custom objects, such as campaigns, skills, and dispositions, and you can create rules to use translated text for domain defaults and associate languages to campaigns and users.

You can download a file that contains your translations and upload a modified file containing additions or corrections. Select a language and click **Download** or **Upload**.

Defining the Default Time Zone for Your Domain

This option enables you to set up the date and time for all users in your domain. The selected date and time appear in all applications in the places where the date or time appears, including contact fields and mouse-over tool tips.

1 Navigate to **Actions > Configure > Other**.



2 Select a time zone.

3 Click **Save**, **Exit**, and **OK**.

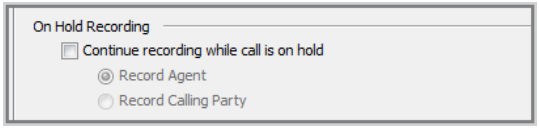
4 Log out and log back in again to apply the changes.

Setting Call Recording Options for On-Hold Calls

You can record either the contact or agent on hold or the parked contact. The current call segment, except for the on-hold music, is saved in a separate file. The entire call recording is associated with the agent.

The option applies to your domain for manual calls that are not associated with a campaign. If the corresponding option is set for a campaign, the campaign option overrides the domain option. This option is different from these events during which agents are always recorded:

- Consult before transfer, conference, and transfer
- Hold while starting a conference

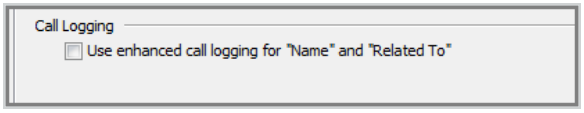


Specify On-Hold Recording Settings	
Continue recording while call is on hold	Specify whether to record the agent while the call is on hold or record the called party while the call is on hold.

Enabling Enhanced Call Logging

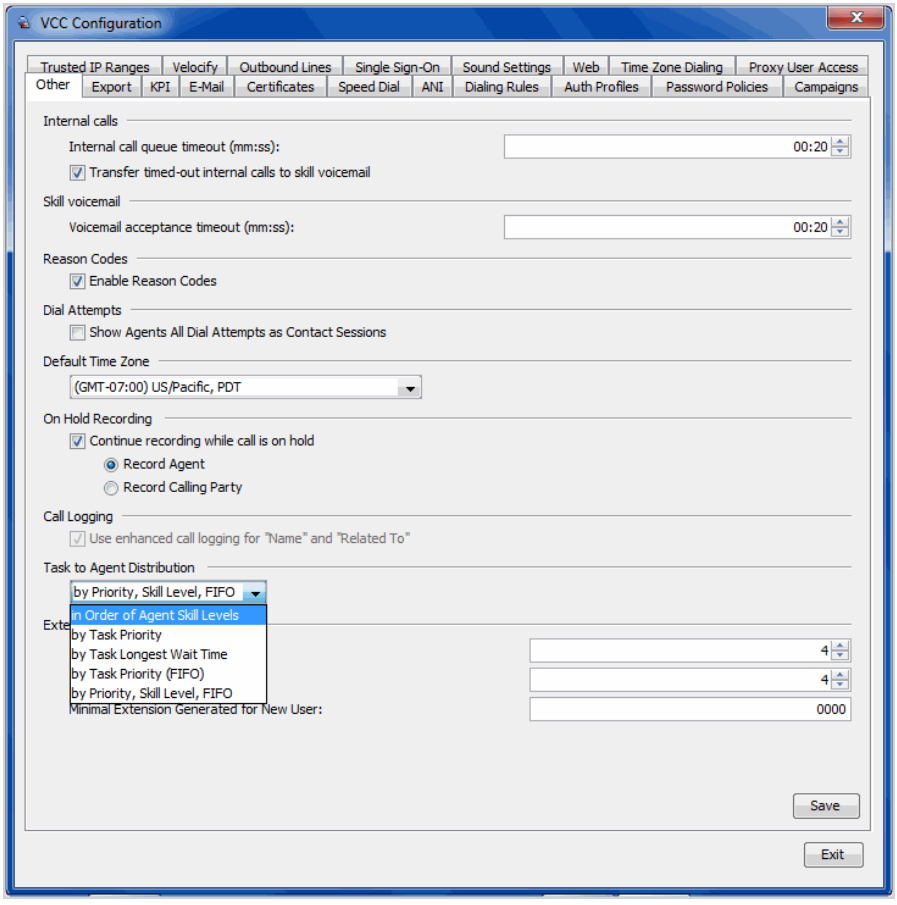
This feature applies to the Salesforce Open CTI and Plus adapter CRM integrations. For more information, see Open CTI for Salesforce Administrator's Guide and Plus Adapter for Salesforce Administrator's Guide.

This feature enables agents to edit contact records when processing calls. Agents can associate related objects, such as cases or opportunities, to contact records in the call log.



Setting the Distribution of Interactions

You can specify how tasks are assigned to agents when tasks are waiting in queue for agents to handle them.



Order of Agent Skill Levels. (Default) Agent queues skill levels are given for each skill that is assigned to an agent. Skill level represents the agent's proficiency at the

assigned queue and is similar to priority, with level = 1 being the highest priority. Queue priority is determined by the order in which queues are listed on the agent's properties. For more information, see **Assigning Users to Queues**. When agents are available, interactions are distributed by using queue priority. Use this task distribution to have tasks assigned to your agents for which they are the most skilled. Tasks are distributed by using these criteria, in the following order:

Call #	Queue, Skill Level	Queue Order	Task Priority	Waiting Time	Delivery Order
1	Sales, 1	1	70	10:00	1
2	Sales, 1	1	70	9:00	3
3	Support, 2	2	70	8:00	5
4	Support, 2	2	60	7:00	6
5	Billing, 1	3	70	6:00	2
6	Billing, 1	3	60	5:00	4

1. Queue rotation is used for multiple queues waiting for the same skill level. Tasks are distributed in consecutive order: *Sales - Skill Level_1, Support -Skill Level_1, ...Queue_N-Skill Level_1*. Agent skill level is distributed in ascending order. Call#1 has been waiting the longest for the highest skill level and is delivered first.
2. Queue order in agent skills list. This queue order determines the queue rotation described in step 1.
3. Task priority is distributed in descending order. Higher priority tasks are distributed first, after skill level distribution is considered.
    - Task priority, in descending order, is secondary in this selection.
    - Queues are chosen consecutively in this selection.
    - Call#5 is the second call delivered.
    - Call#2 and Call#6 are each waiting for the highest skill level and are distributed in order of queue priority, consecutively.
4. Waiting time is considered only after agent skill level and task priority and is distributed in descending order.
    - Consecutive queue selection continues for skill level = 1.
    - Call#3 and Call#4 are waiting for skill level = 2 and are distributed to an available agent after all calls for skill level = 1 are distributed.

Task Priority. When no agents are available, interactions with the highest priority among all queues are assigned to agents. Use this distribution to distribute tasks in order of business value, or task priority, while still considering the agent skill level and skills list order. Tasks are distributed using the following criteria, in this order:

Call #	Queue, Skill Level	Queue Order	Task Priority	Waiting Time	Delivery Order
1	Sales, 1	1	70	10:00	1
2	Sales, 1	1	70	9:00	3
3	Support, 2	2	70	8:00	4
4	Support, 2	2	60	7:00	6
5	Billing, 1	3	70	6:00	2
6	Billing, 1	3	60	5:00	5

1. Task Priority: Tasks are distributed in descending order. Higher priority tasks are distributed first.
2. Agent Skill Level: Tasks are distributed in descending order of agent skill level. Queue rotation is used for tasks waiting for the same skill level.
3. Queue Rotation: Queue rotation order is related to skill configuration, not necessarily to any display order.
4. Waiting Time: After task priority, agent skill level, and queue rotation are considered, tasks are distributed in descending order of longest waiting time.

Task Longest Wait Time. When no agents are available, interaction priority increases with the waiting time. Use this task distribution when all tasks are of equal business value and queue priority or agent skill level are not a consideration. Tasks are distributed purely by task waiting time.

Call #	Queue, Skill Level	Queue Order	Task Priority	Waiting Time	Delivery Order
1	Sales, 1	1	70	10:00	1
2	Sales, 1	1	70	9:00	2
3	Support, 2	2	70	8:00	3
4	Support, 2	2	60	7:00	4
5	Billing, 1	3	70	6:00	5
6	Billing, 1	3	60	5:00	6

1. Distribution order is FIFO (first in, first out) across all queues.
2. Task priority and agent skill level are ignored by the ACD.
3. Queue order in agent skills list is ignored by the ACD.
4. Task priority that is set in the campaign profile and increased or decreased in the skill transfer module is ignored by the ACD.

Task Priority (FIFO). When no agents are available, interactions with the highest priority in queue among all queues are delivered to agents in the order of their arrival: first in, first out. Use this to distribute tasks purely in order of their business value, or task priority. Tasks are distributed by using the following criteria, in this order.

Call #	Queue, Skill Level	Queue Order	Task Priority	Waiting Time	Delivery Order
1	Sales, 1	1	70	10:00	1
2	Sales, 1	1	70	9:00	2
3	Support, 2	2	70	8:00	3
4	Support, 2	2	60	7:00	5
5	Billing, 1	3	70	6:00	4
6	Billing, 1	3	60	5:00	6

1. Distribution order is FIFO (first in, first out) by task priority across all queues.
2. Agent skill level ignored by the ACD.

Priority, Skill Level, FIFO. When no agents are available, interactions are distributed to agents in this order: task priority > skill level > first in, first out. Use this to route your queued interactions to the agent best able to handle those interactions first. This distribution eliminates consecutive queue distribution associated with alternate distribution algorithms. Tasks are distributed by using the following criteria, in this order.

Call #	Task Priority	Queue, Skill Level	Wait Time	Delivery Order
1	60	Sales, 5	10:00	5
2	60	Sales, 5	9:00	6
3	70	Support, 3	8:00	1
4	60	Billing, 5	7:00	7
5	60	Billing, 5	5:00	8
6	65	Receiving, 1	3:00	2
7	60	Shipping, 2	2:00	3
8	60	Shipping, 2	1:00	4

1. Distribution order is FIFO (first in, first out) by task priority across all queues.
2. Agent skill level is considered after task priority.

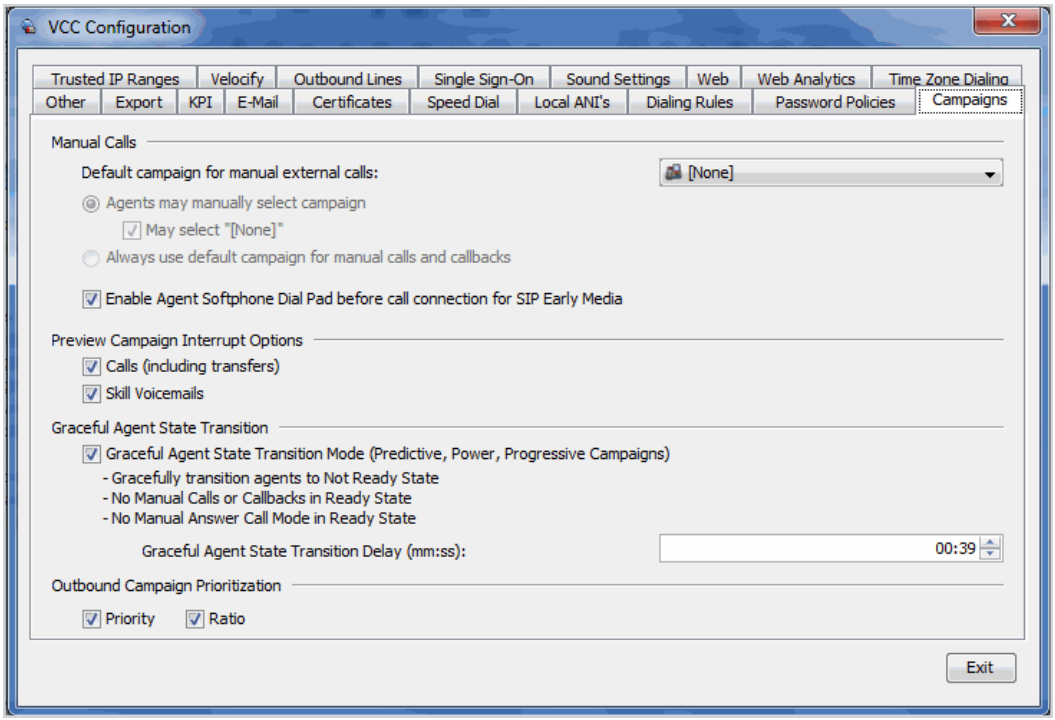
Configuring User Extensions

This global setting applies to user properties and IVR routing. To set the minimum and maximum extension length enter a number between one and six. The minimum extension generated must comply with the extension length set above.


Extensions Configuration
Minimal Extension Length:
4
Maximal Extension Length:
6
Minimal Extension Generated for New User:
0001

Defining Global Campaign Settings

You can define global settings for your campaigns in the Campaigns tab.



Associating Manual Calls with a Campaign

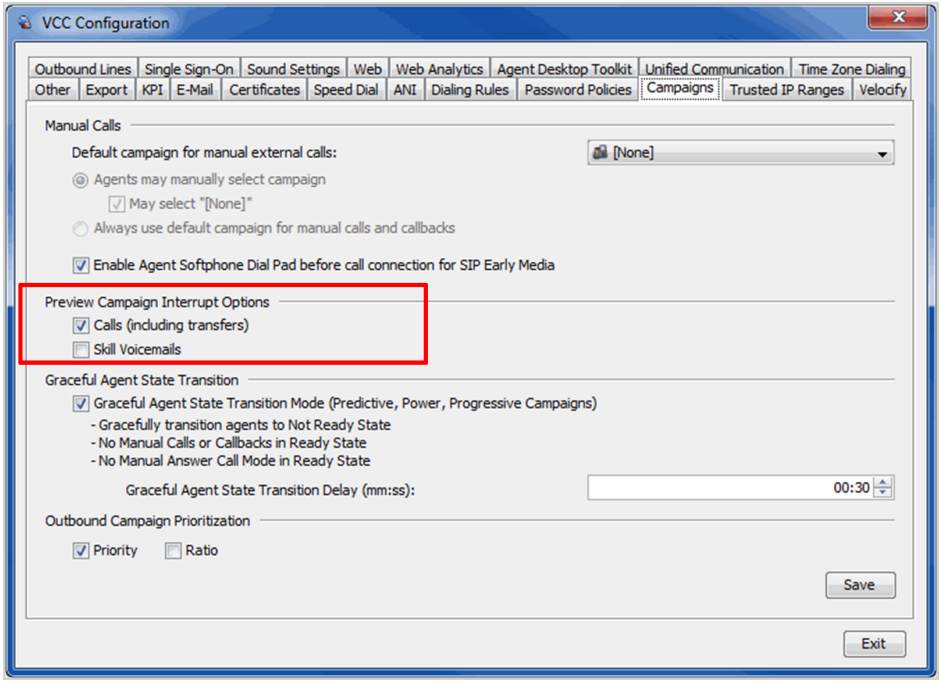
You can associate manual calls with a specific campaign. You can enable your agents to manually define a campaign or you can specify a single campaign to be used for manual external calls.

Default campaign for manual external calls	Campaign to use when agents start manual calls to external numbers.
Agents may manually select campaign	When making calls, agents may change the default campaign and make calls not associated with a

	campaign.
Always use default campaign for manual calls	If you choose this option, agents may not make manual calls from campaigns other than the default campaign.
Enable Agent Softphone Dial Pad before call connection for SIP Early Media	The dial pad needs to be enabled for a call in the PROCEEDING state. Agents may need to dial a number that requires interaction with an IVR script. Some of these numbers use SIP Early Media, which means that the third party establishes an RTP stream with VCC but does not change the call state from PROCEEDING to CONNECTED.

Setting Options to Interrupt Campaign Preview

In preview campaigns, you can specify what type of incoming calls can interrupt an agent who is previewing a contact record. The preview interrupt feature enables agents to take calls that may be more important than previewing the current contact record.



Once the agent assigns a disposition to the call or skill voicemail, the contact record is again opened for the agent to continue the previous preview task. All timers related to that preview task are reset to zero.

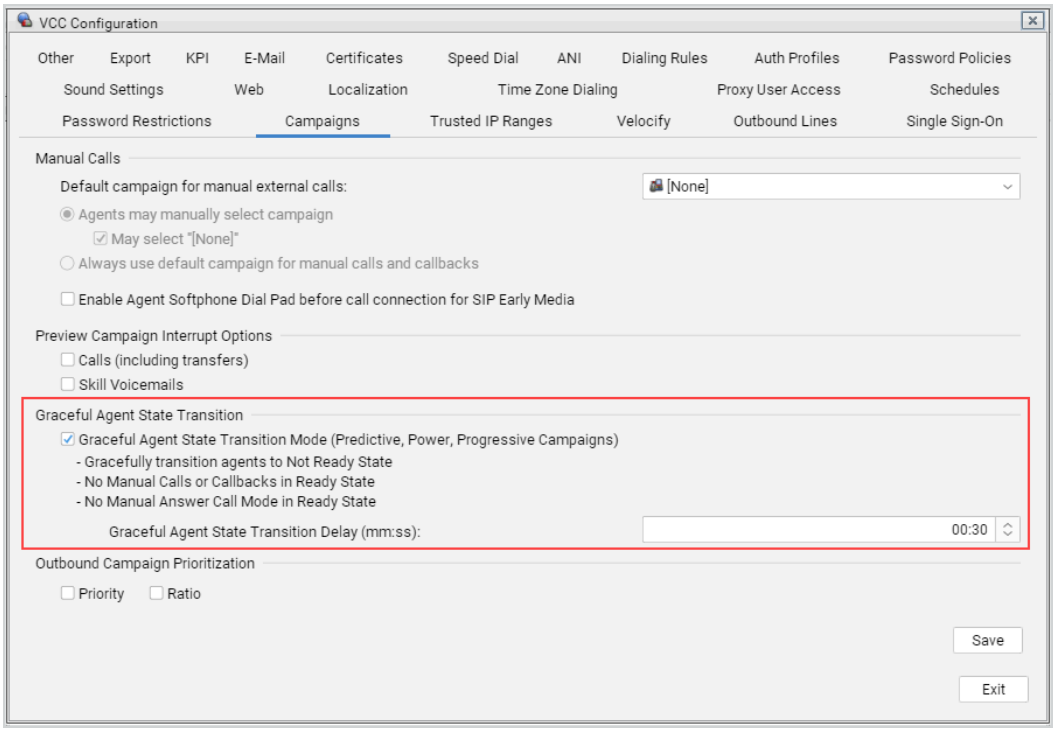
You can define preview interrupt options at the Domain level or at the campaign level. To configure preview interrupt options at the domain level, select **Actions > Configure** and open the **Campaigns** tab. See Campaign Administrator's Guide.

Preview Interrupt Options	
Calls (including transfers)	Allows incoming calls, including calls transferred from other agents or campaigns, to be presented to an agent who is currently engaged in a contact preview task.
Skill Voicemails	Allows skill voicemail to be presented to an agent who is currently engaged in a contact preview task.

To monitor how interrupted calls are affecting Preview campaigns, run the Agent Preview Mode Interrupt Summary from the list of standard reports.

Graceful Agent State Transition Delay

This feature is a global setting that applies to outbound campaigns running in predictive, power, or progressive mode that are used in Agent Desktop Plus and Plus CRM integrations. This feature enables you to prevent agents from abruptly becoming unavailable to take calls after the agents select Not Ready.



Dialing Process

The dialer makes calls based on the number of agents in ready state in each running campaign. Therefore, when agents change to Not Ready, the number of calls made by the dialer exceeds the number of agents available to receive the calls. As a result, some calls may be abandoned. If too many calls are abandoned, compliance issues may occur.

Transition Delay

You can set a 1- to 59-second delay that is applied when agents select Not Ready after setting a call disposition. During that interval, agents are placed in a pending Not Ready state. In their application, agents can see that they are still ready to accept calls, but these options are disabled:

- Making manual calls and callbacks
- Manually answering outbound calls

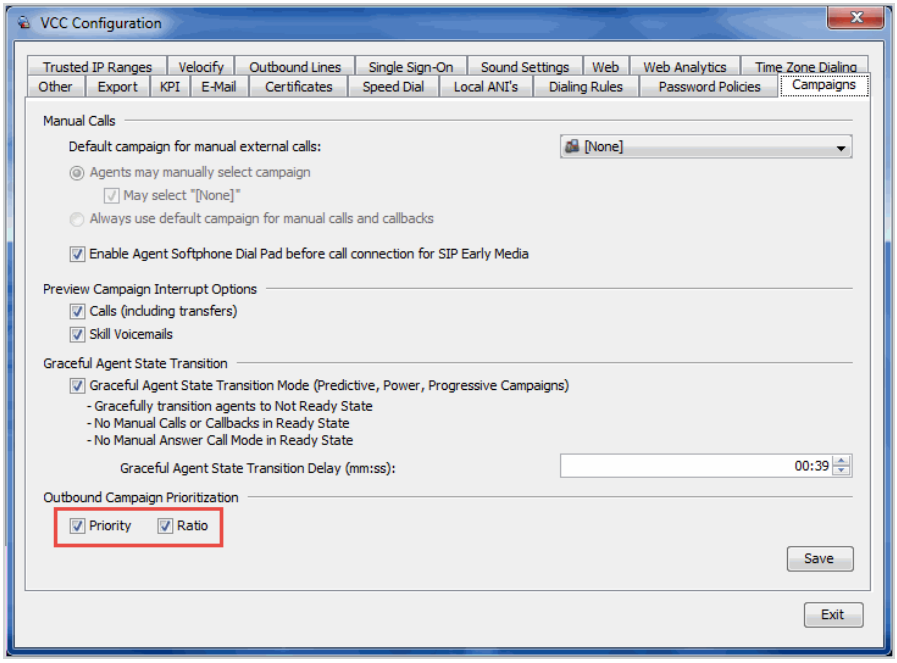
The dialer continues to route the outbound calls that were already dialed to the original number of agents. Agents in pending Not Ready state receive only these outbound calls already in transit, but the dialer will not place additional calls for these

agent. When the delay expires, these agents are set to Not Ready and no longer receive outbound calls.

Priority and Dialing Ratio for Outbound Campaigns

You can manage the priority and dialing ratio of outbound campaigns based on the business value of each campaign. For example, you might want to spend more time and resources on Campaign A than Campaign B if Campaign A is currently yielding better results.

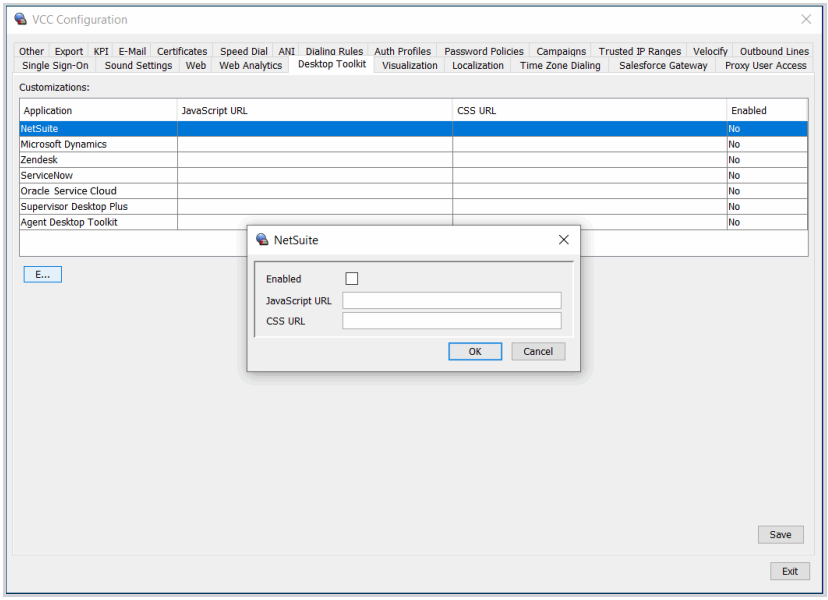
Outbound campaigns may be assigned a dialing priority, dialing ratio, or both. To configure campaign priority and/or ratio, open the **Campaigns** tab. For more information, see the Campaign Administrator's Guide.



Enabling Desktop Toolkit Customizations

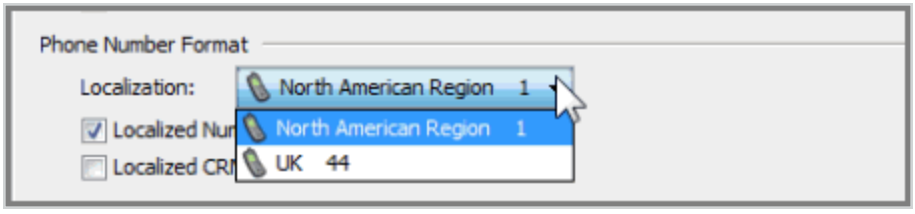
You can control your customizations in a single tab. To specify URL listings for your integrations, follow these steps:

1. In the configuration menu, select the **Desktop Toolkit** tab.
2. Set the **Enabled** checkbox, as applicable.
3. Enter the **JavaScript URL**.
4. Enter **CSS URL**.
5. Click **OK**.
6. Click **Save**.



Using Dialing Lists in E164 Format

If your domain is enabled to use E164 format for international phone numbers, your agents must enter up to 15 digits, starting with the plus (+) sign and the country code for all inbound and outbound calls made by the dialer or manually. If your domain is not enabled, your agents must enter 10 digits to conform to the North American Numbering Plan.



The format is used to route calls, process lists, and display numbers in your applications and reports. When you upload a list, all non-numeric characters, such as dots, dashes, spaces, and parentheses, and the country prefix are removed. Numbers are stored in the format, starting with the plus sign.

You may also configure in the VCC a national phone number format. In this case, you can upload lists that contain numbers in format, in your national format, or both. If you do not specify a format, the VCC uses the format for all numbers. For example, if you operate in the UK, these numbers are processed as follows:

Phone number format	How the number is processed
International format	**1** Belgium phone number is added to a list: **00**32.20.3456.7899 **2** Phone number is processed in VCC: International prefix (**00**) and non-numeric characters are removed. Plus sign is added. **3** Stored number: **+**322034567899
National format	**1** UK phone number is added to a list: **0**2034567899 **2** Phone number is processed in VCC: National prefix (**0**) and non-numeric characters are removed. **UK** country code and the plus sign are added. **3** Stored number: **+44**2034567899
No specified format	Number stored in format.

Configuring International Service with Five9 Global Voice

Five9 Global Voice provides international calling with regionally specific skills, IVR scripts, and campaigns configured to provide continuous coverage and/or additional agent capacity for overflow coverage. Domains configured for international dialing may be further subdivided into regional contact centers using Five9 Global Voice.

Five9 Global Voice currently consists of four regions: Brazil (US and EU domains), Ireland (US domains only), Japan (US and EU domains), and Australia (US and EU domains). Calls that originate in one global region and end in another region are subject to latency, which introduces call quality problems, such as long delays. You can

save your recordings to a Global Voice Point of Presence (PoP) so that your recordings stay in your geographic region.

Planning Your Five9 Global Voice Implementation

To determine your specific use and needs, the following guidance is offered.

Understanding Your Call Patterns

When planning your contact center, be sure to optimize your calling patterns to eliminate these delays. International dialing is augmented by defining calling regions to subdivide your global coverage service area. Segmenting your call patterns to identify local, or regional, calling areas also helps to overcome any latency issues often associated with international dialing.

Determining Your Business Needs

A best practice is to classify your calls by region, which means that you route calls to the agents nearest to the call origin or termination. For example, your callers from Japan would talk to agents in Japan, and your Australia region callers talk to agents in Australia. To accomplish this, you need local numbers, regional station IDs, and campaigns configured to route regions calls to local numbers.

Planning for Overflow Call Traffic

To accommodate peak hours, off hours, and business continuity, you may want agents in one region to back up agents in another region for uninterrupted support or overflow calls. You can define an alternate region as a backup for your excess call traffic. For example, 100 Japanese-speaking agents can process from Japan while 10 Japanese-speaking agents in Australia are available to receive calls when all agents in Japan are busy. To reduce call delays, remember the distance that the voice must travel.

Five9 Global Voice Requirements

Contact your Five9 representative to determine your specific needs and readiness for Five9 Global Voice.

Requirement	Description
Domain	Must be enabled for your domain.
Station IDs	Assigned to specific agents in each of your defined regions.
IDID/ITFN	International Direct Inward Dialing numbers or International Toll-Free Numbers assigned to your regional campaigns.

Configuring Five9 Global Voice

After your domain is enabled for international dialing and has been assigned regional Station IDs, configure your domain for in-region calling.

> **Note**
> To easily identify your global agents, queues, IVRs, and campaigns, Five9 recommends that you add the region to the naming convention, for example: JPN_*username* and AUS_*region*.

1. Assign regional station IDs to the agents in your defined regions to staff your campaigns and support your call patterns.

   For example, define agents that will connect to Sydney, Tokyo, or both regions.

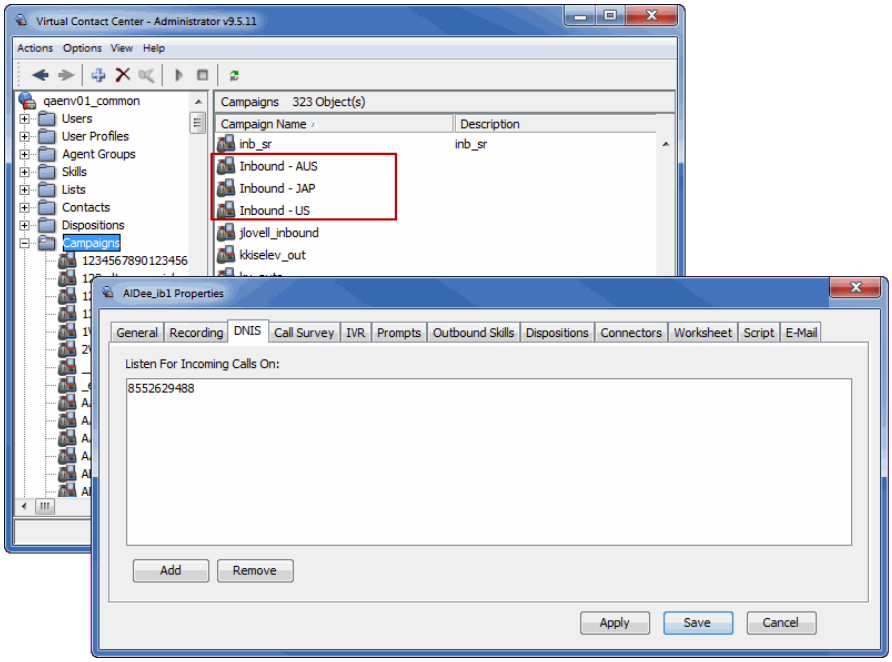
2. Create campaigns and campaign profiles for specific regions.

   See **Managing Automatic Number Identification (ANI)**.

3. Assign the new regional IDID or ITFN to these campaigns.

4. Customize campaigns and IVR scripts specific to regions to perform these actions:
   a. Play local announcements.
   b. Use local in-region IVR.
   c. Enable local regional inbound and outbound calls.

d Assigns local in-region agents with skills to a campaign.



5 Configure your queues and skill levels to optimize regional calling priorities (see **Adding Users to Skills**).

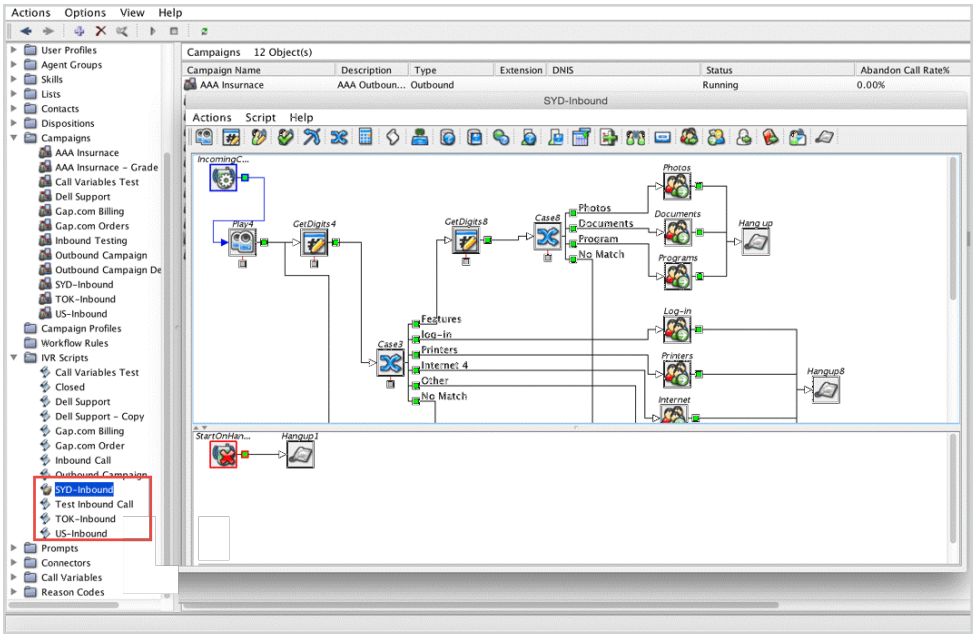
Skills can be used to associate a user to a region or language, for example: AUS skill to be used in Australia, JAP can be used for Japanese language, and so on. Configure skills and skill levels to provide continuous coverage or regional backup.

- Skills and skill levels should support in-region campaigns to define and map agent availability and language skill.
- Agents in their primary region are configured with the highest priority skill set to answer that call.
- Agents in the alternate region are configured with a lower priority skill set.

6 Create or assign the users to staff your designated campaigns and support your Global Voice calling patterns.

7 Create IVR scripts as you do today.

Associate these IVR scripts with a specific campaign in a specific region, containing any regional attributes necessary.



Enabling Access to the REST API

This optional section applies to you only in these cases:

- You use the REST API for Plus applications.

  and

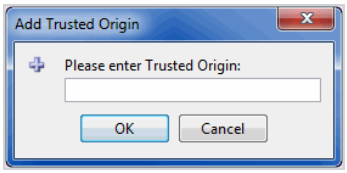
- You have a custom integration configured by Professional Services or with a third party.

To ensure that browsers do not restrict cross-origin requests, add your trusted URLs to your VCC configuration so that your application can access all Five9 resources, including the REST API.

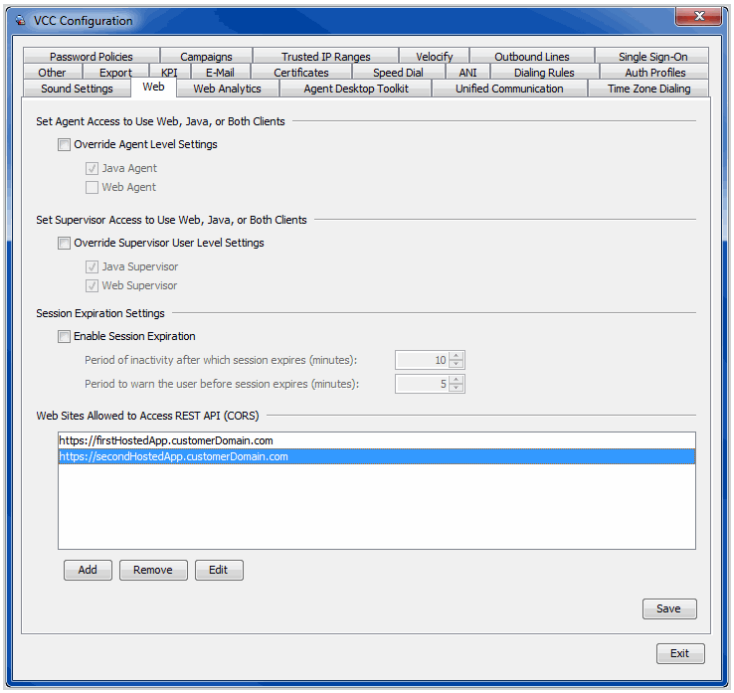
1. Select the **Web** tab.
2. Click **Add** and enter one explicit URL for each custom integration that you host, for example:

   `https://firstHostedApp.customerDomain.com`

   `https://secondHostedApp.customerDomain.com`



In most cases, you would add one or two URLs. You may not enter wildcards.

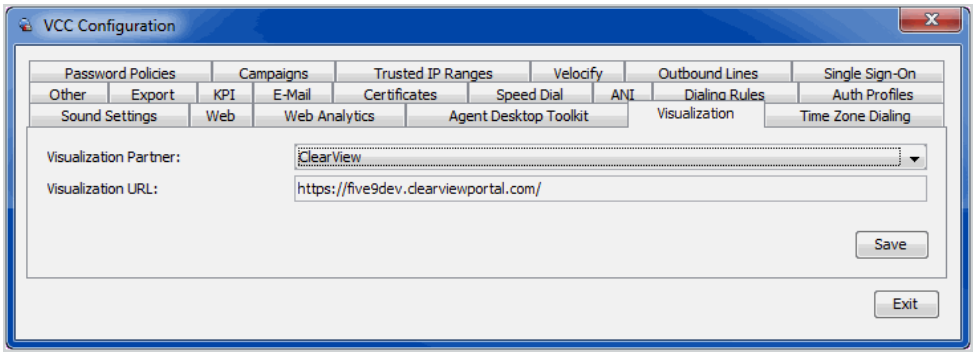


Enabling Performance Dashboard

This optional section applies to you if you are enabled for Five9 Performance Dashboard. The URL enables you to access the dashboards.

1 In the configuration menu, select the **Visualization** tab.

2 Enter the URL of the partner, and click **Save**.



User Accounts

Using WebRTC for Audio Communication
Installing and Managing the Five9 Softphone for Plus Applications
Managing User Definitions
Assigning User Roles and Permissions
Assigning Users to Queues
Defining User Profiles
Managing Agent Groups
Managing User Passwords and Voicemail PINs
Managing Voicemail
Managing Voicemail Greetings
Managing User Callbacks
Managing User Recordings
Managing Canned Reports
Communicating With Users

You identify each user by name, email address, and one or more roles. The user name is the login ID. The roles determine which applications users can access. Users can have one or more roles.

You can organize users with agent or supervisor roles into skill groups and agent groups and assign those groups to specific campaigns. Create user profiles to enable rapid configuration of users when assigning roles and skills and when defining contact record layouts.

Using WebRTC for Audio Communication

If your domain is enabled for WebRTC (Web Real-Time Communication), your Five9 Plus applications users can establish audio communication through their browser with no need to install a softphone or an extension. WebRTC station IDs are interchangeable with softphone station IDs. For example, if an agent connects using 5432 as their softphone station ID, that same station ID may be used when that agent connects using WebRTC. For more information about using WebRTC with Five9 Plus applications, see the Technical Requirements Reference Guide.

> **Note:** Tablet users must use WebRTC or PSTN.

Installing and Managing the Five9 Softphone for Plus Applications

This section provides instructions to prepare and install the softphone in standard implementations.

Recommendations and Prerequisites
Installing the Five9 Softphone
Repairing a Softphone Installation
Uninstalling the Five9 Softphone
Updating the Software
Downloading Software Versions for Early Access

Recommendations and Prerequisites

- Five9 recommends installing one softphone per workstation (per machine), although the softphone can be installed for each user account on the workstation (per user).
- When you ***manually*** install the softphone, Five9 recommends uninstalling the softphone before you install the new version to ensure that only the latest version of the softphone exists on the machine. For detailed steps, see **Uninstalling the Five9 Softphone**.
- To verify that agent workstations meet the technical requirements to use Five9 products, see Workstation Requirements for Web-Based Applications in the Technical Requirements Reference Guide.
- On each workstation, ensure that port 8083 on localhost is not used by any other applications. For detailed steps, see Web Browser Proxy Configuration in the Technical Requirements Reference Guide.
- Configure your HTTP proxy to bypass port 8083 websocket requests. For detailed steps, see Web Browser Proxy Configuration in the Technical Requirements Reference Guide.

Installing the Five9 Softphone

There are three options to install the softphone for agents and supervisors:

- **Single workstation deployment**: Users install the softphone and browser extensions on individual workstations (may require administrative permissions). When Five9 releases a new version of the softphone, each workstation automatically updates.
- **Group deployment**: IT deploys the softphone using administrator tools to ensure consistent implementation across many workstations.
- **Virtual desktop deployment**: Users use virtualization client applications (such as Citrix or VMWare) to run applications. You configure the softphone as part of the virtual setup on both the agent workstations and the virtual deployment infrastructure (the remote server). For more information on installing and managing the softphone in virtual desktop environments, see Virtual Desktop Configuration Administrator's Guide.

Option 1: Installing the Software on a Single Workstation

The simplest method to deploy the softphone on a single workstation is for agents and supervisors to install the browser extension and softphone for the specific logged-in user (per user) on their workstation.

Alternately, IT or supervisors can install the browser extension and softphone on each workstation. When installing the softphone on a single workstation, Five9 recommends installing for all user accounts on the workstation (per machine), which requires administrative permission.

Step 1: Installing Browser Extensions

You must install the Five9 softphone browser extension before beginning softphone installation. This is not required when using the WebRTC station type.

For detailed instructions, see:

- Installing Chrome or Edge Browser Extensions
- Installing Firefox Browser Extensions

Step 2 (Windows): Installing the Softphone

To install the softphone using the Windows command line interface:

Determine whether you will install the softphone for all users on the workstation (per machine) or for the logged in user (per user).

1. To download the Windows installation file:
   a. Log in to Five9 and select **Tools & Add-Ons** on the Company Portal page.
   b. Under Installing the Softphone, select **follow these steps**.
   c. Select **Windows platform** to download the installation file to your workstation.
2. Open a command prompt using one of these methods:
   - To install for all user accounts on the workstation (recommended), open the command prompt using the Run as administrator option and enter the following command:

     ```
     msiexec /i Five9SoftphoneService.msi ALLUSERS=1
     ```

   - To install for the logged-in user only, open the command prompt and enter the following command:

     ```
     msiexec /i Five9SoftphoneService.msi
     ```

   The installation program installs the softphone.

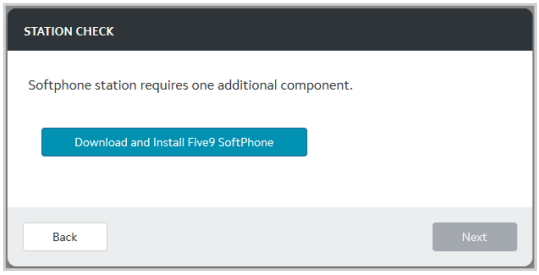
Note

Available command line options for the MSIEXEC utility are:

- `/i` = install the package
- `/x` = uninstall the package
- `/qn` = no UI during the installation process

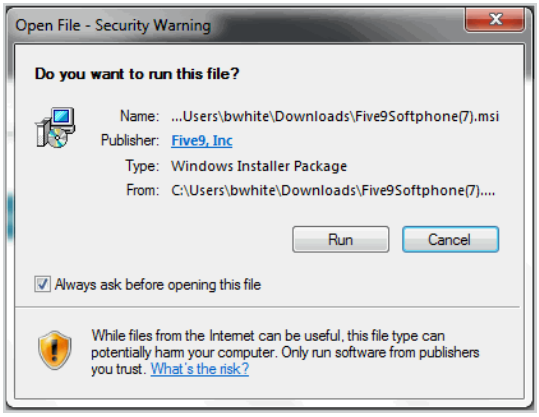
To install the softphone for the logged-in user with the Windows installation wizard:

1 In the agent application, select **Download and install the Five9 Softphone**.

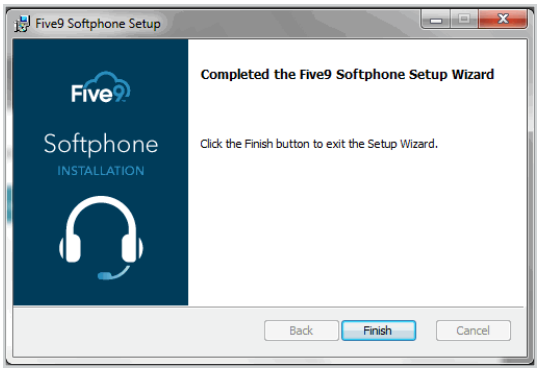


> **Note:** The **Five9Softphone.msi** file may appear in your designated browser downloads folder.

2 Double-click the MSI file and select **Run** in the Open File window.



This setup wizard displays a completed notification.



3 Select **Finish**.

The Station Check page indicates that all extensions are installed. Activation is automatic.

Step 2 (macOS): Installing the Softphone

To install the softphone using the macOS command line interface:

1. To download the macOS installation file:
   a. Log in to Five9 and select **Tools & Add-Ons** on the Company Portal page.
   b. Under Installing the Softphone, select **follow these steps**.
   c. Select **Mac platform** to download the installation file to your workstation.
2. Attach the DMG file with this command:

   `hdiutil attach <`***path-to-Five9SoftphoneService.dmg***`>`

   Example

   If the file is in the current directory, the command and its output are as follows:

   Command: `hdiutil attach Five9SoftphoneService.dmg`

   Output:

   ```
   expected CRC32 $228E6516
   /dev/disk2      GUID_partition_scheme
   /dev/disk2s1    Apple_HFS    /Volumes/Five9 Softphone
   Service Installer
   ```

3. Locate the line in the output that contains `Apple_HFS`. Make note of the following:
   - The ***disk location*** precedes `Apple_HFS`, such as `/dev/disk2s1`.
   - The ***path*** follows `Apple_HFS`, such as `/Volumes/Five9 Softphone Service Installer`.
4. Determine the ***flag*** values to use in the command:
   - To install for the current user, use: `FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true`
   - To install for all users on the workstation, use: `FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true FIVE9_SOFTPHONE_INSTALLER_SYSTEM_SPACE_MODE=true`
5. Construct the command by combining these elements:

```
<flags> "<path>/double click to open.app/Contents/MacOS/applet"
```

Example

Complete command syntax:

```
FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true FIVE9_SOFTPHONE_
INSTALLER_SYSTEM_SPACE_MODE=true  "/Volumes/Five9 Softphone
Service Installer/double click to
open.app/Contents/MacOS/applet"
```

6 Run the command to install the softphone.

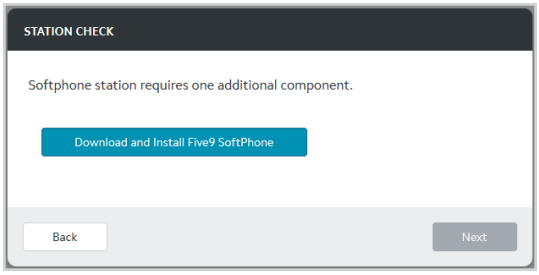
7 Detach the DMG file using the disk location noted previously:

```
hdiutil detach <disk location>
```

To install the softphone for the logged-in user with the macOS installation wizard:

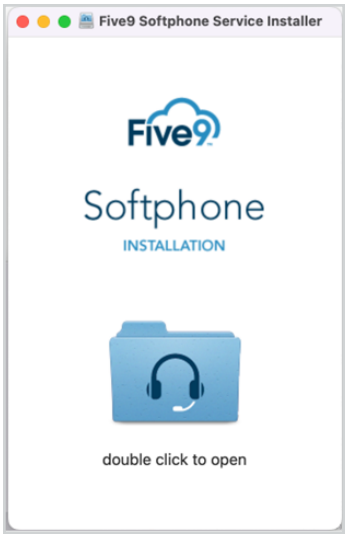
With the macOS installation app, you can select an option to install the softphone for all users on the workstation (per machine) or for the logged-in user (per user).

1 In the agent application, select **Download and install the Five9 Softphone**.



Note: The **Five9Softphone.dmg** file may appear in your designated browser downloads folder.

2 Double-click the DMG file and then double-click the icon in the Finder window.



3 In the installation wizard, select the appropriate option.

- **For me only** installs the softphone for the logged-in user.

  Important: If you are prompted that the installer applet needs access to control the Finder app, select **OK**. The Five9 installer needs this permission to update the Home folder when installing the softphone for the logged-in user.

- **For all users** installs the softphone for all users on the workstation.

The macOS installer removes any currently installed softphones and installs the new version.

Option 2: Installing the Software in Group Deployment

To ensure standard implementation across many workstations, administrators can deploy the browser extension and softphone across groups using automated methods.

Important

These instructions apply to using automation to deploy the software to user workstations. The process to deploy the software in a virtual desktop environment is similar, but the commands and parameters differ. For information on deploying the software in a virtual desktop environment, see the Virtual Desktop Configuration Administrator's Guide.

Considerations for Group Deployment

- If you use automation techniques to deploy the softphone using the command line to users who have ***limited permission to update their workstation***, the softphone will not automatically update when a new version is released. You must use automation to first uninstall the softphone for all users before deploying the new version. See **Uninstalling the Five9 Softphone**.
- Before using automation, ensure that you fully test the process to install and uninstall using the command line.
- Five9 tests softphone installation with the command line. However, each customer deployment using automated tools and scripts is unique. Five9 Customer Support can assist you with issues about the installer, but cannot support or troubleshoot your network or implementation.

Downloading Files

To download the softphone and browser extension files:

1. Log in to Five9 and select **Tools & Add-Ons** on the Company Portal page.
2. Under Installing the Softphone, select **follow these steps**.
3. If your users plan to use the softphone with Chrome, Edge, or Firefox, download the appropriate browser extensions.
    - For Chrome and Edge:
        a. Select **Chrome/Edge extension** to open the Chrome Web Store page.
        b. Make note of the extension ID in the URL: `https://chromewebstore.google.com/detail/five9-softphone-extension/<extensionID>`
    - For Firefox, select Firefox extension to download the Firefox extension file.
4. Download the Windows or Mac softphone installer.

Installing the Browser Extension in Group Deployments

Before you deploy the softphone, you must install or deploy the install browser extensions. If the browser extension is not available when you deploy the softphone, your agents will receive a warning when they log in the first time after the installation. The warning directs users to contact their administrator to finish the installation.

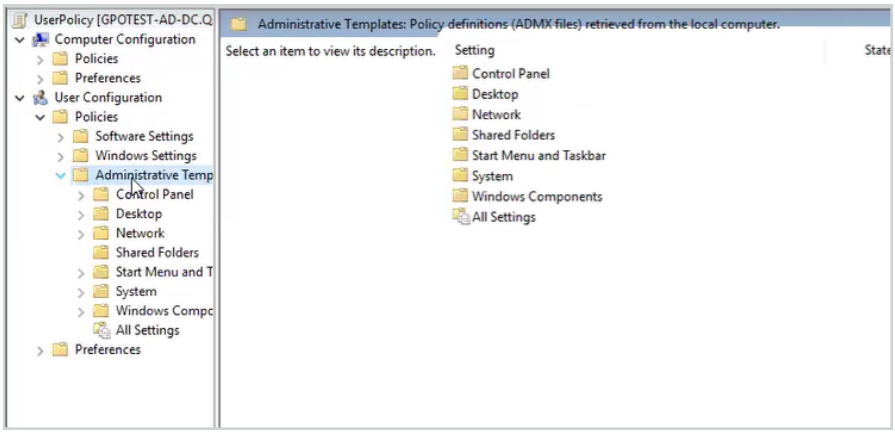
This example illustrates deploying the Google Chrome browser extension using Microsoft's Group Policy Object (GPO). You can use similar methods to deploy other browser extensions or to deploy using other administration tools.

There are two options for deploying the Chrome browser extension:

- Installing as a *force-installed* extension prevents users from enabling or disabling the browser extension in their browser.
- Installing using *extension management settings* gives users the option to enable or disable the browser extension.

Follow these steps:

1. Download and install the Google Chrome policy templates you need for deployment using GPO.
   a. Download the Google Chrome group policy template: https://dl.google.com/dl/edgedl/chrome/policy/policy_templates.zip. Then extract the compressed zip file on your local workstation.
   b. To open the Group Policy Management Console, in the Windows search bar, type **gpmc.msc** and press Enter.
   c. In Group Policy Management, under **User Configuration**, expand **Policies**.

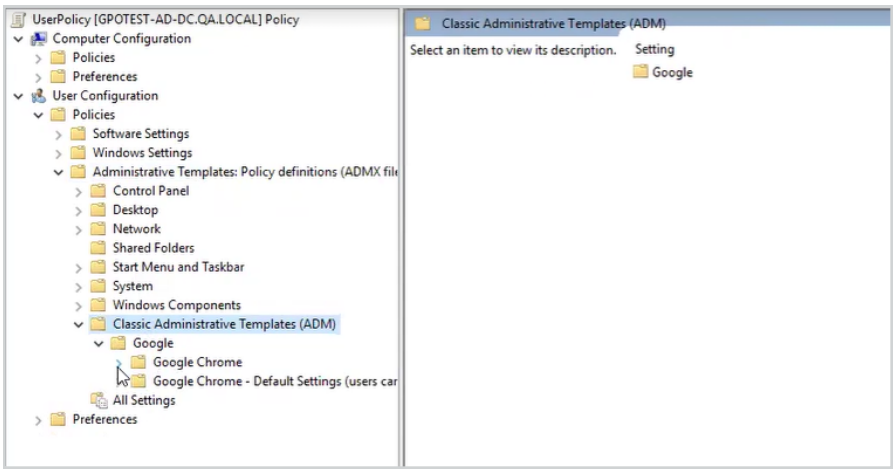


   d. Right-click **Administrative Templates** and select **Add/Remove Templates**.
   e. Select **Add**.

f Browse to the location of the extracted administrative templates, and select **policy_templates\windows\adm\en-US\chrome.adm**, and then click **Open**.

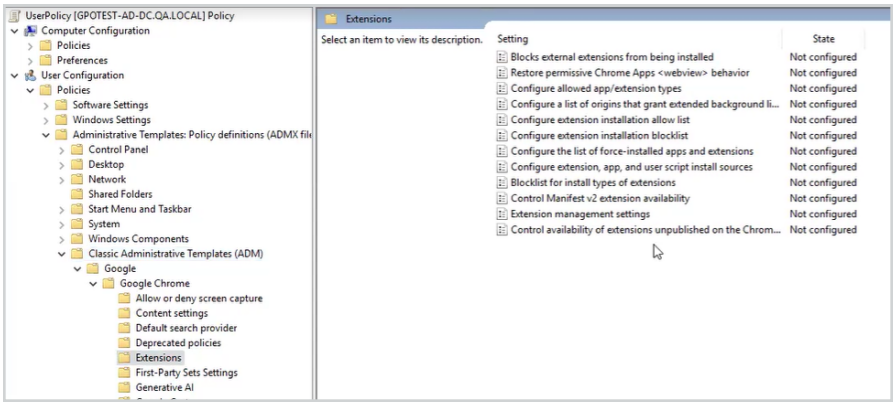
g In Add/Remove Templates, click **Close**.

The Classic Administrative Templates (ADM) folder appears in the list.



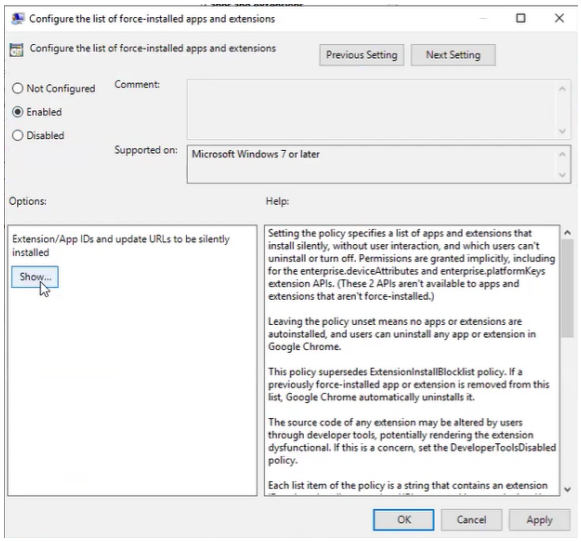
2 Set up the template for your users.

a Under **Classic Administrative Templates**, expand **Google**, then **Google Chrome**, and select **Extensions**.



b In the Setting list, double-click **Configure the list of force-installed apps and extensions**.

c Select **Enabled**, and in the Options list, select **Show**.



d In **Value**, enter the extension ID for the Five9 Google Chrome browser extension previously retrieved in **Downloading Files**, such as **apdkclopegaflhehflfdieginkoiejjj**. Then click **OK**.

> **Note**
>
> To install the browser extension so that users can disable the browser extension, use the Extension management setting option instead:
>
> 1. Select **Extensions** and open **Extension management settings** in the Setting list.
> 2. Select **Enabled**.
> 3. In the Options pane, in **Extension management settings**, enter the extension ID n and specify **normal_installed** as the installation mode:
>
>   `{"<extensionID>": {"installation_mode": "normal_installed"}.`
>
> 4. Click **OK**.

The extension is enabled for all users, and is available when each workstation refreshes the updated group policy. The extension is available when they open Chrome.

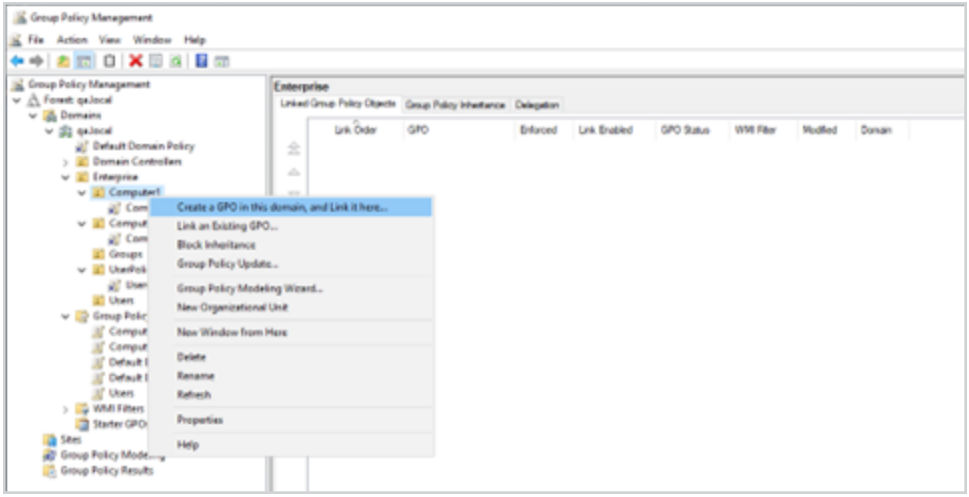
Installing the Softphone in Group Deployment on Windows

There are numerous tools for deploying software across multiple workstations, and you may choose to deploy the software for a specific user (per user) or for all users on the workstation (per machine). See **Considerations for Group Deployment** for important limitations.

> **Note**
>
> For information on uninstalling the softphone using group deployment, see **Option 2: Uninstalling in Group Deployment**. For information on upgrading the softphone, see **Updating the Software**.

This example illustrates installing the softphone on a per-machine basis using Microsoft's Group Policy Object (GPO).

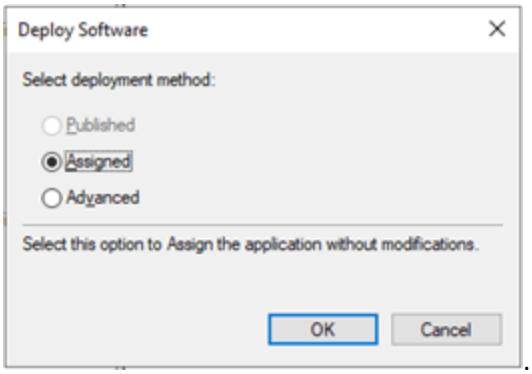
1. Create a shared folder on the network accessible to the workstations where you will install the softphone, and copy the MSI package to the shared folder.
2. In Group Policy Management, create a GPO and link it to the computers organizational unit where you will push the softphone.



3. Under Group Policy Objects, right-click the new GPO and select **Edit**.
4. Create a deployment package:
   a. For all users on each workstation (per machine), under **Computer Configuration**, expand **Policies**, then **Software Settings**, then **Software installation**. Select **New** > **Package**.

b For each user (per user), under **User Configuration**, expand **Policies**, then **Software Settings**, then **Software installation**. Select **New** > **Package**.

5 Select the softphone installation file **Five9Softphone.msi** from the shared network folder. The Deploy Software window displays.



6 Select the option to deploy the software:

- **Assigned**: The application automatically installs on the workstation and is available to all users (per machine installation).
- **Published**: The application appears in the Add/Remove Programs app on each workstation.

> **Note:** The Published option is only supported when installing the software for each user on the workstation (per user).

Important

If a user has previously installed the softphone on their workstation, the script to install the softphone for all users per machine displays an error: "There is at least one version of the same product installed to user space for another user."

You must uninstall the softphone on that workstation and execute the script again to install for all users. For information on uninstalling the softphone, see **Uninstalling the Five9 Softphone**.

Installing the Softphone in Group Deployment on macOS

This example provides instructions for creating a script to deploy the softphone across mulitple macOS workstations. See **Considerations for Group Deployment** for important limitations.

To install the Five9 softphone for users on macOS, create a script in the language that you prefer, such as bash. Use this script in your group deployment system to deploy the softphone on multiple macOS workstations.

Important

In this example, paths that contain spaces are in quotes to escape the spaces. Refer to the language that you use for the correct handling of spaces.

1. Attach the DMG file with this command:

   `hdiutil attach <`***path-to-Five9SoftphoneService.dmg***`>`

   Example

   If the file is in the current directory, the command and its output are as follows:

   Command: `hdiutil attach Five9SoftphoneService.dmg`

   Output:

   ```
   expected CRC32 $228E6516
   /dev/disk2      GUID_partition_scheme
   /dev/disk2s1    Apple_HFS    /Volumes/Five9 Softphone
   Service Installer
   ```

2. Locate the line in the output that contains `Apple_HFS`. Make note of the following:
   - The ***disk location*** precedes `Apple_HFS`, such as `/dev/disk2s1`.
   - The ***path*** follows `Apple_HFS`, such as `/Volumes/Five9 Softphone Service Installer`.
3. Determine the ***flag*** values to use in the command:
   - To install for the current user, use: `FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true`
   - To install for all users on the workstation, use: `FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true FIVE9_SOFTPHONE_INSTALLER_SYSTEM_SPACE_MODE=true`
4. Construct the command by combining these elements:

   `<flags> "<path>/double click to open.app/Contents/MacOS/applet"`

Example

Complete command syntax:

```
FIVE9_SOFTPHONE_INSTALLER_SILENT_MODE=true FIVE9_SOFTPHONE_
INSTALLER_SYSTEM_SPACE_MODE=true  "/Volumes/Five9 Softphone
Service Installer/double click to
open.app/Contents/MacOS/applet"
```

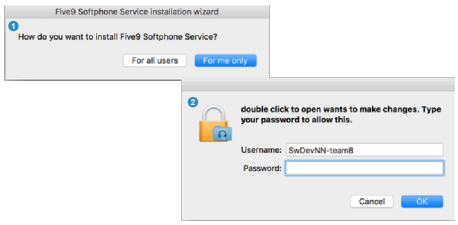
5 Run the command to install the softphone.

6 Detach the DMG file using the disk location noted previously:

```
hdiutil detach <disk location>
```

Example

This is an example of the macOS installer with the system and user space options (top figure) and the password window (bottom figure).



1 Administrators see the system space option.

2 Other users do not see this option. The softphone is installed to user space.

Option 3: Installing the Software in Virtual Desktop Deployment

There are many important considerations and configurations required to installing the browser extension and softphone in virtual desktop environments. See Virtual Desktop Configuration Administrator's Guide for details.

Repairing a Softphone Installation

If you have any issues while installing or uninstalling the softphone on a workstation, use the command line repair option with the softphone installer.

1 Open a command prompt ***with administrator privileges***.

2 Enter either of these commands to restore the softphone to proper function.

```
msiexec /famus Five9SoftphoneService.msi
msiexec /famus {7EAF6F71-FE39-40E6-B15A-21D76E96BE40}
```

If the issue persists, see Using the Clean-Up Batch File to Remove Old Softphone Files.

Uninstalling the Five9 Softphone

Use these instructions to uninstall the softphone.

Considerations for Uninstalling the Softphone

- By default, the softphone installs with the auto-update feature enabled. The softphone automatically updates on release of a new version.
- Agents and supervisors with ***write permission*** on their workstation do not need to uninstall the current Five9 softphone on release of a new version. This is true regardless of whether the softphone was installed using the single workstation option or group deployment option.
- If agent and supervisor workstations are not configured with write permissions, the softphone auto-update feature will not work. You must uninstall the softphone for all users on release of a new version. You can then deploy the new version regardless how the previous version was installed (single workstation or mass/group deployment)

> **Note:** In some cases, new functionality in a softphone release may require that you uninstall the previous softphone from all workstations before installing the version. When that is required, Five9 will provide specific instructions.

Using the Clean-Up Batch File to Remove Old Softphone Files

In some cases, repeated installation of the softphone on a workstation may leave obsolete entries in the Windows Registry. These obsolete entries may cause group deployment scripts to fail with a message, "Product already installed."

Five9 installs a batch file for removing the softphone files, folders, and registry entries from a workstation. The batch file is installed in the %TEMP% folder of the workstation.

The clean-up batch file does the following.

- Stops any running softphone processes.
- Removes Five9 softphone folders.

- Removes Five9 softphone entries from the Windows Registry.

You can run the batch file for the logged-in user (per user) or for all users on the workstation (per machine).

> **Note**
> When you uninstall the softphone using the MSI installer in a command line, the installer automatically executes the clean-up batch file to remove any obsolete files remaining on the workstation.

To run the clean-up batch file:

1. Open a command prompt ***with administrator privileges***.
2. Change to the %TEMP% directory where the clean-up batch file was installed.
   ```
   cd %TEMP%
   ```
3. Run the clean-up batch file:
   - For all users on the workstation:
     ```
     softphone-cleanup.bat ALLUSERS
     ```
   - For a specific user on the workstation:
     a. Determine the security identifier (SID) of the user from which you want to remove the softphone:
        - Retrieve the SID of the *logged-in user*:
          ```
          whoami /user
          ```
        - Retrieve the SID of *a specific user*:
          ```
          wmic useraccount where Name='{username}' get SID
          ```
     b. Enter the following command.
        ```
        softphone-cleanup.bat {username} {SID}
        ```

Option 1: Uninstalling from a Single Workstation

To uninstall the softphone on a workstation, use Windows Control Panel or use the following commands in a command prompt.

1. Open a command prompt ***with administrator privileges***.
2. Enter this command to uninstall the softphone.

```
msiexec /x Five9SoftphoneService.msi
```

Option 2: Uninstalling in Group Deployment

If you use automation techniques to deploy the softphone using the command line to users with limited permission to update their workstation, the softphone will not automatically update when a new version is released. You must use automation to uninstall the softphone for all users before deploying the new version.

Uninstalling the Softphone in Group Deployment on Windows

This example illustrates uninstalling the softphone on a per-machine basis using Microsoft's Group Policy Object (GPO).

1. In Group Policy Management, locate the GPO used to install the softphone.
2. Locate the deployment package created under Group Policy Objects:
    a. For a deployment package for all users on each workstation (per machine), under **Computer Configuration**, expand **Policies**, then **Software Settings**, then **Software installation**.
    b. For a deployment package for each user (per user), under **User Configuration**, expand **Policies**, then **Software Settings**, then **Software installation**.
3. Select the software installation container that contains the package.
4. Right-click the program, point to All Tasks, and then select **Remove**.
5. When prompted, select an option to immediately uninstall the software or to allow users to continue to use the software.
6. Select **OK** to uninstall the package.

Uninstalling the Softphone in Group Deployment on macOS

To uninstall the Five9 Softphone Service from macOS for all users, mount DMG and run an uninstall script:

```
# /Volumes/Five9\ Softphone\ Service\ Installer/.content/uninstall.sh
```

Option 3: Uninstalling in Virtual Desktop Deployment

For details on uninstalling the softphone in a virtual desktop environment, see Virtual Desktop Configuration Administrator's Guide.

Updating the Software

This section describes what happens when Five9 releases new softphone and browser extension versions.

> **Note:** For information on updating the softphone in virtual desktop environments, see Virtual Desktop Configuration Administrator's Guide.

Updating the Five9 Softphone for a New Release

Automatic Softphone Installation

When Five9 releases a new version of the softphone, the new version automatically installs the next time the agent logs into their station. If there is an issue with the updated softphone, update messages may display in the browser on log in. Any failure in the migration to the new softphone requires manual installation. See **Installing the Five9 Softphone**.

> **Note:** To manually install the update, Windows users must first uninstall the Five9 softphone through Settings > Apps.

> **Important:** Security software may prevent automatic softphone updates. In this case, the softphone must be manually installed.

Softphone updates happen in the background at the agent's next login. If any failure occurs during the download or unpacking of the softphone update, this process repeats at the next login attempt until successful. The next agent login presents the new softphone version.

> **Note**
>
> If the agent has the **User Cannot Install Softphone** permission enabled in their user properties, a **Contact Your IT** message displays.

Updating the Softphone Manually

To manually install the update, Windows users must first uninstall the old softphone version using the command line:

1. Open a command prompt ***with administrator privileges***.
2. Uninstall the softphone:

   ```
   msiexec /x Five9SoftphoneService.msi
   ```

3. Install the new softphone. See **Option 1: Installing the Software on a Single Workstation**.

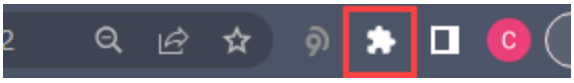
Updating the Chrome and Edge Browser Extensions

When Five9 releases a new browser extension version for Chrome and Edge, agents can update their browser to use the new extension. To install a new version of the Five9 browser extension for Chrome or Edge, agents must remove the existing extension and then install the new extension on their next log in (see also, **Installing and Managing the Five9 Softphone for Plus Applications**).

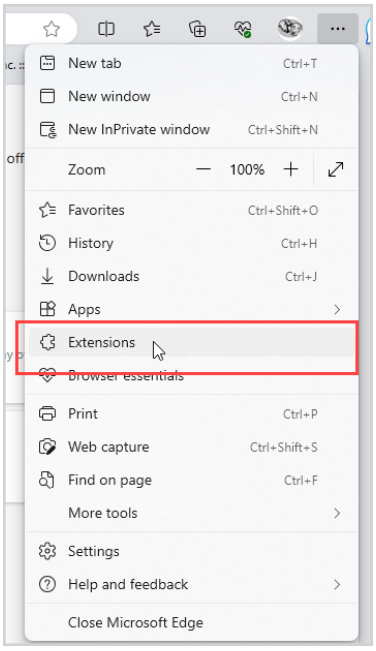
> **Important:** Five9 recommends that you plan the update to the new Chrome and Edge browser extension before early 2024, when Google discontinues support for the current Chrome extension manifest version (V2).

Removing Five9 Softphone Browser Extensions

In Chrome, select the Extensions icon, where you can remove the extension or access all installed browser extensions.



In Edge, select Extensions from the Settings and more menu to manually remove the browser extension.



After you remove the extension, log into Five9 to install the new browser extension (see **Installing and Managing the Five9 Softphone for Plus Applications**).

Updating the Firefox Browser Extension

When Five9 releases a new version of the browser extension, a button displays in the adapter on log in. The agent installs the update by selecting **Download**. Agents do not need to remove the old browser extension. If the browser contains old extensions, the installation window automatically displays the new extension.

Downloading Software Versions for Early Access

When Five9 prepares a new version of the softphone or browser extension for release, IT personnel and administrators may need to download the next version of the software in advance for testing in their environment and to prepare for deployment. Early access to the next software version is especially important for customers who use group deployment techniques to install software.

The Tools & Add-Ons page on the Five9 Customer Portal provides a section to download the browser extensions and installer files that support the next release.

1 Login to the Five9 Company Portal and select **Tools & Add-Ons**.

2 Under Next Version of the Softphone, select **follow these steps** to display links and instructions.

3 Use the links to download the installation files for the browser versions and workstation operating systems that you support.

Note

After Five9 releases the new version of the softphone or browser extension, clicking the links in the **Next Version of the Softphone** section of the Tools & Add-Ons page downloads the current files.

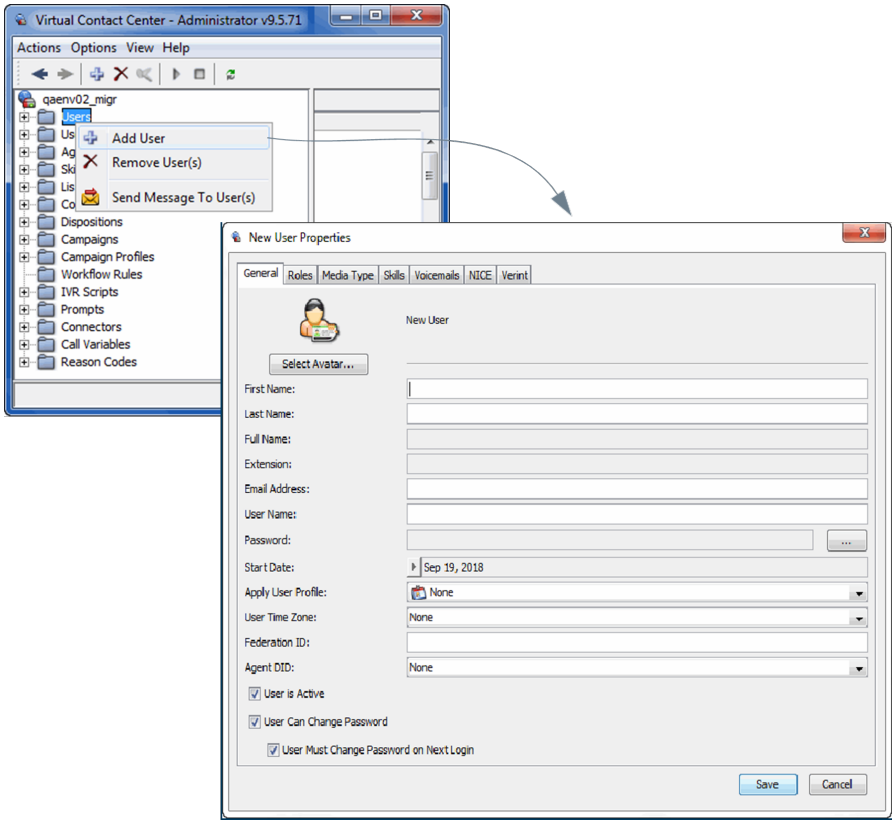
Managing User Definitions

User configuration may contain a password, user profile, queue membership, roles, and permissions. Before creating users, be sure to create the user profiles, agent groups, and queues that you will add to the user definitions. The number of users that you can add, regardless of the role, is determined by your license.

Adding Users
Duplicating Users
Removing Users
Accessing User Properties

Adding Users

In the navigation pane, right-click **Users**, and select **Add User**.



Field	Definition
First Name	First name of the user
Last Name	Last name of the user
Full Name	Automatically populated from First Name and Last Name fields.
Extension	Number automatically assigned the first time that you save the user's properties. You can change the number to any unique four digits.
Phone Number	This field is no longer used.
Email Address	Email address required for voicemail notification and announcements.
User Name	Login ID for the VCC. User names are case sensitive and must be unique across all Five9 domains. To ensure a unique user name, use the email address, which is populated when you type the email address. You can also use a different format,

Field	Definition
	such as <first name last name> or <first initial last name>. Do not use these characters: ' * \ ' ~ & % # , ! I () ^ / \ < > : ; ? [ ] { } + = and any non-Latin symbols.
Password	Default password populated when you type the email address. However, you cannot save a user with the default password and without the User Can Change Password option. To change the password, click the dotted button, and enter a password.
Start date	Start date field is used in reporting to enable analysis of agent performance. Click the arrow icon to select the agent's start date. The Start date does not affect the ability of the agent to log in.
Apply User Profile	Optional user profile. If you assign a predefined profile, the roles and skills for this user are taken from the user profile properties.
User Time Zone	Date and time fields displayed to users. You may choose a time zone or let the system detect the user's time zone.
Unified Communication ID	This field is no longer used.
Federation ID	User name or ID used for single sign-on.
Agent DID	DNIS assigned directly to an agent. Any unassigned DNIS may be assigned to an agent. Calls to this DNIS are treated as agent-to-agent calls.
Locale	If your domain is enabled for multiple languages, you can change the language displayed in the user applications to any language supported in your domain. This value overrides the value selected by the agent. The Administrator, Supervisor, and Reporting roles can override the default locale.
User is Active	Enables users to log into Five9 applications. Inactive users appear in reports. Deleted users appear in some reporting data as [Deleted].
User Can Change Password	Enables the user to change the password. Overwrites your domain setting (Configure > Password Policies > Users Can Request New Password on Login Page). Enabled by default. Without this permission, users cannot see the Security Settings tab in My Settings and are not prompted to select or update their security questions when they log in.
User Must Change	If the previous option is enabled, you can force the user to

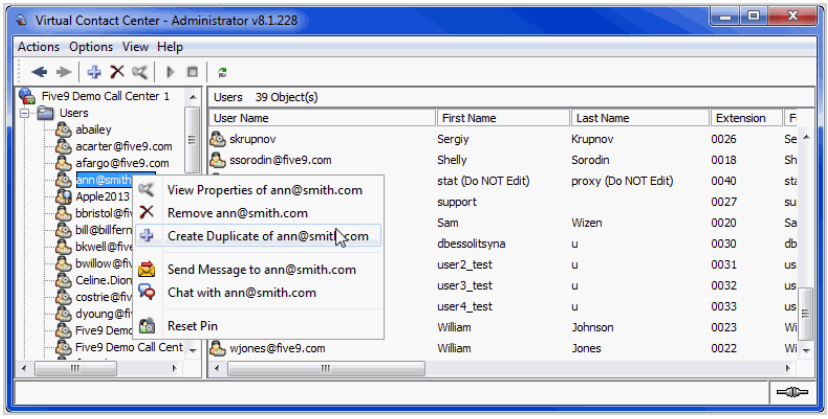
Field	Definition
Password on Next Login	change the password at the next login. Enabled by default.
User Can Access Billing Tab	Whether users can see the Billing tab after logging into the Five9 account.

Duplicating Users

1 In the navigation pane, select the user that you want to duplicate.

2 Right-click the user, and select **Create Duplicate**.

The properties are copied to a new object called <*original object name*> - Copy. The duplicate property window opens. The Roles, Skills, Callbacks, Voicemails, and Recordings tabs are copied.



3 Enter the information for the duplicate.

4 Assign an extension and start date.

Removing Users

When users leave your organization, change the account password to ensure that the person cannot access the Five9 application remotely.

Five9 recommends that you disable users instead of deleting them because if you delete a user, you lose all data attached to that user. After you have retrieved all data and followed up on any outstanding items, you can delete the user. You may also wait

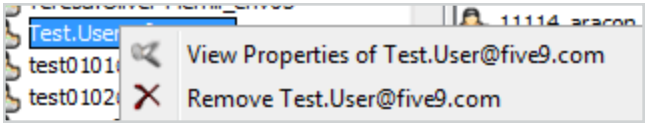
until your 60-day data retention period is reached so that the data is deleted automatically.

To deactivate a user, disable **User is Active** in the General tab of the User Properties screen. To remove users from a skill group, see Managing Skill Group Users.

Deleting a Single User

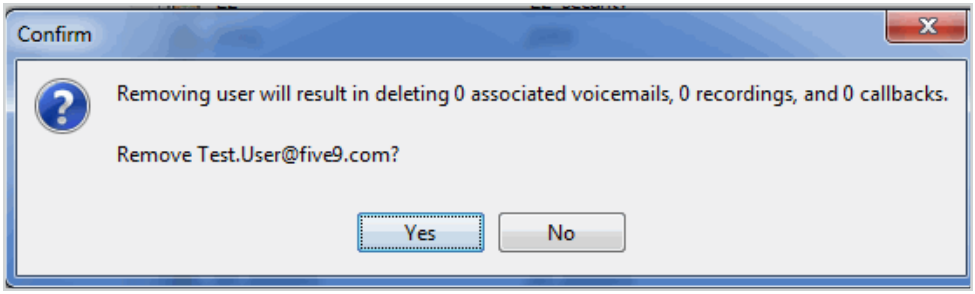
To delete an account with all associated records, follow these steps.

1. Right-click a user name, and select **Remove** *username*.



2. Click **Yes**.

   A confirmation message shows the number of voicemail messages, recordings, and callbacks that are removed with the user.

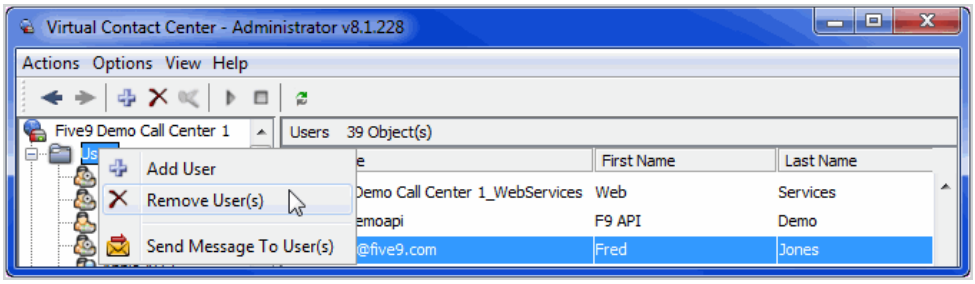


3. Click **Yes** to confirm that you want to delete the user.

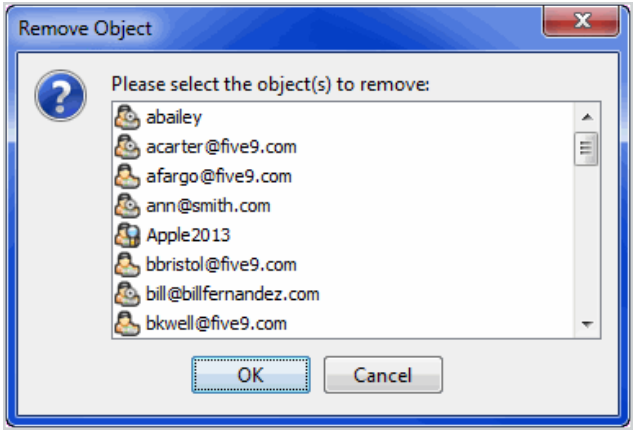
Deleting Multiple Users

Follow these steps.

1 In the navigation pane, right-click **Users**, and select **Remove Users**.



2 Select one or more users.



3 Click **OK**, and **Yes to all** to remove the selected users.

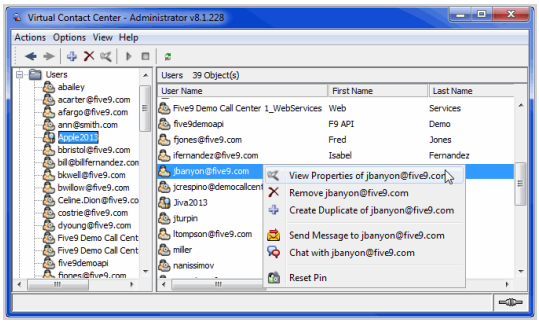
Accessing User Properties

Follow these steps.

1 In the navigation pane, click **Users**.

2 Double-click the a user in the list, or right-click on a user in the list and select

View Properties.



Assigning User Roles and Permissions

The roles assigned to users determine which Five9 applications they can access. Each user must have at least one role. Agent is the default role. For each role that you assign, you need to define the permissions for the tasks each user is allowed to perform in the assigned role.

> **Note:** The usage for an API Only User is comparable to a user created in our admin tools where API access was granted using legacy permissions. See User and User Details in Administrator Console Administrator's Guide

You can change assigned roles at any time and define permissions for individual users in the **Roles** tab of the **User Properties** window.

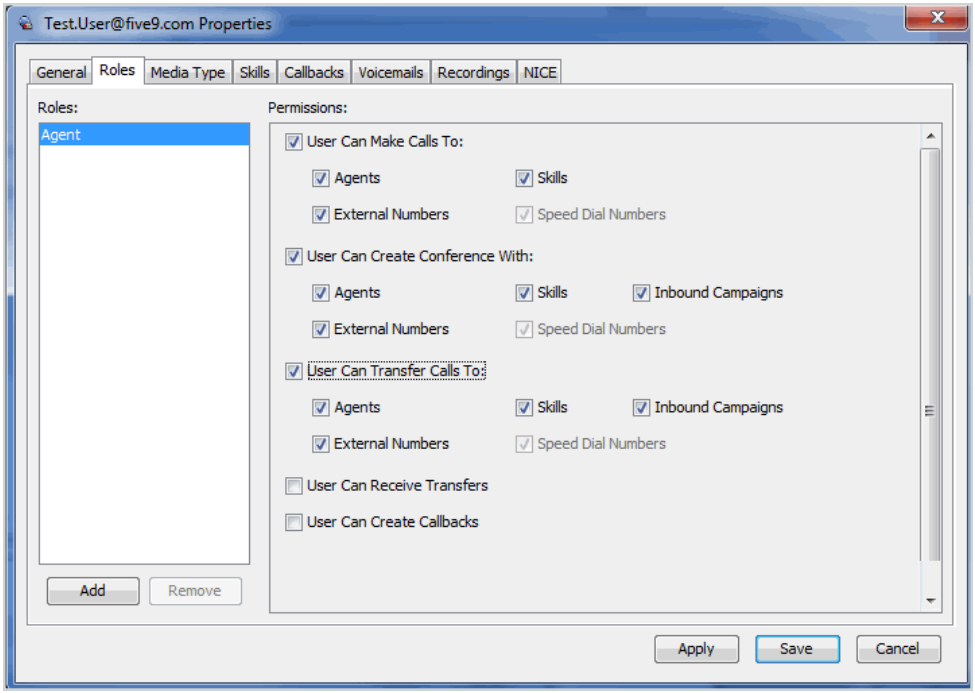
Define permissions for user profiles in the **User Profile Properties** window. If you assign a user to a user profile, the Roles tab is disabled for that user in the **Users** > **User Properties** tab. See **Defining User Profiles** for details.

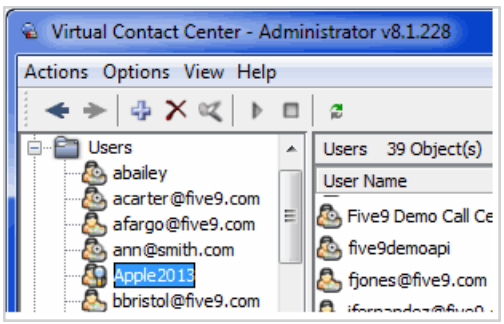
The available permissions depend on the selected role. See **Accessing User Properties**.

Role	Description
Administrator	Sets up the Virtual Contact Center (VCC) and manages daily operations.
Supervisor	Manages agents and campaigns from the Five9 Supervisor application. Supervisors can monitor logged-in users, agent status,

Role	Description
	chat sessions, campaigns, and run reports.
Contact Records Manager	Can use the Web2Campaign API. This role has only the permission Can Access W2C.
Agent	Processes calls and text interactions from the Five9 Agent application.
Reporting	Runs reports in the Reports portal.

1 To display the list of possible roles and assign additional roles to a user or user profile, click **Add** in the **User Profile Properties** window.





2 Select one or more roles and click **OK** to add roles to a user or user profile.

The selected roles immediately appear in the list. Users with multiple roles can use the same login account for all applications.

3 For each role, check all permissions that you want to enable for the user.

- Agent Permissions
- Supervisor Permissions
- Administrator Permissions
- Contact Records Manager Permission
- Reporting Permissions

Agent Permissions

Important

Agents who log into a PSTN station or forward calls between sessions may incur high long-distance fees. Therefore, be sure to give permission only to the appropriate users.

Primary Permission	Secondary Permission	Description
User can access Agent applications	Java client Web client	Can access either or both agent applications.
User can make calls to		Can dial calls manually and make callbacks (see below for information on callbacks).
	Agents	Can call specific agents.
	External Numbers	Can call external numbers, including predefined speed-dial numbers. External Numbers and Speed Dial Numbers options are mutually exclusive; you can't select both options. **Note:** If you don't want agents to connect to external numbers in general but do want agents to connect to specific external numbers defined as speed-dial numbers, select **Speed Dial** and ensure that **External Number** isn't

Primary Permission	Secondary Permission	Description
		selected.
	Skills	Can call into specific queues.
	Speed Dial Numbers	Can call predefined speed-dial numbers. Speed-dial numbers can include preset external numbers. If Speed-Dial Numbers is checked, External Numbers cannot be checked.
User can create conference with		Can add a conference participant to a call.
	Agents	Can create conference calls with agents.
	Inbound Campaigns	Can create conference calls in inbound campaigns.
	Skills	Can create conference calls by using skill groups.
	External Numbers	Can create conference calls with external numbers, including predefined speed-dial numbers. External Numbers and Speed Dial Numbers options are mutually exclusive; both options cannot be checked. **Note:** If you do not want agents to connect to external numbers in general, but do want agents to connect to specific external numbers defined as speed-dial numbers, de-select the **External Number** box, and select the **Speed Dial** box.
	Speed Dial Numbers	Can add speed-dial numbers to conference calls. Speed-dial numbers can include preset external numbers. If Speed-Dial Numbers is checked, External Numbers cannot be checked.
User can transfer calls to		
	Agents	Can transfer calls to agents.
	Inbound Campaigns	Can transfer calls to inbound campaigns.

Primary Permission	Secondary Permission	Description
	Skills	Can transfer calls to skill groups.
	External Numbers	Can transfer calls to external numbers, including predefined speed-dial numbers. External Numbers and Speed Dial Numbers options are mutually exclusive; both options cannot be checked. **Note:** If you do not want agents to connect to external numbers in general, but do want agents to connect to specific external numbers defined as speed-dial numbers, disable the **External Number** box, and select the **Speed Dial** box.
	Speed Dial Numbers	Can transfer calls to predefined speed-dial numbers. Speed-dial numbers can include preset external numbers. Ensure that External Numbers isn't selected.
User can receive transfers		Can receive transfers from other agents.
User can create callbacks		Can create callback reminders for customers who were contacted during the user's session. User Can Make Calls permission isn't required.
User can configure automatic answer settings		Can disable the auto-answer options in the Agent application, which forces agents to manually answer calls by clicking Accept. This permission is enabled by default and doesn't affect the Hang-up Phone When Call Ended setting in the softphone options. **Important:** For outbound calls placed by the dialer, instruct your agents to never disable automatic answer because the time allowed to answer the call expires before agents can answer.

Primary Permission	Secondary Permission	Description
	User can reject ringing calls	When auto-answer is disabled, agents can decline incoming calls by pressing Reject.
User can process skill voicemail messages		Can process voicemail messages sent to a skill group. See **Managing Skill Voicemail Messages**.
	User can delete skill voicemail messages	Can delete messages.
User can transfer voicemail messages		Can transfer messages to another user or skill group.
User can record calls		Can record calls or a portion of a call. See **Managing User Recordings**.
User can send messages		Can send messages to Agents, Administrators, or Supervisors.
User can create chat sessions		Can start a chat session with other Agents, Administrators, or Supervisors.
User cannot remove contact data		Prevents users from deleting contact records. In most cases, it is best to select this for all agents.
User cannot edit contact record session notes		Prevents users from changing contact record notes.
User can enable call forwarding		Can enable call forwarding.
User can add numbers to DNC list		Can add numbers to the DNC list either directly or by using a disposition.
User can manually dial numbers in the DNC list		Can manually call the numbers in the DNC list. For more information about enabling DNC-related permissions for agents, see **Managing Do Not Call (DNC) Lists**.

Primary Permission	Secondary Permission	Description
		Note: The system restricts an agent who doesn't have this permission from dialing a number in the list, it displays a message when a restricted agent attempts to make a call.
User can select system disposition named Recycle		Applies to outbound dialing. Enables the agent to recycle a number back into the queue to be dialed again when the number comes up.
User can play audio files to callers		Can play recorded messages while on call or leave standard recorded messages to answering machines (the Play Audio File button).
User can wrap up call		Can end a call and assign a disposition afterward. Without this permission, agents can end a call only by setting a disposition.
User can place call on hold		Can place a call on hold.
User can park call		Can park a call.
User can skip contact records in Preview Dialing mode		Can skip preview records. Disabled by default. See also, Preview Dialing in Campaign Administrator's Guide.
User can manage availability by skill		Can select queues when logging in.
User can browse web in embedded browser		Can use the embedded browser located as a tab on the Current Call screen in the Agent application. This permission enables agents to open any URL. This permission is not required to use a connector in the browser tab.
User can change screen pop preview		Can control the appearance of the pop-up preview window.

Primary Permission	Secondary Permission	Description
preferences		
User must pick Salesforce object For interaction log		Applies only to Salesforce integrations. Required to associate all calls with a Salesforce object, such as an account or lead.
User cannot manually install softphone		Cannot install and update the softphone. When the permission is enabled, you must install and update the softphone for users.
User can select display language		If your domain is enabled for localization, user can change the language displayed in their VCC applications to any language supported in your domain. Disabled by default.
User can display missed calls		Can view, return, and schedule reminders for calls missed during the current logged-in session. Enabled by default.
User can transfer chat interactions to	Agents Skills	Visible if you are enabled for chat interactions in Agent Desktop Plus. Can transfer chat interactions to another agent or to a group of agents (queue).
User can transfer email interactions to	Agents Skills	Visible if you are enabled for email interactions in Agent Desktop Plus. Can transfer email interactions to another agent or to a group of agents (queue).
User can create chat conference with	Agents	Visible if you are enabled for chat interactions in Agent Desktop Plus. Can create chat conferences with another agent or a group of agents (queue).
User can transfer social interactions	Agents Skills	Visible if you are enabled for social interactions in Agent Desktop Plus. Can transfer social interactions to another agent or to a group of agents (queue).
User can search email interactions	Only for assigned skills. Only that have ever been assigned to the user.	Visible if the agent is enabled for email interactions in Agent Desktop Plus. Allows agents to search email interactions and lock interactions that show in the search results. Five9 recommends that you enable this for all agents so they can use it rather than the Text

Primary Permission	Secondary Permission	Description
	User can lock open interactions in search results	Channel Filters settings.
User can receive notifications about supervisor monitoring		Can receive audible notification of Supervisor monitoring event.
User can download and save email messages		Can download email interactions as a file.
User can unlock email interactions routed automatically		Enabled by default. Can unlock email interactions that were assigned in AID mode.
User must use latest interface in integrated adapters		Enables responsive UI for user, if the associated adapter supports responsive UI. User can't select Classic design with this option enabled.
User can add/remove mobile numbers from SMS opt-in list		User can place a mobile number on or off of the Opt-in List.
User can send messaging attachments		Enables user to attach files and images to chat and SMS messages.

Supervisor Permissions

Important

Supervisors who log into a PSTN station or forward calls between sessions may incur high long-distance fees. Therefore, be sure to give permission only to the appropriate users.

To use the Statistics Web Services, users must have the Supervisor role. Set the appropriate permissions for each user.

Primary Permission	Secondary Permission	Description
User can access the Supervisor application	Java client Web client	Can access either or both supervisor applications. Users will see the link for only the selected client in the Five9 Portal.
User can execute Web API requests		Can execute Statistics Web Services API requests. This permission is enabled for existing users and is disabled by default when creating new users. Additional permissions may be required for specific object classes.
User can view user details		Can view the Users tab of the Supervisor application, which shows the login information.
User can view agents data	User can view	Can monitor agent status and view agent statistics and ACD queues.
	User can edit agent skills	Can add and remove skills and change skill levels for agents that the supervisor can view.
	User can review voice recordings	Can access voicemail messages and recordings associated with each agent that the supervisor can access.
	User can monitor calls	Can listen to agents' calls.
	User can barge into calls	When monitoring calls, can speak with customers.
	User can	When monitoring calls, can speak to agents

Primary Permission	Secondary Permission	Description
	whisper to agents	without the customer hearing the supervisor.
	User can monitor idle agents	• **Enabled**: When monitoring calls, the supervisor can monitor and listen to the agent's voice, including the time between active calls. • **Disabled**: When monitoring calls, listen mode is disabled between active calls. **Important:** You are responsible for complying with all privacy laws and regulations that govern your use of the contact center service, including that you may be required to notify agents that this monitoring feature is enabled and in use.
	User can monitor manual outbound calls	Can monitor outbound calls made manually by agents. Supervisor view is determined by agent group and skill filter settings.
	User can monitor email interactions	Can view agents' active email interactions.
	User can transfer email interactions	Can transfer email interactions to another user.
	User can monitor chat interactions	Can monitor agents' active chat interactions.
User can view station data		Can view station IDs assigned to your domain.
User can view internal message data (Java only)		Can view active internal messaging sessions.
User can view campaign details		Can view the Campaigns tab, which contains campaign status information and statistics.

Primary Permission	Secondary Permission	Description
	User can start campaigns	Can start outbound and autodial campaigns.
	User can stop campaigns	Can stop outbound and autodial campaigns.
	User can reset campaigns	Can reset outbound and autodial campaigns.
	User can reset campaign dispositions	Can start and stop campaigns, reset campaigns and dispositions, and reset the dialing list position for outbound and autodial campaigns.
	User can reset list position	Can reset the dialing list position for outbound and autodial campaigns.
	User can reset abandoned calls rate in available campaigns	Can reset the dialer's dropped call percentage for outbound and autodial campaigns.
User can view text data		Can view and log into the Text Details tab, which provides access to the Five9 Chat and Email.
User can view all skills data		If enabled, supervisors have complete access. Otherwise, supervisors have access only to the Agent Statistics and Agent State for their assigned skills.
User can view all agent groups data		Can access all agent groups. Otherwise, supervisors have access only to the Agent Statistics and Agent State for their assigned agent groups.
User can access Excel dashboard menu (Java only)		Can access the Five9 dashboard menu. Any dashboard created before disabling this permission is still available.
User can view call charges		Can see information about call charges: • Agents tab > Agent Statistics > Call Charges • Campaign tab > Campaign Statistics > Call Charges
User can		Can select and rename data fields in the Supervisor Plus application.

Primary Permission	Secondary Permission	Description
manage data fields		
User can select display language		Can localize UI presentation for language.
User can manage compliance data		Can search, filter, and delete personal user data in the application Compliance tab.

Administrator Permissions

Users with all administrator permissions can edit other administrator users and can assign limited permissions to other administrators. Administrators with limited permissions can access the properties of other users who have the administrator role and give the administrator role to other users.

Important

To use the Configuration Web Services, users must have the Administrator role. Be sure to set the appropriate permissions for each user.

Full Access Permissions

Primary Permission	Secondary Permission	Description
User can access Java VCC Administrator application		Can access Administrator application. Users will see the link for only the selected client in the Five9 Portal.
User can use Administrator Services		Can run Configuration Web Services API requests.
All administrators permissions (User can edit other administrator users)		Full access to all roles, permissions, and users in the administrator application.

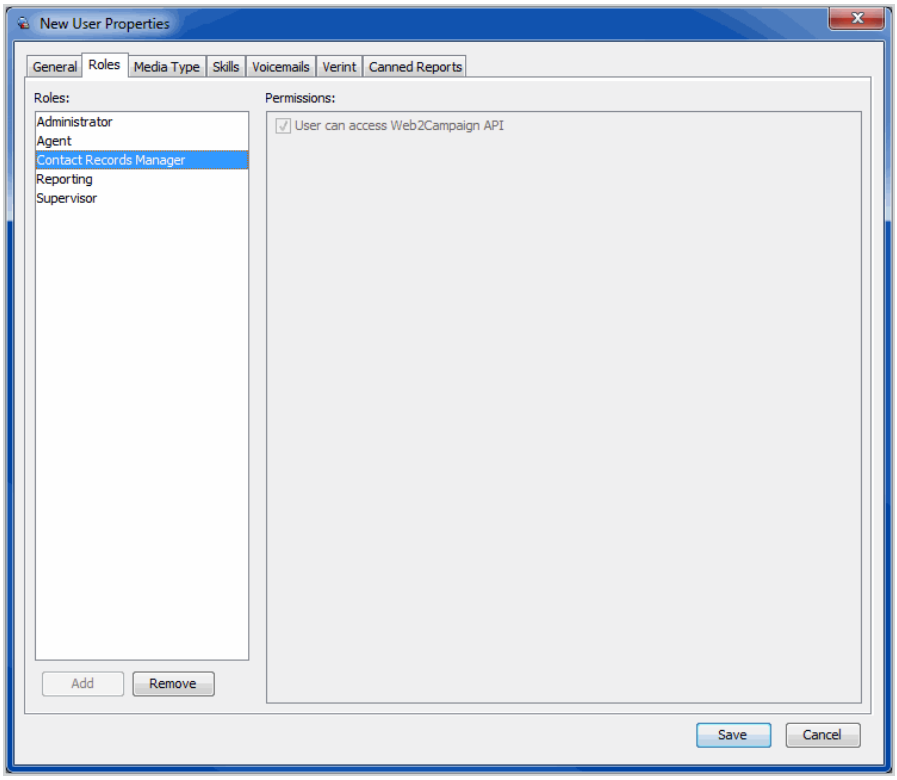
Limited Permissions

Primary Permission	Secondary Permission	Description
User Can Access VCC configuration, and can set default ANI		Can change the VCC Configuration (Actions > Configure) and the domain's default ANI from the Actions menu.
	User can edit trusted IP addresses	Can edit the trusted IP ranges in the VCC configuration.
	User can edit e-mail list for maintenance notifications	Can edit the list of recipients of maintenance notifications that apply to the domain.
User can manage users, except administrator users		Depending on the permissions selected below, can see and edit users, user profiles, and skill and agent groups.
	Users and user profiles	Can see and edit other users (except other administrators) and user profiles.
	Skills	Can see and edit the Skills folder.
	Agent groups	Can see and edit the Agent Groups folder.
User can manage campaigns		Can edit campaign properties and perform other campaign-related actions, according to the permissions below.
	Start and stop campaigns	Can start, stop, and force stop campaigns.
	Reset, update, and schedule updates for dispositions	Can manage dispositions in campaigns.
	Reset campaigns	Can reset campaigns.
	Reset list position	Can reset the list position.
	Edit, create, and delete campaigns	Can add, delete, and edit campaign properties.
	Edit email list for	Can edit the list of recipients of

Primary Permission	Secondary Permission	Description
	maintenance notifications	maintenance notifications that apply to campaigns.
User can manage lists, contact records, and DNC list		Can manage contact record, depending on the permissions below.
	Calling lists	Can create and delete dialing lists and perform list-related actions, such as updating lists.
	Contact records	Can manage contacts and perform related actions, such as updating contact records.
	DNC list	Can add numbers to and remove numbers from the Do Not Call list and check the DNC list for numbers.
User can edit IVR scripts		Can add, remove, and edit IVR script properties.
User can edit campaign profiles		Can add, remove, and edit campaign profiles properties.
User can edit connectors		Can add, remove, and edit connector properties.
User can edit dispositions		Can add, remove, and edit disposition properties.
User can edit prompts		Can add, remove, and edit prompt properties.
User can edit reason codes		Can add, remove, and edit reason code properties.
User can edit workflow rules		Can add, remove, and edit workflow rules.
User can edit variables		Can add, remove, and edit call variable properties and call variable groups.
User can edit export destinations		Can add, remove, and edit export destinations set at the domain configuration or campaign level. Enabled by default.

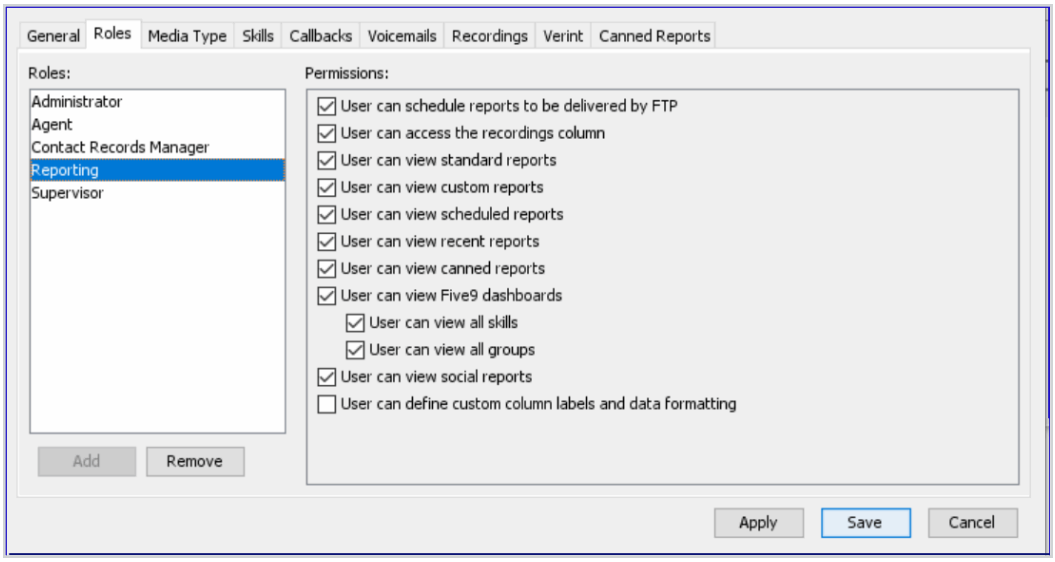
Contact Records Manager Permission

Users with contact records manager permissions can access the Web2Campaign API.



Reporting Permissions

Users with reporting permissions can run reports in the Dashboards and Reports Application. Users who need access to Dashboards must be given explicit permission. Supervisors are able to see only the dashboards and run reports for their assigned campaigns and skills.



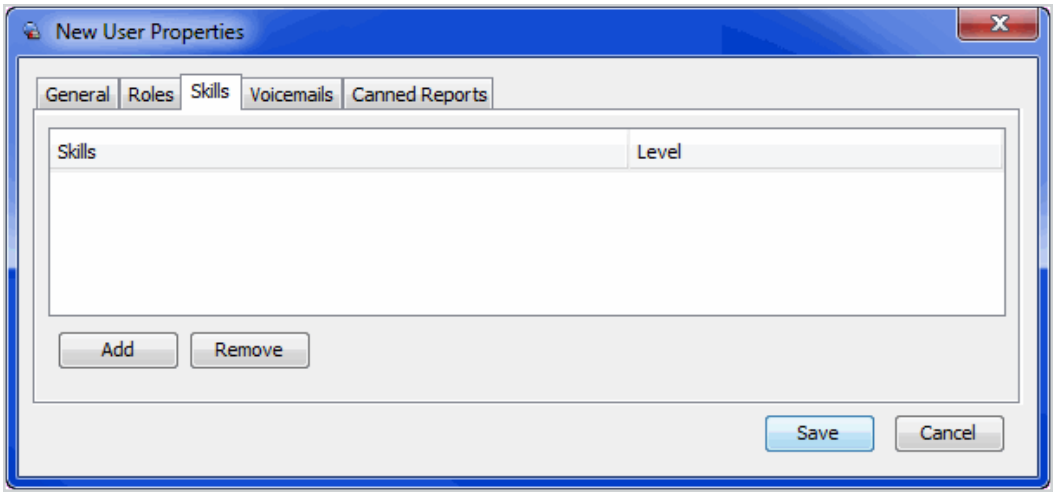
Primary Permission	Secondary Permission	Description
User can schedule reports to be delivered by FTP		Can schedule reports to be delivered by email or FTP delivery several times each day. Can send email reports to several addresses.
User can access the recordings column		Can access only the Recording column and links to recordings. Enabled by default.
User can view standard reports		Can access the reports that contains the major categories of data.
User can view custom reports		Can access the customized standard reports and custom reports.
User can view scheduled reports		Can access the reports scheduled by users.
User can view recent reports		Can access the recently generated, exported, or scheduled reports.
User can view		Can access the Canned Reports, which can be run only

Primary Permission	Secondary Permission	Description
canned reports		by users with the reporting role.
User can view Five9 dashboards	User can view all skills	Can access Five9 dashboards to view and run dashboard reports and view Key Performance Indicators (KPIs) for the contact center.
	User can view all groups	By default, supervisors with permission to view dashboards can see only the dashboards for the skill and groups to which they belong. If a user should have permission to see all skills or groups, check the box for that specific permission.
User can view social reports		Can access social reports (chat, email, and social) only if you are licensed for text channels.
User can define custom column labels and data formatting		Can fully customize report labels and display column formatting.

Assigning Users to Queues

Queues contain the interactions that agents can process and the tasks that agents can perform in a campaign. In the Skills tab of the agent's properties, you assign queues to the agent. The Level option represents the priority of the queue for this agent. Level 1 is the highest priority. Different agents may be assigned the same queues, but the priority for each agent may be different. For example, when interactions are routed to agents who are assigned the same queues, agents who have the highest Level (priority) may receive interactions first, depending on the distribution method that is selected. Note that other factors can affect how interactions are routed. For a description of these factors, see **Setting the Distribution of Interactions**.

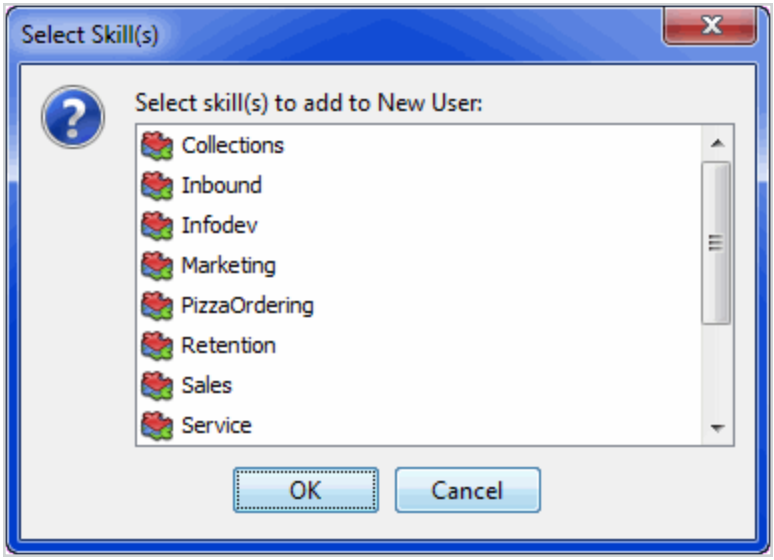
Selecting Queues for Agents



1 Click **Add t**o assign a user to one or more queues.

Queues organize your agents and supervisors according to tasks and responsibilities. You can also add agents to a queue from the Properties window of the queue.

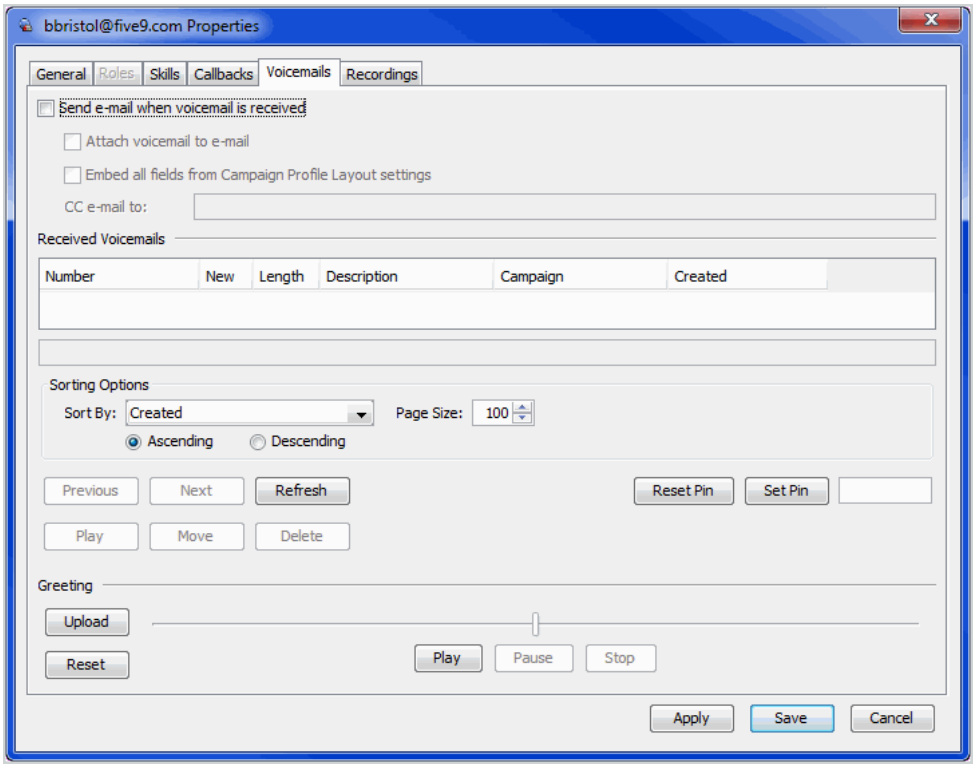
2 Select one or more queues to assign to an agent.



3 Click **OK**.

4 Select the **Voicemails** tab to define how a user can interact with voicemail messages.

See Managing User Passwords and Voicemail PINs and Managing Voicemail Greetings.



5 If you have assigned the reporting role, click the **Canned Reports** tab.

See also, Managing Canned Reports.

6 To save the new user, click **Save**.

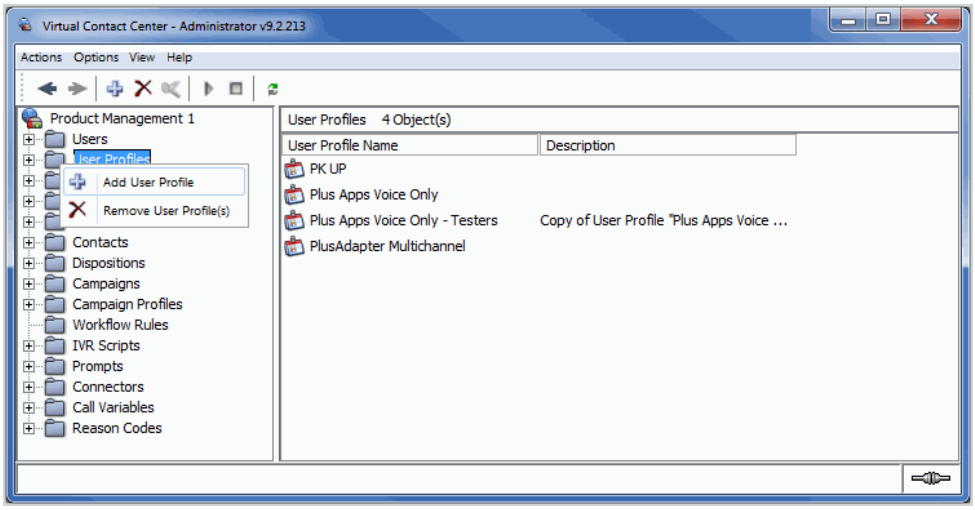
Defining User Profiles

User profiles enable you to create and assign specific user options, such as roles, permissions, and skills, to groups of users. Additionally, they enable you to control the default field layout and contact record search conditions for group members.

Assigning a user profile overwrites any previously configured roles, permissions, and skills options for users. You can also assign a user to a user profile in the user properties (see Accessing User Properties).

Adding User Profiles

1 In the navigation pane, right-click User Profiles, and select **Add User Profile**.



2 Configure the properties as for a new user.

See Adding Users.

Tab	Actions or Definitions
General Tab	Enter the name and description of the user profile and list of members. Click **Add** to assign the profile to users. Click **Remove** to remove a user from the list. **User Time Zone:** Date and time fields displayed to users. You can choose a specific time zone, or you can let the system detect the user's time zone. **Locale:** If your domain is enabled for multiple languages, you can change the language displayed in the user applications to any language supported in your domain. This value overrides the value selected by the agent. The Administrator, Supervisor, and Reporting roles can override the default locale.

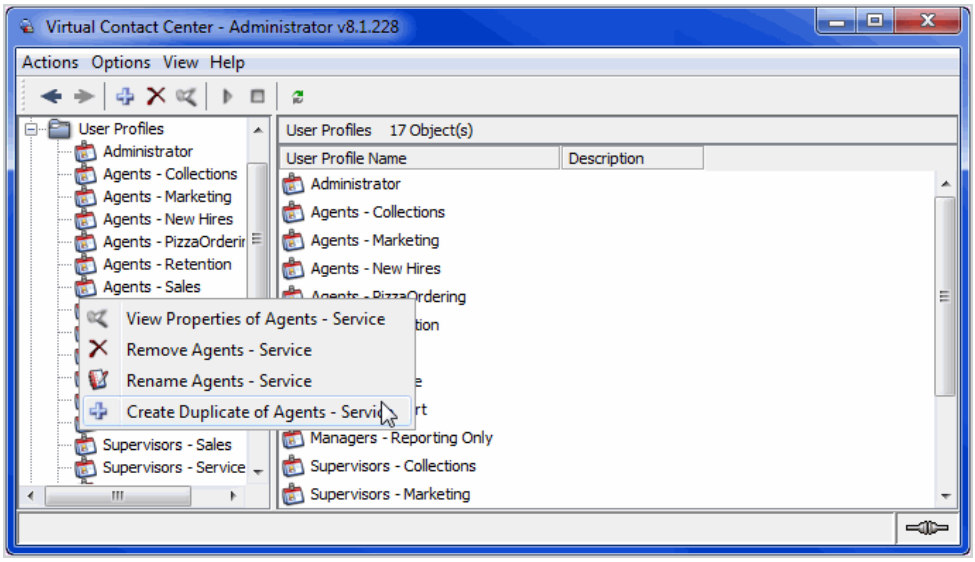
Tab	Actions or Definitions
Roles	Assign or remove roles and permissions. See **Assigning User Roles and Permissions**.
Media Type	See **Setting the Media Types for Text Channels**.
Skills	Manage skill groups. Enabled only for users with the agent or supervisor roles. See **Managing Skill Group Users** and **Accessing User Properties**.
Layout	Select contact fields and variables shown to agents and which fields they can edit when handling calls for a campaign associated with the profile. You can control how the fields are displayed by configuring the width of the fields, you can move fields up or down, and you can preview the layout. See **Configuring a Campaign Profile Layout**. User profiles do not allow you to show call variables as part of the layout because agents in a user profile may work with various campaigns. Different call variables may apply to each campaign.
	Allow User to View/Edit the Following Fields Only: users assigned to the profile can access only fields listed in the Data Fields table. If this option is disabled, the default global contact field options apply.
	Add, Edit, and Delete: manage contact fields in the profile.
	Up and Down: arrange fields in the table. The order determines the display order of the fields in the agents' desktop.
	Preview: preview the contact field layout.
	Show Contact Record Sessions Posted by Other Users: users assigned to the profile can access all information about previous calls from other users, including their notes, in the Contacts tab of the agents' desktop.
	Users Can Perform Lookup: users assigned to the profile can search contact records in the Contacts tab of the agents' desktop. In the following field, you can also limit the accessible lookup data by configuring the Record lookup Condition.
	Contact Record Lookup Condition: filter the results that the users receive when searching for a contact record. Click Edit to access the Condition pop-up dialog, where you can configure one or several criteria and link them by logical operators (OR/AND).

Duplicating User Profiles

Follow these steps.

1. In the navigation pane, select the profile that you want to duplicate.
2. Right-click the user, and select **Create Duplicate**.

   The properties are copied to a new object called <original object name> - Copy. The duplicate property window opens. The roles, skills, permissions, and layout configuration are copied.



3. Enter the information for the duplicate profile.

Setting the Media Types for Text Channels

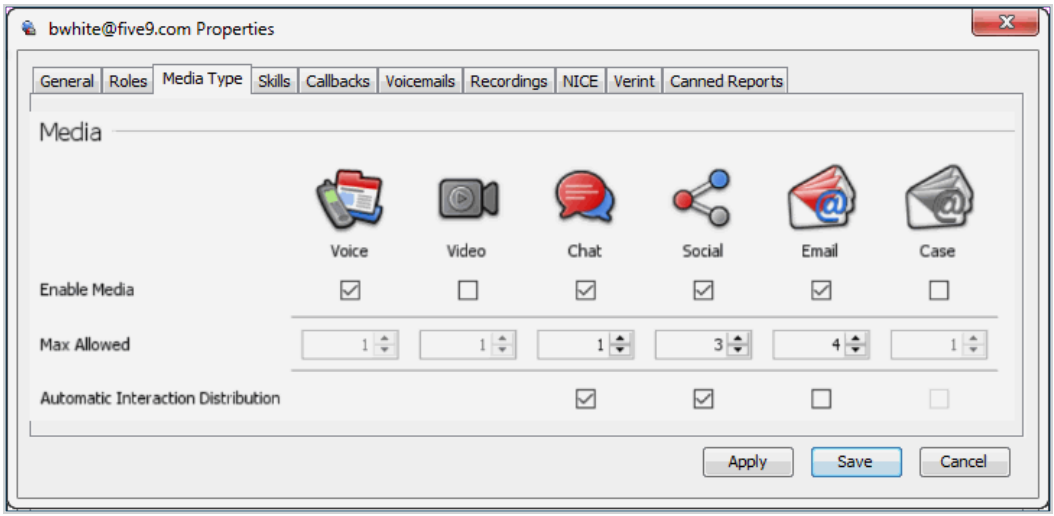
If your contact center is using text channels and the implementation is complete, you see the Media Type tab in the Properties tab. Some configuration is required in VCC and some in the Text Channel server. Use the Media Type tab to define which types of interactions each user may have with contacts.

For each user, you can define the allowed types of interactions. Depending on their assigned skills, agents can interact with your customers through voice and any combination of text channels. Agents respond to incoming requests coming from email, chat, or social tools, such as Facebook and Twitter. Text channels are available only with inbound campaigns. Voice interactions can be configured for inbound and

outbound campaigns. If your domain is enabled for Five9 Engagement Workflow, this media type panel also enables you to select Salesforce Chat and Case media types for interaction routing.

Important

To route Salesforce cases to agents, enable Chat and Case media types.



If your contact center uses text channels in addition to voice, specify which of the channels each agent can use and the maximum number (**Max Allowed**) for each type of interaction that the agent can have at any time. In this example, the agent is allowed to engage in all media channels.

If Intelligent Routing is enabled, incoming requests are automatically presented to the agent to accept or reject until the specified maximum number is reached. If Intelligent Routing is disabled, the agent can select interactions manually (or *cherry pick*) from the queue. In this example, Social is not enabled so the agent may select a new social request from the media queue if the agent has not reached the task limit.

Managing Agent Groups

Creating agent groups enables you to simplify user configuration. Users can be grouped by skills, their role in a campaign, or other designation. Only users assigned the agent or supervisor roles may be added to agent groups.

Supervisors can filter agents based on groups. In the **Agents** tab of the Supervisor application, select

View > Filter Agents by Groups > Individual Groups > Group Name

or

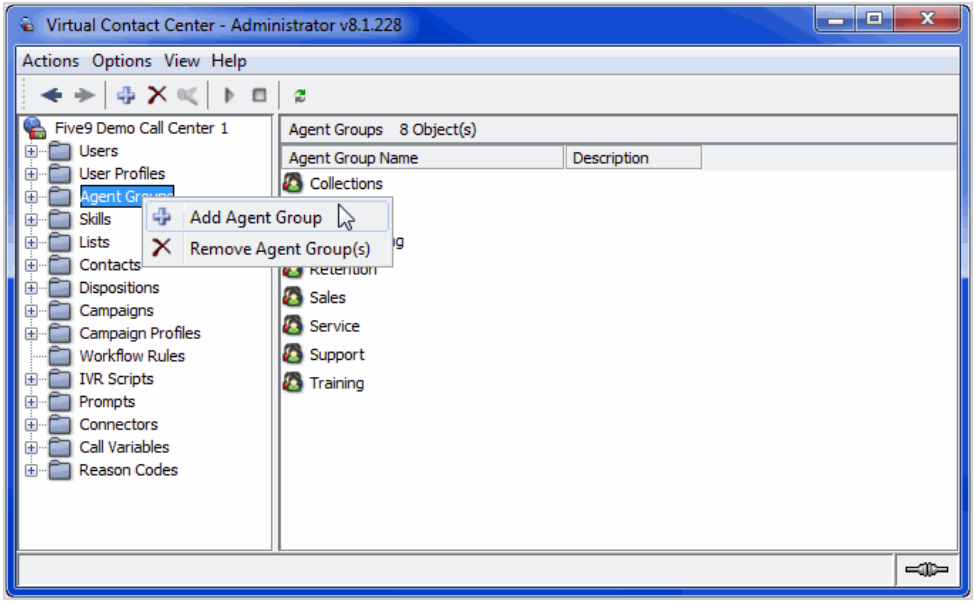
View > Filter Agents by Groups > All Groups.

Supervisors might not have permission to see all skills and all agent groups. Supervisors can broadcast a message to groups and skills to reach all agents with the definitions in common.

Agent groups appear in agent reports. For example, reports can show how effectively supervisors manage the groups by running a report that shows which agent group occupancy is higher (which supervisor is more effective in keeping the agents busy).

Creating Agent Groups

1 In the navigation pane, right-click Agent Groups, and select **Add Agent Group**.



2 Name and describe the group.

3 To add users to the group, click **Add**.

4 Click **Save** to save the user definition.

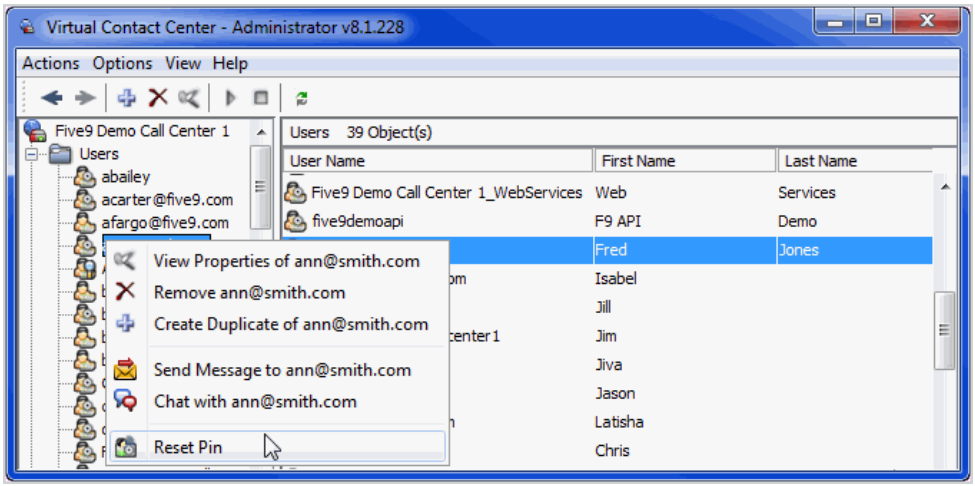
Duplicating Agent Groups

When you copy an agent group, all agents in the original group are copied to the new group.

1 In the navigation pane, select the agent group that you want to duplicate.

2 Right-click the group, and select **Create Duplicate**.

The properties are copied to a new object called <original object name> - Copy. The duplicate property window opens.



3 Enter the information for the duplicate.

Managing User Passwords and Voicemail PINs

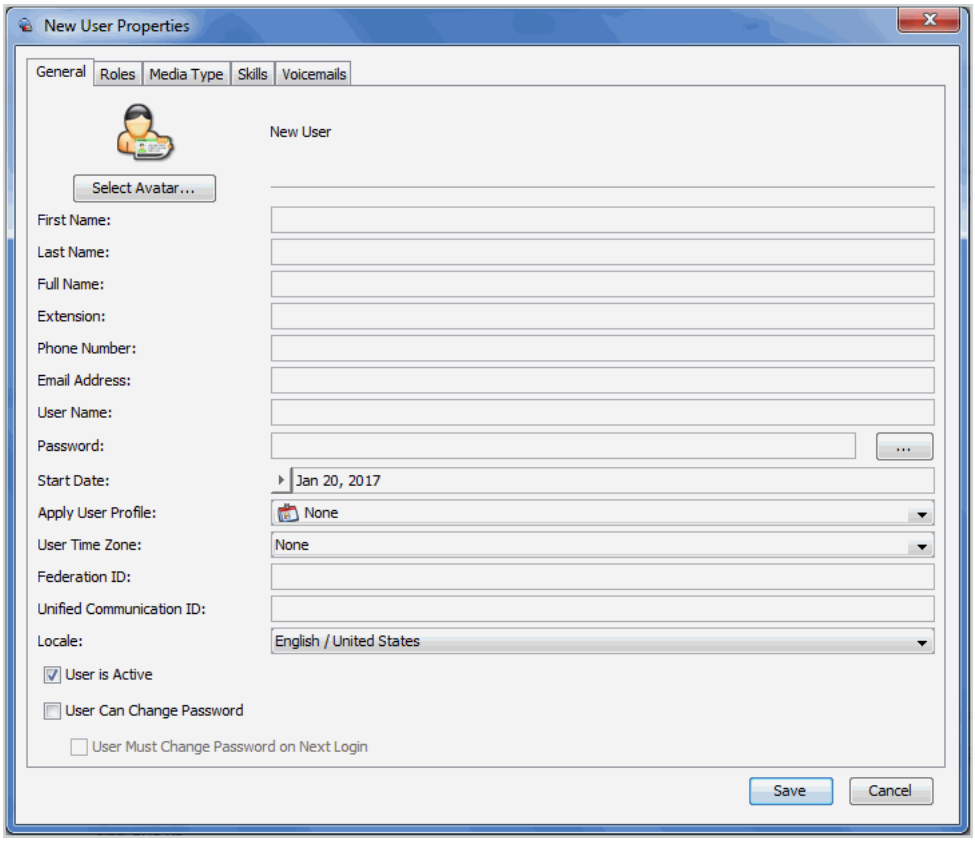
Passwords must meet the specified requirements. For example, passwords cannot match the user name. See also **Defining Single Sign-On Identity Providers**.

Changing Passwords

Follow these steps.

1 Double-click the user, or right-click and select **View Properties**.

2 To change the password, click the dotted button.



3 Type a new password.

The password must contain at least six characters.

Your current and maximum character count is shown as you enter a password. The **Update** button is enabled once the password requirements are met.

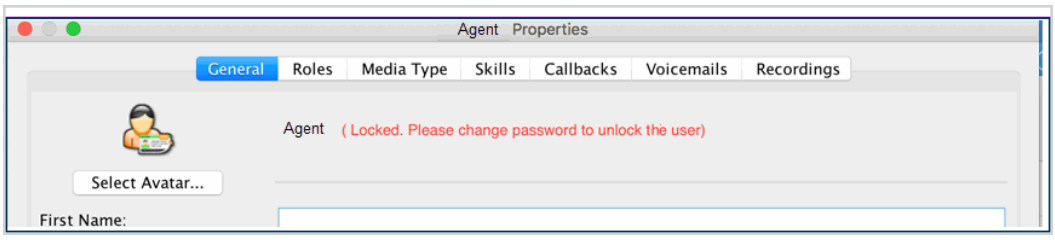
4 Click **OK** and then **Save** or **Apply** to save your changes.

Note

Your current and maximum character count is shown as you enter a password. The **Update** button is enabled once the password requirements are met.

Unlocking Users

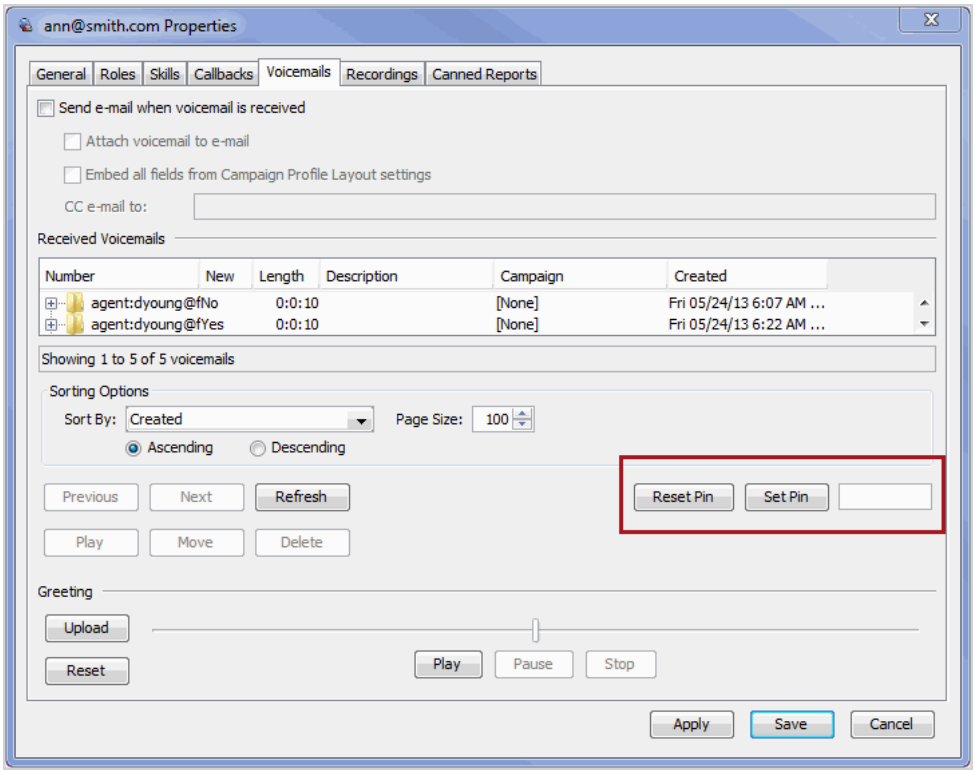
User accounts can be locked when the maximum allowed number of incorrect login attempts is reached. You can identify locked-out users by viewing the user properties, shown below.



Locked-out users must contact you to reset the password.

To unlock users, follow these steps:

1. Access the user properties.
2. Change the password to a temporary password.
3. Check **User Can Change Password** and **User Must Change Password On Next Login**.



4 After the changes are complete, click **Save** or **Apply**.

Managing Voicemail

Agents can receive messages when they are not available to answer calls or when calls are transferred. Messages are WAV files that are transferred to users by using Java RMI, which uses encryption.

Important

No email notification is sent until an email to receive error messages is configured in **Actions > Configure > Email**.

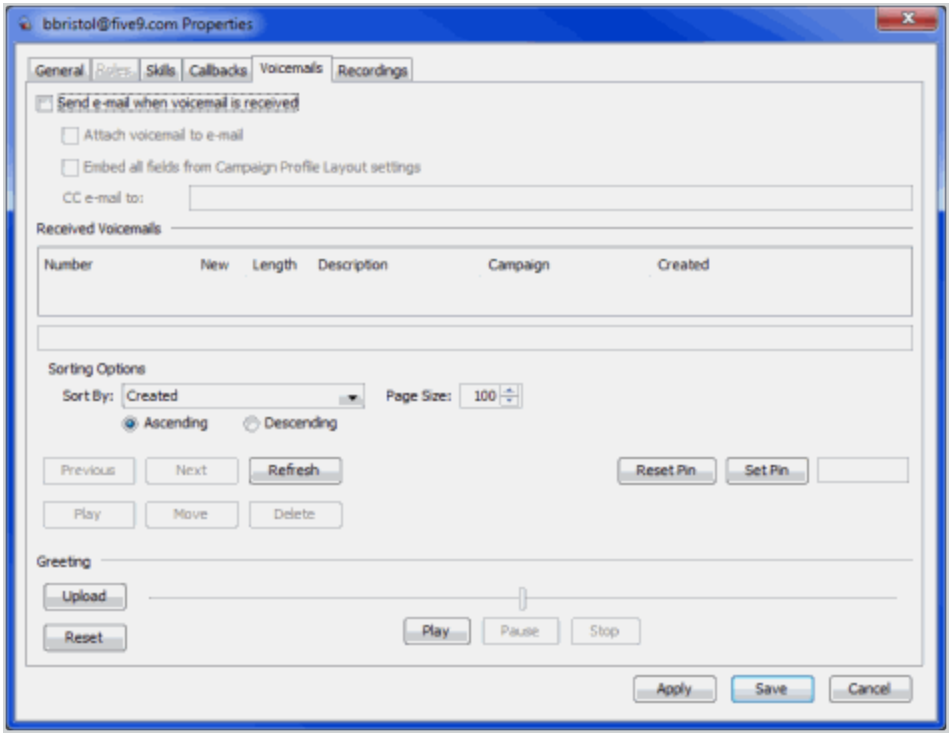
Accessing Voicemail Messages
Enabling Voicemail Notification
Transferring Messages
Listening to Voicemail Messages
Resetting PINs

Accessing Voicemail Messages

1 Double-click a user name, or right-click and select **View Properties**.

2 Select the **Voicemails** tab to define summary information about messages:

- **Number:** Phone number of the person who left the message. If the message is the result of an internal call, this column contains the user name of the caller, for example: `agent:egrace`.
- **New:** Whether the file is new.
- **Length:** Length of the message in hours:minutes:seconds.
- **Description:** Message.
- **Campaign:** Associated campaign. If the message is not associated to a campaign, [None] is displayed.
- **Created:** Creation date and time of the message.



Enabling Voicemail Notification

In the **Voicemails** tab of the user's properties, define these options:

Send email when voicemail is received	Send a notification email to the user for each message received.
Attach voicemail to email	Attach a WAV file of the voice message to the email. Therefore, users do not need to log in to agent or administrator applications to listen to messages, which can be played with any computer media player. See **Defining Email Notifications** and **Managing Skill Voicemail Messages**.
Embed all fields from Campaign Layout settings	Include the additional data about the call in the email. Recipients do not need to go to the agents' desktop. Define in the Layout section of the campaign properties the data to send in the email notification. The format of the data must be easy to parse by a script or program. Place each field-value pair on a separate line and delimit the field and data with a colon followed by a comma (:.)

	Example Campaign Layout Settings:
	`$FIELDS: START`
	`Primary: 011119252012078`
	`Call.ANI: 011119252012078`
	`Call.DNIS: 9254183250`
	`Call.type: 2`
	`$FIELDS: END`
	Example email:
	`Dear <firstname> <lastname>,`
	`You have received a new message from 011119252012078 Thu Aug 02 15:20:08 PDT 2012`
	`$FIELDS: START`
	`Primary: 011119252012078`
	`Call.ANI: 011119252012078`
	`Call.DNIS: 9254183250`
	`Call.type: 2`
	`$FIELDS: END`

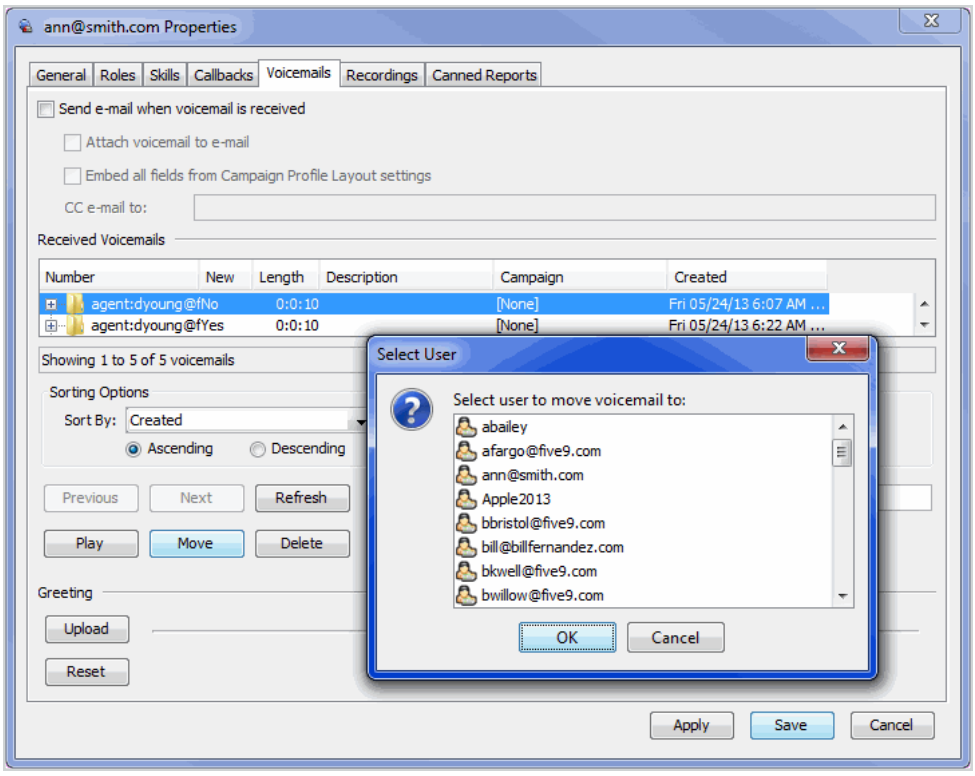
CC e-mail to:	Email address of up to five recipients. Separate the addresses with commas.

Click **Save** or **Apply** to save your changes.

Transferring Messages

You may assign voicemail messages to other users.

1. In the **Voicemails** tab of the user's properties, select one or more messages.
2. Click **Move**.
3. Select a user recipient.



4. To move the message from the sender's to the recipient's list, click **OK**, and **Yes**.

Listening to Voicemail Messages

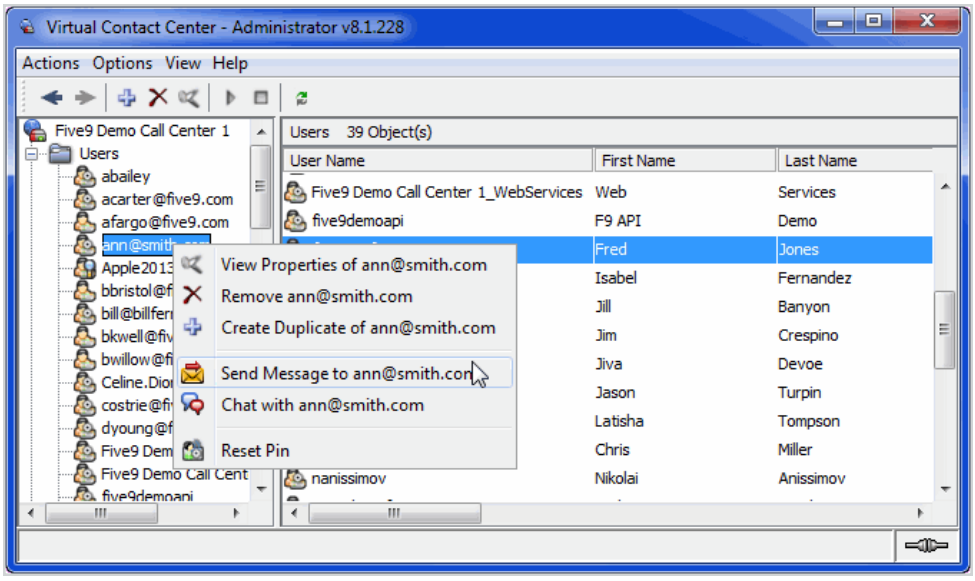
The message is played in your default media player.

1. In the **Voicemails** tab, select a message.
2. Click **Play**.
3. To delete messages, select one or more messages.
4. Click **Delete**, and **Yes**.

Resetting PINs

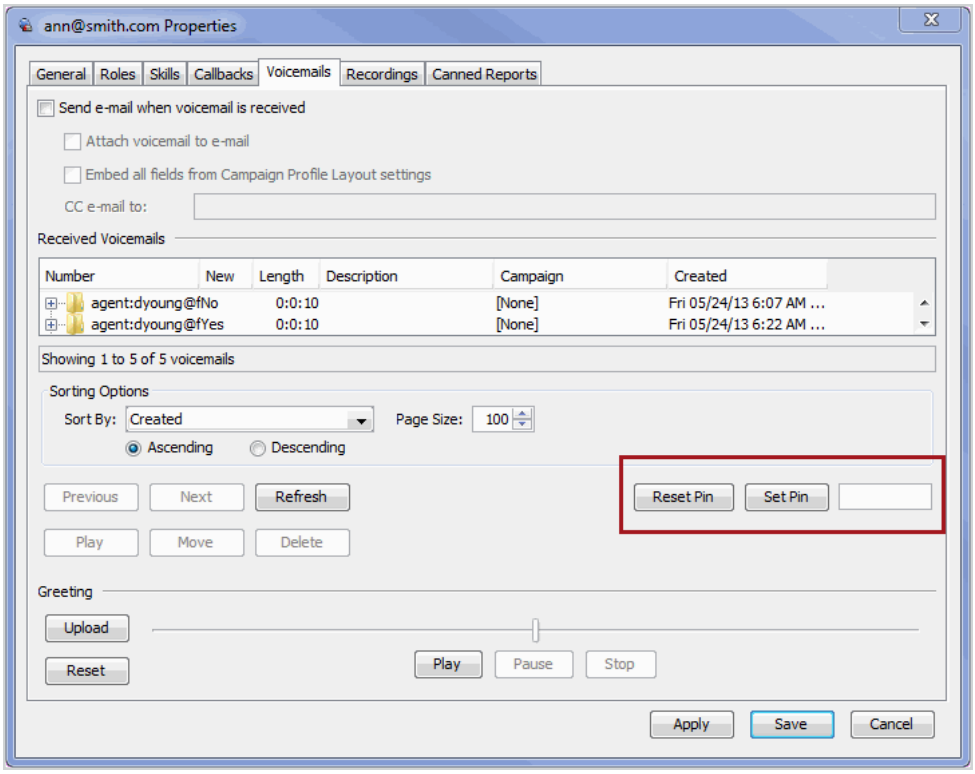
When you access voicemail through your phone, a secure Personal Identification Number (PIN) is required to access the voicemail storage box. The PIN is a string that can contain up to eight digits ["0. . 9"]. The field is empty for new users. Agents can set or change their PIN only by calling a dedicated phone number. The extension number and the PIN enable agents to listen their new and saved messages.

- In the navigation pane, right-click **Users**, and select **Reset Pin**.



- Alternately, you can set the PIN in the Voicemail tab of the User Properties screen. Click **Reset Pin** in the Voicemails tab of the user properties. See also

[Managing User Passwords and Voicemail PINs](#).



The message says that the PIN of the user has been successfully reset. Click **OK**. If you reset the PIN, the user will be prompted to set a new PIN next time they log into voicemail.

Managing Voicemail Greetings

A greeting is a message played to callers when a call redirects to the voice mailbox because the agent didn't answer. You can configure greetings for skill and personal messages. For more information about skill mailbox greetings, see [Managing Skill Voicemail Greetings](#).

If your agents have a personal voice mailbox, you may upload a personalized greeting for each agent to replace the default greeting. Five9 recommends that you use personalized greetings if you transfer calls directly to agents in your IVR scripts or if agents transfer calls to other agents. Agents can record their greetings by calling a number added by the administrator to the campaign and may upload custom greetings.

You may also use the Voice Input module in an IVR script. See also Interactive Voice Response (IVR) Administrator's Guide.

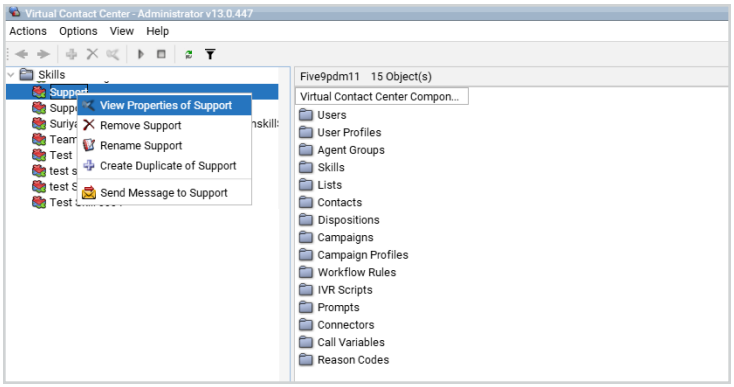
If you or the agent resets the greeting, the system deletes the uploaded greeting and uses the default greeting instead.

The supported format for new files uploaded to the system is WAV audio, ITU G.711 mu-law, mono 8000 Hz. In some applications, it's also listed as CCITT u-Law, 8.000 kHz, 8 bit, Mono, 7 kb per second. See **Managing Voice Prompts**.

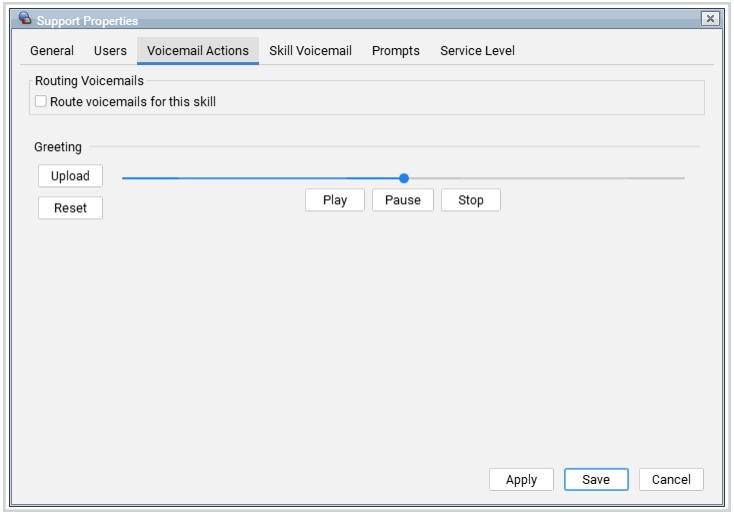
Uploading Greetings

The last uploaded file overwrites the earlier one. The files that you upload don't have priority over those uploaded by agents.

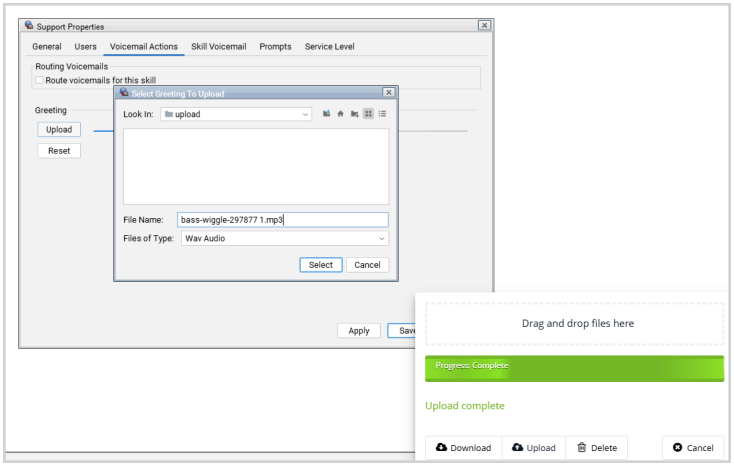
1 In the Administrator Application, expand the **Skills** folder on the left navigation pane, right-click **Support**, and then select **View Properties of *[Skills name]***.



2 In the **Voicemail Actions** tab of the Support Properties, select the **Upload** button.



3 Browse to the Wav Audio file and then click the **Select** button.



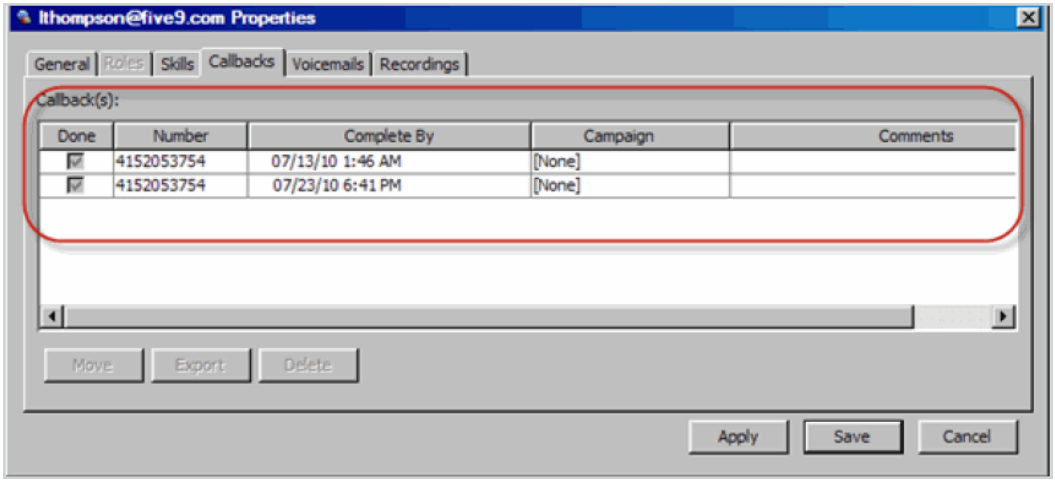
Listening to Greetings

In the **Voicemails** tab, click **Play**. The process can take some time. The system enables the **Pause** and **Stop** buttons.

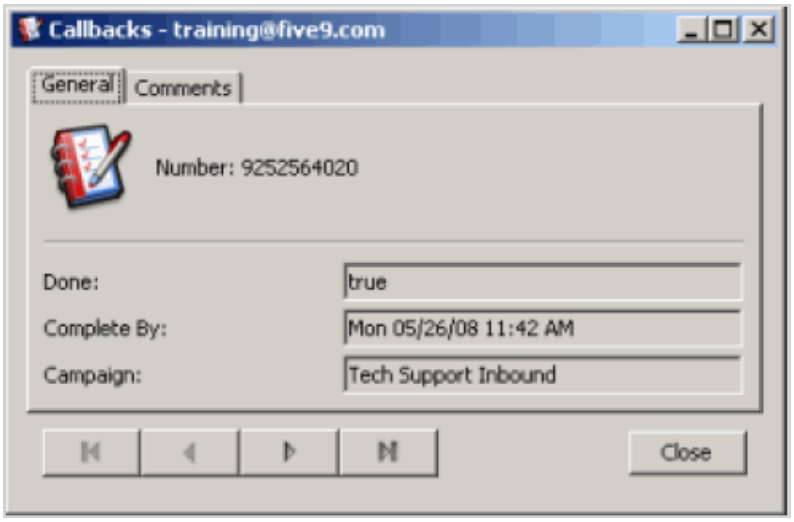
Managing User Callbacks

The Callbacks tab appears in the user's properties after the user has been created. Agents can schedule a date and time to return a call and can receive reminders of the scheduled callbacks. The callback list shows this information:

Done	Whether the call has been returned.
Number	Phone number to call.
Complete by	Date and time of the scheduled callback.
Campaign	Campaign associated with the callback.
Comments	Text entered by the agent about the callback.



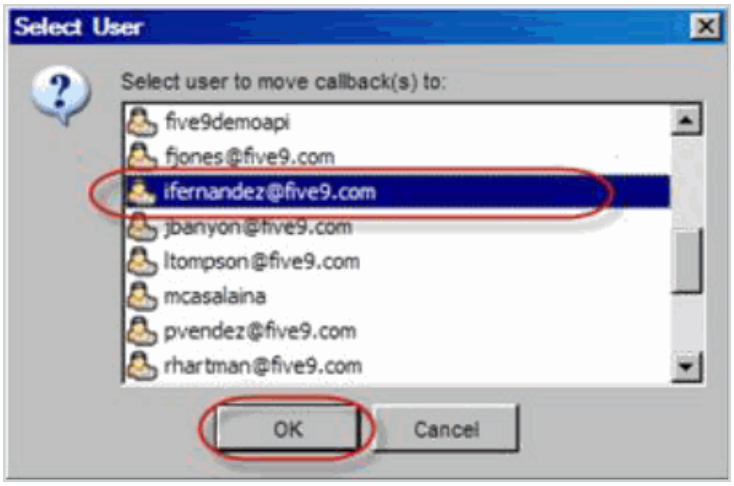
To see the details of a callback, double-click the callback.



Transferring Callbacks

Follow these steps.

1 To transfer scheduled callbacks, select a callback and click **Move**.



2 Select a user, and click **OK**.

3 Click **Yes**.

Exporting Callbacks

The callback data are exported as a CSV file. The first row in the file contains the names of the fields.

1. Select callbacks.
2. Click **Export**.
3. Select a folder, and click **Export**.

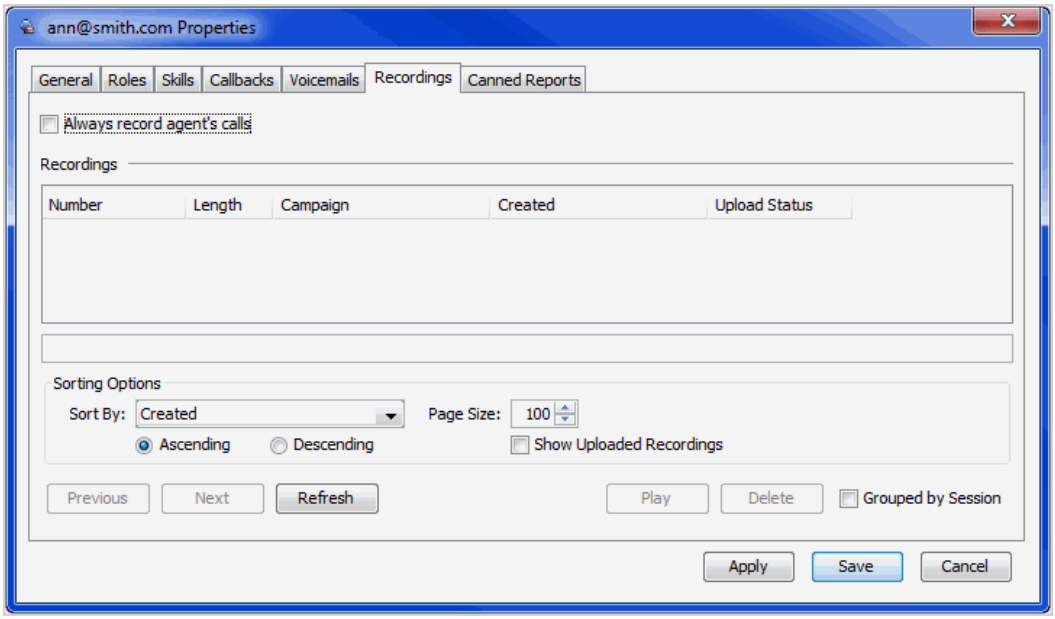
Managing User Recordings

The Recordings tab appears in the user's properties after the user has been created. Recordings are WAV files containing the agent's conversations during call sessions.

The default maximum call recording length is one hour for each call. To increase the maximum recording length to up to three hours, contact your Five9 support representative. By default, the number of simultaneous call recordings is limited to 20% of the provisioned agent seats.

The recorded calls are listed in the Recordings tab:

Number	Phone number associated with the call.
Length	Length of the recording (hours:minutes:seconds).
Campaign	Campaign associated with the call.
Created	Creation date and time of the recording.
Upload Status	Upload status of the recording.



You can sort recordings as follows:

Sort By:	Sort Criteria
Number	Phone number associated with the call.
Length	Length of the recording.
Campaign	Campaign associated with the call.
Created	Creation date and time.
Ascending or Descending	Ascending or Descending order
Page Size	Number of the recordings per page.
Show Uploaded Recordings	If checked, the uploaded recordings are shown.
Grouped by session	Groups recordings by calls. Some calls can have multiple recordings.

To always record the agent's calls, check **Always record agent's calls**.

To listen to a recording, select the recording and click **Play**. The recording is played with your default media player.

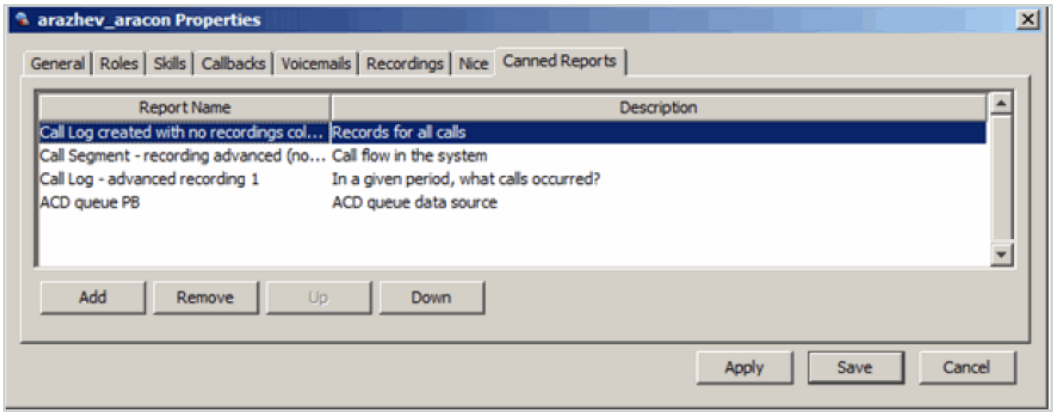
To delete a recording, click **Delete**, and **Yes**.

Managing Canned Reports

Canned reports can be configured only for users with the reporting role. The **Canned Reports** tab is not visible unless users have the reporting role. Users with Canned Reports access are allowed to run a limited set of reports, with no ability to create, modify, or schedule reports. Users of Canned Reports can specify only the date range before running the reports. These users cannot access reports that were not configured for them.

If you try to save a modified custom report that has been assigned to at least one user as a canned report, you receive a warning. *Changing the Canned Report will deny the assigned user access to the report*. To avoid this issue, save the report under a different name.

You can add, remove, and change the order of canned reports in this tab.

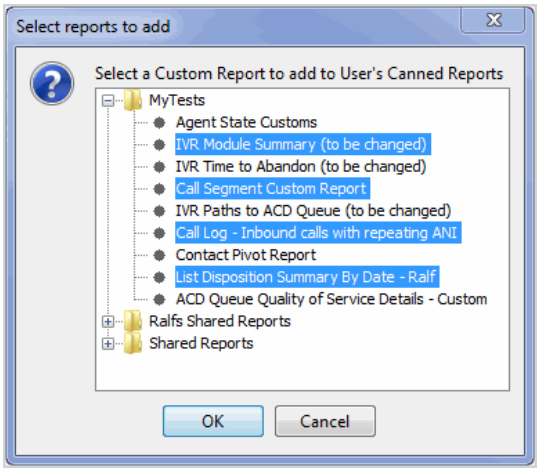


Adding Canned Reports

Follow these steps to add a canned report to a user. You can select from the list of custom reports.

1 Click **Add**.

2 Open each folder, and select the reports.



3 Click **OK**.

4 To sort the report in the list, use the **Up** and **Down** buttons.

The reports in this menu have the same order as the reports in the Reporting Portal.

5 Click **Save** or **Apply**.

Removing Canned Reports

1 Select one or more reports.

2 Click **Remove**.

3 Click **Save** or **Apply**.

Communicating With Users

You can communicate with your agents in real time by sending messages to individual users, creating a chat session with one or more users, and broadcasting messages to all logged-in users.

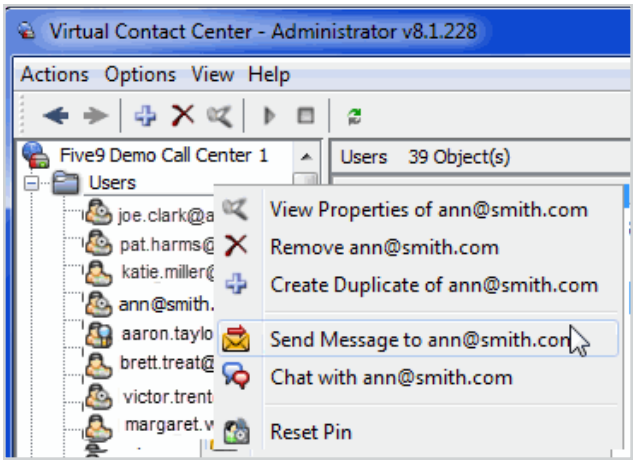
Broadcast messages are one-way communication; users cannot reply.

Use the instant message to have an interactive chat session with an individual agent, or all agents in a skill group. See **Communicating With Skill Group Members**.

Sending Instant Messages to Individual Users

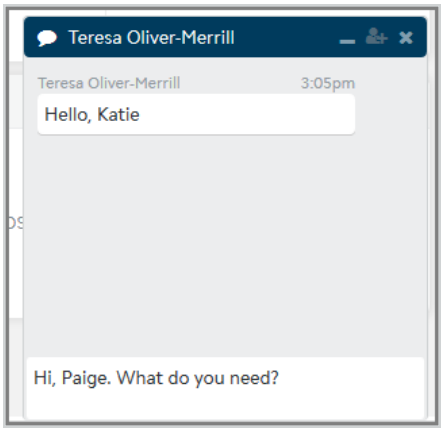
You can send messages only to users who are currently logged in.

1 Right-click a user name, and select **Send Message To User**.



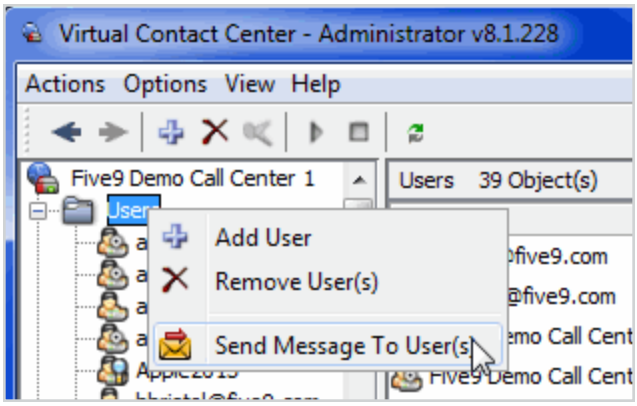
2 Type your message in the window, and click **OK**.

The message you send appears on user's screen as a popup window.

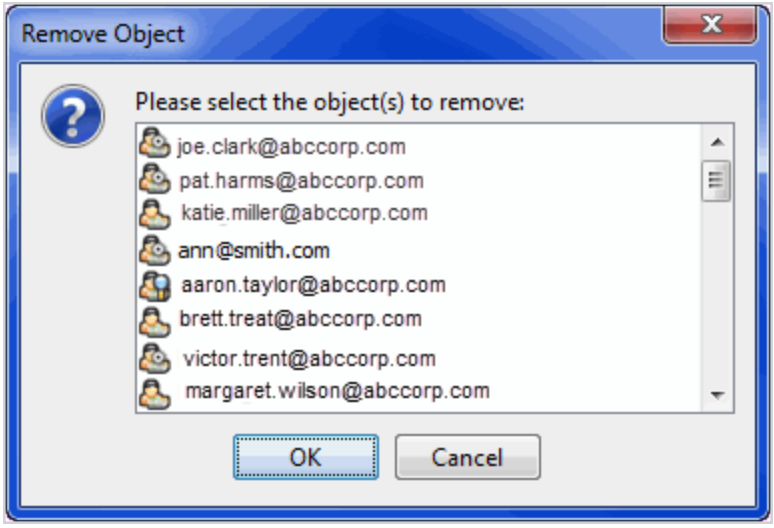


Sending Messages to Multiple Users

1 In the navigation pane, right-click **Users**, and select **Send Message to User(s)** to select the users to receive your message.



2 Select one or more users.



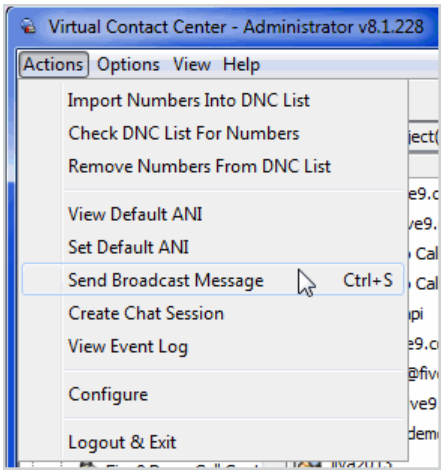
3 Click **OK**.

4 Type your message in the Message field, and click **OK**.

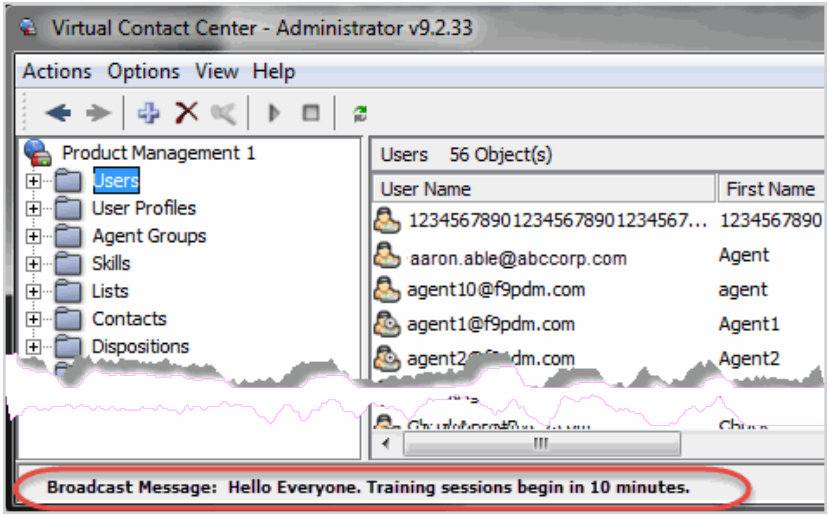
Broadcast Messages to All Users

The broadcast message appears in the footer status area on the screens of all Five9 users currently logged in.

1 Select **Actions > Send Broadcast Message**.



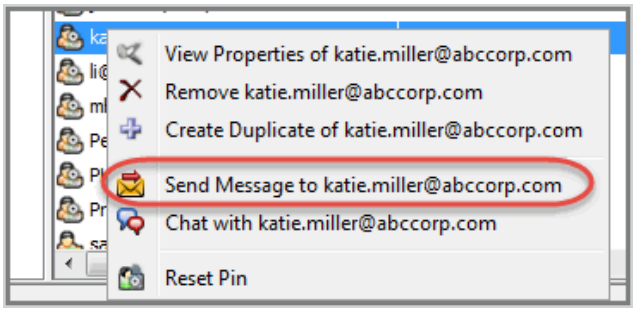
2 Type your message in the message field, and click **OK**.



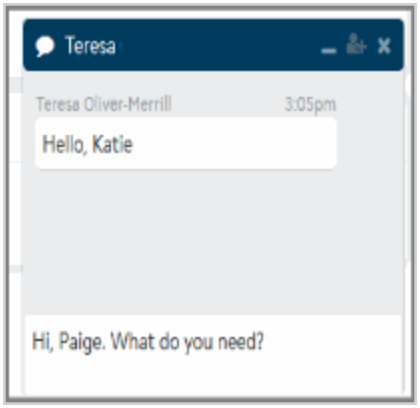
Chatting with a Single User

You can create a session from the navigation pane or from the main window.

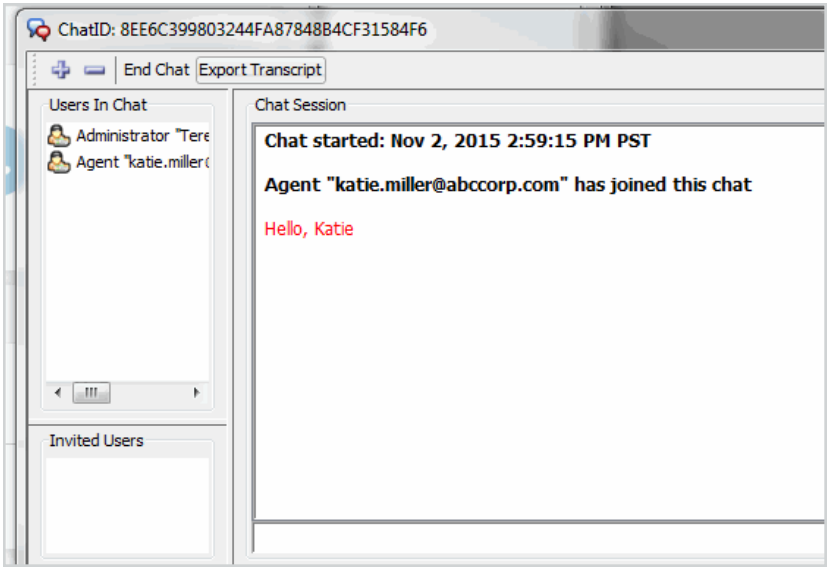
1 Right-click a user name, and select **Chat**.



2 The user you select receives a chat invitation.



3 You will receive a notice that the user has joined the chat.



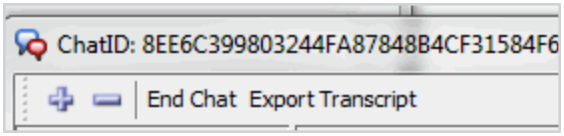
4 Exchange messages by typing in the box at the lower section of the screen and pressing **Enter**.

Chat text appears in the main section of the screen.

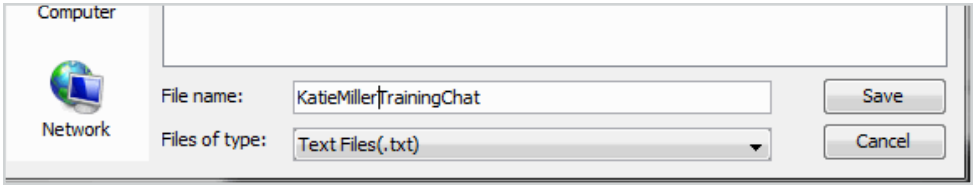
Exporting the Internal Message Transcript and Ending the Chat Session

You can export the internal message transcript and save it as a text file on your computer.

1 Click **Export Transcript** in the window header.



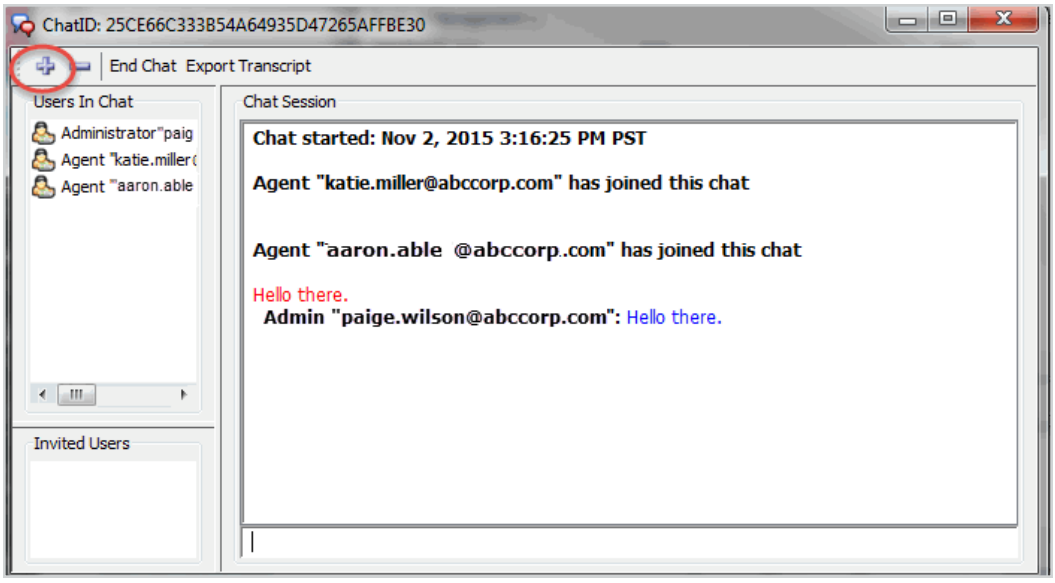
2 Specify a name for the text file when prompted.



3 To end the chat, click on **End Chat** in the window header. When prompted to confirm, click **Yes**.

Inviting Additional Users to a Chat Session

To invite additional users to a chat session, click on the plus sign (+) in the chat window header. Select the users for the chat from the list of users currently logged in.


ChatID: 25CE66C333B54A64935D47265AFFBE30
End Chat
Export Transcript
Users In Chat
Administrator"paig
Agent "katie.miller(
Agent "aaron.able
Invited Users
Chat Session
Chat started: Nov 2, 2015 3:16:25 PM PST
Agent "katie.miller@abccorp.com" has joined this chat
Agent "aaron.able @abccorp.com" has joined this chat
Hello there.
Admin "paige.wilson@abccorp.com": Hello there.

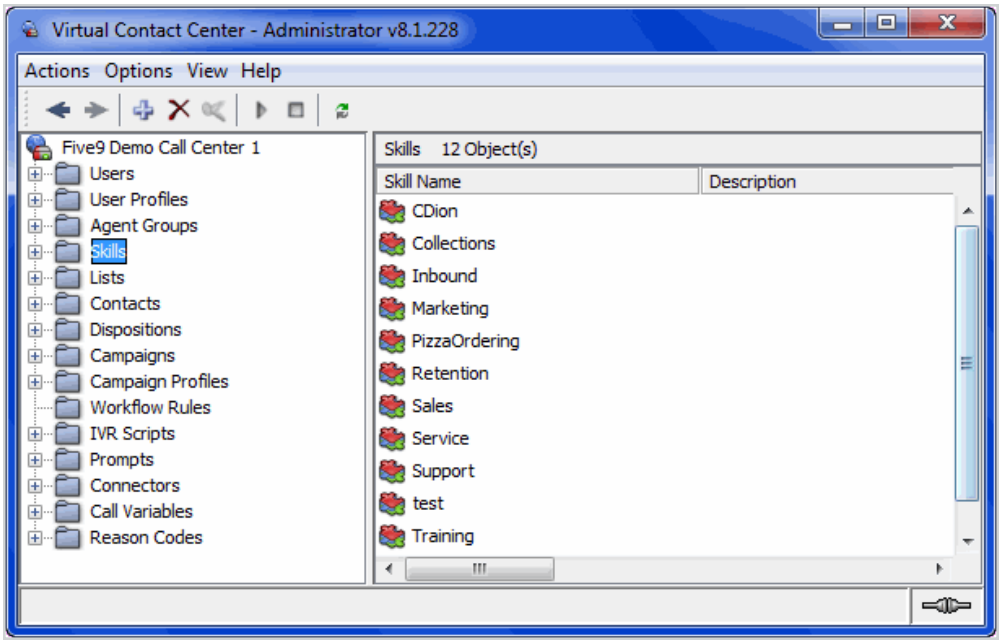
Skill Groups

Managing Skill Groups
Accessing Skill Group Properties
Managing Skill Group Users
Removing Skill Groups
Routing Voicemail Messages to Skill Groups
Managing Skill Voicemail Messages
Managing Skill Voicemail Greetings
Managing Audio Files for Skill Groups
Managing Skill Group Service Levels
Communicating With Skill Group Members

Skill groups organize users who have the agent or supervisor role into groups assigned to the call queues that are part of campaigns. Users can be assigned to multiple skill groups; campaigns can have multiple skill groups.

- Outbound campaigns: Calls initiated by the VCC dialer are routed to agents by their skill group assignments. The skill assignment is under the Skills tab of the campaign properties.
- Inbound and autodial campaigns: Calls are routed to agents who are assigned to the skill groups listed in the Outbound Skills tab of the inbound campaign properties.

For information about adding skill groups to campaigns, see *Configuring Skills* in the Campaign Administrator's Guide.

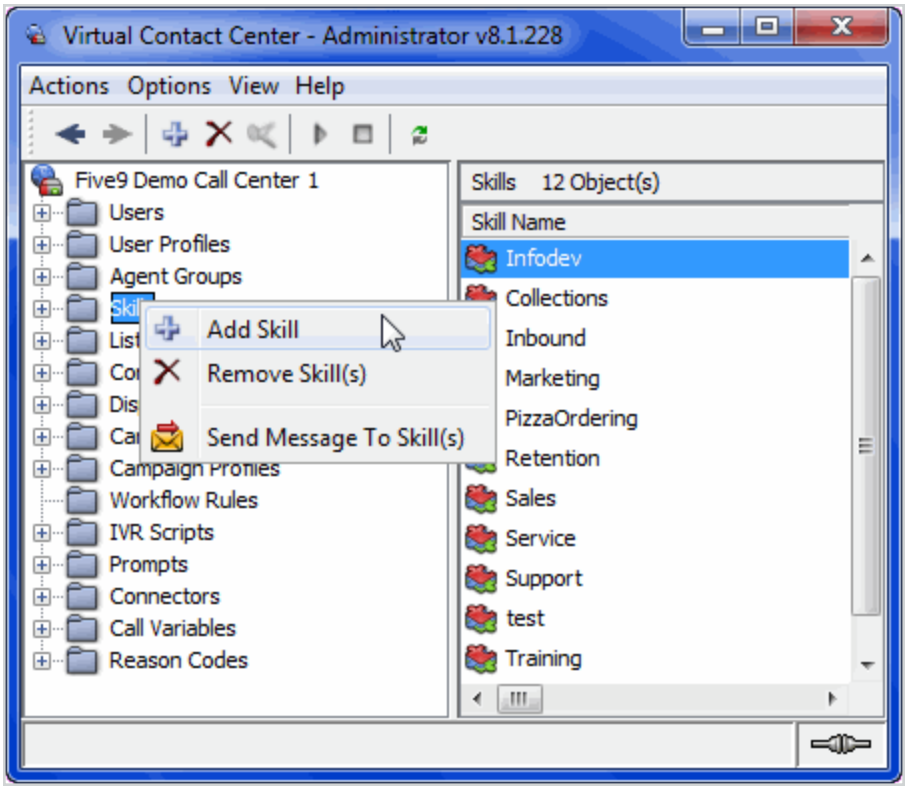


You can add, modify, and remove skill groups. You can also send a message to all the agents in a skill group.

Managing Skill Groups

Adding Skill Groups

1 Right-click Skills, and select **Add Skill**.



2 Name your new skill group.

3 Click **OK**.

4 To modify the properties of the new skill group, double-click the skill group, or right-click and select **View Properties**.

Duplicating Skill Groups

1 Right-click a skill group name, and select **Create Duplicate**.

All properties, except for skill voicemail messages, are copied to a new group called <original object name> - Copy. The property window of the duplicate opens.



2 Edit as needed.

Renaming Skill Groups

1 Right-click a skill group name, and select **Rename**.
2 Click **OK**.

Accessing Skill Group Properties

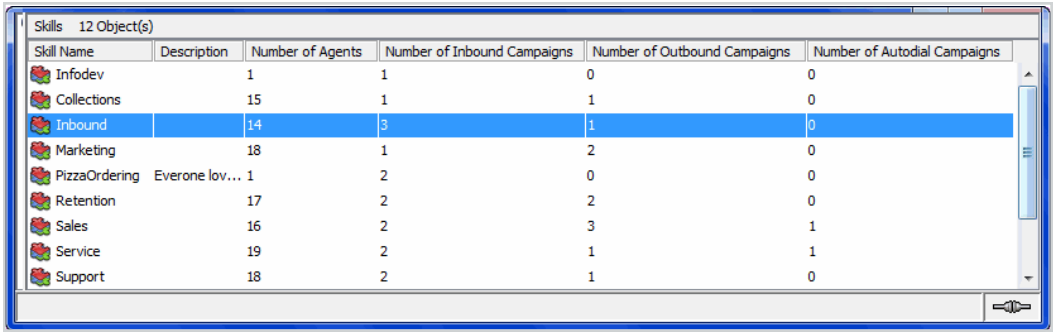
Double-click a skill group name, or right-click, and select **View Properties** to define or modify skill group properties.

Tab	Action or Function Description
General tab	Describe the skill group and message of the day for the group members. For more information about the message of the day, see **Communicating With Skill Group Members**.
Users tab	Add or remove users to or from the skill group. You can set up skill levels (priorities). For more information, see **Managing Skill Group Users**.

Tab	Action or Function Description
Voicemail Actions tab	Enable routing of voicemail messages to agents. Skill messages are delivered to agents only if the Skill Group Voicemail Routing option is enabled. For more information, see **Routing Voicemail Messages to Skill Groups**.
Skill Voicemail tab	View, play, and manage messages for a certain skill group. For more information, see **Managing Skill Voicemail Messages**.
Prompts tab	Configure skill audio files. For more information, see **Managing Audio Files for Skill Groups**.
Service Level tab	Define skill-level overrides for key performance indicators.

Save changes on each tab.

All properties assigned to the skill group appear in the main pane:



Managing Skill Group Users

Assigning Users to Skill Groups

You can assign users to skill groups in many ways. Only users with the agent or supervisor roles can be assigned to skill groups.

Assigning Skills to User Profiles

See **Defining User Profiles**.

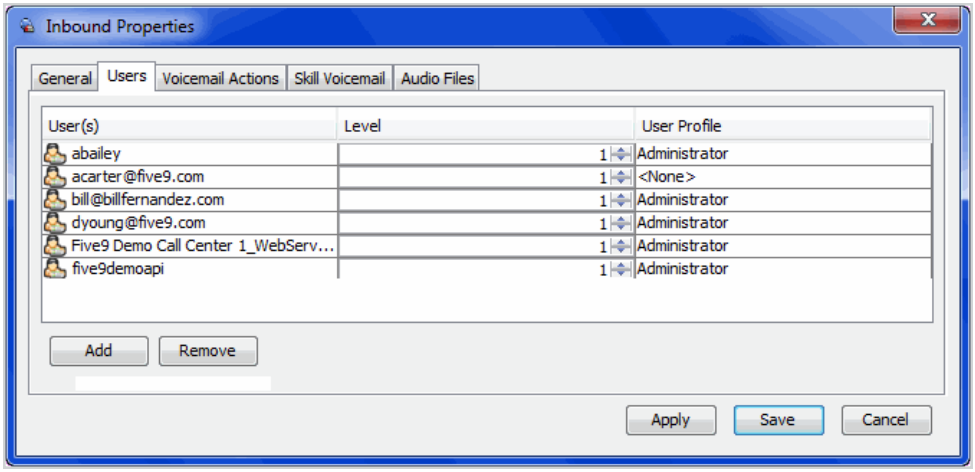
Adding Users to Skills

You can add only users who do not have a user profile.

1 Open the skill group properties.

2 Click the **Users** tab.

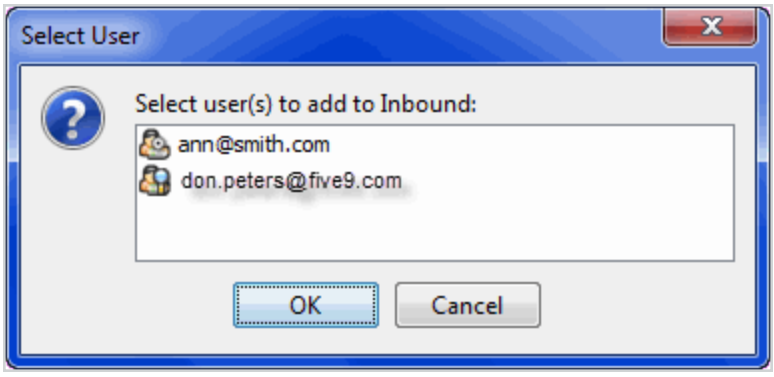
This tab contains the agents members of the skill group.



3 To add the user to the skill group, click **Add**.

4 Select the users to add to this skill group.

Only users who do not belong to user profiles are listed. To add or remove skills to users who have a user profile, edit the properties of the user profile.



5 Click **OK** to add the users.

6 To change the priority in the Level column, use the **Up** and **Down** arrows.

The Level determines the agent's priority in receiving calls sent to this skill group. Level 1 is the highest priority. Agents with higher ranking receives calls first. Users assigned to several skill groups may have a different priority level for each skill.

7 Click **Save**.

Assigning Skill Groups from the Properties of the User Account

See **Accessing User Properties**. Only users who do not belong to user profiles are listed. To add or remove skills to users who have a user profile, edit the properties of the user profile.

1 Open the User Properties window.

2 Click the Skills tab.

The Skills tab shows the skill groups to which the user belongs.

3 To assign the user to a skill group, click **Add**.

4 Select the skills to assign to the current user.

5 Click **OK**.

6 Define level options for the users.

The Level determines the agent's priority in receiving calls sent to this skill group. Level 1 is the highest priority. Agents with higher ranking receives calls first. Users assigned to several skill groups may have a different priority level for each skill.

7 To change the priority, use the **Up** and **Down** arrows.

8 Click **Save**.

Removing Users from Skill Groups

Removing Skill Groups Using User Profile Properties

This is the only option for users who have a profile. The skill groups are automatically removed from all users who belong to the profile. For more information, see **Defining User Profiles**.

Removing Users Using the Skill Properties Window

You can remove only users who do not have a user profile.

1. Open the skill group properties.
2. Click the **Users** tab.
   This tab contains the agents members of the skill group.
3. Select users.
4. Click **Remove** and **Yes**.

Removing Skill Groups in User Properties Window

You can remove only users who do not have a user profile.

1. Open the User Properties window.
2. Click the Skills tab.
   The Skills tab shows the skill groups to which the user belongs.
3. Select users.
4. Click **Remove** and **Yes**.

Removing Skill Groups

When you delete skill groups, you lose reporting information about those skill groups. You do not lose the reporting data, but the reports show **Deleted** as the name of deleted skill groups.

Deleting a Single Skill Group

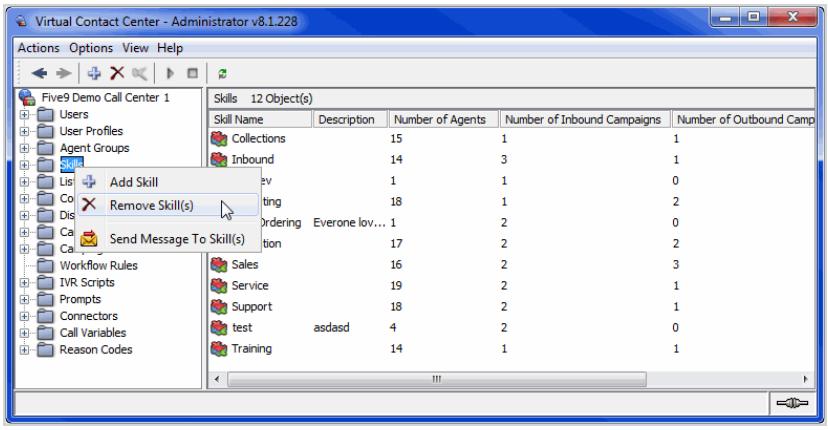
1 Right-click a skill group name, and select **Remove Skill Group**.

2 Click **Yes**.

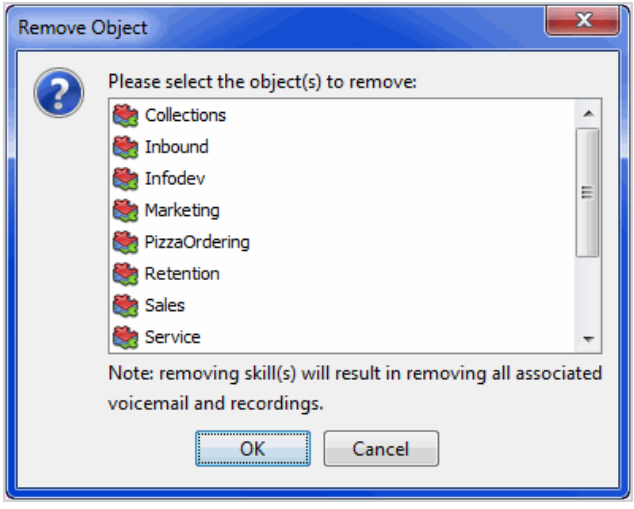
Deleting Multiple Skill Groups

Follow these steps.

1 In the navigation pane, right-click **Skills**, and select **Remove Lists**.



2 Select one or more skill groups.



3 Click **OK**, and **Yes to all** to save changes.

Routing Voicemail Messages to Skill Groups

Agents can control their availability to receive messages. Supervisors can monitor the progress of the voicemail queue at any time. You enable the routing option in the **Skill Properties** window. See also the *Skill Transfer Module* in the Interactive Voice Response (IVR) Administrator's Guide.

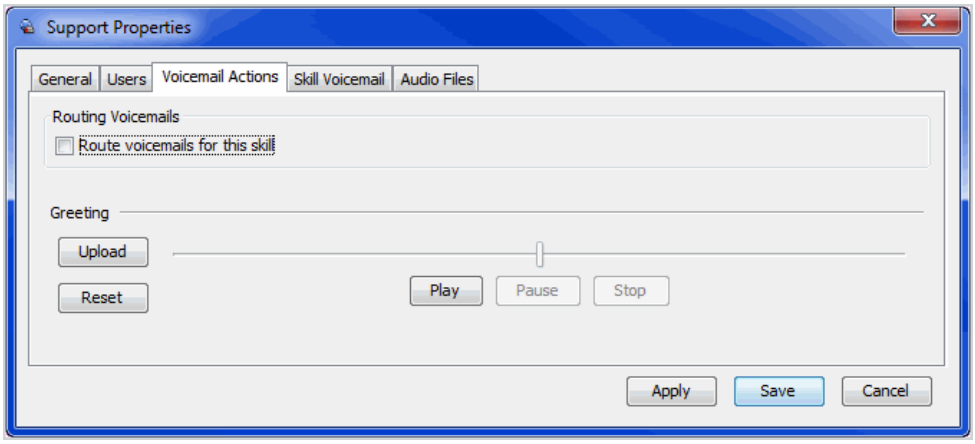
Message Routing Options

Route voicemails for this skill Option enabled: messages for the skill group are automatically delivered to the skill group agents who have the Ready for Voicemail status. If routing is not enabled for a skill group, its voicemail messages accumulate but are not delivered to agents.

Route voicemails for this skill Option disabled: administrators or supervisors can still manage skill group messages. See **Managing Skill Voicemail Messages**.

To specify the timeout, see **Defining Settings for Agent Desktop Plus** and the properties of the Skill Transfer module.

1. In the skill group properties, click the **Voicemail Actions** tab.
2. Check **Route Voicemails for this Skill**.



Managing Skill Voicemail Messages

Voicemail is used to transfer and store telephone messages to agents and or skill groups. Each skill group can be configured to receive messages. Administrators and supervisors also have access to the skill messages. Voicemail files are transferred to users by using Java RMI, which is securely encrypted.

Typical skill messages originate from IVR modules (Voicemail Transfer or Skill Transfer), internal calls to a skill group when no agents are available, and transferred personal or other skill group messages.

Skill messages are delivered only to agents who have permissions to process them and whose status is VMReady. Administrators may give to agents these permissions:

- User Can Process Skill Voicemails
- User Can Delete Skill Voicemail Messages
- User Can Transfer Skill Voicemail Messages

Supervisors can monitor the distribution of messages. They may also force agents to be ready or not ready to receive messages.

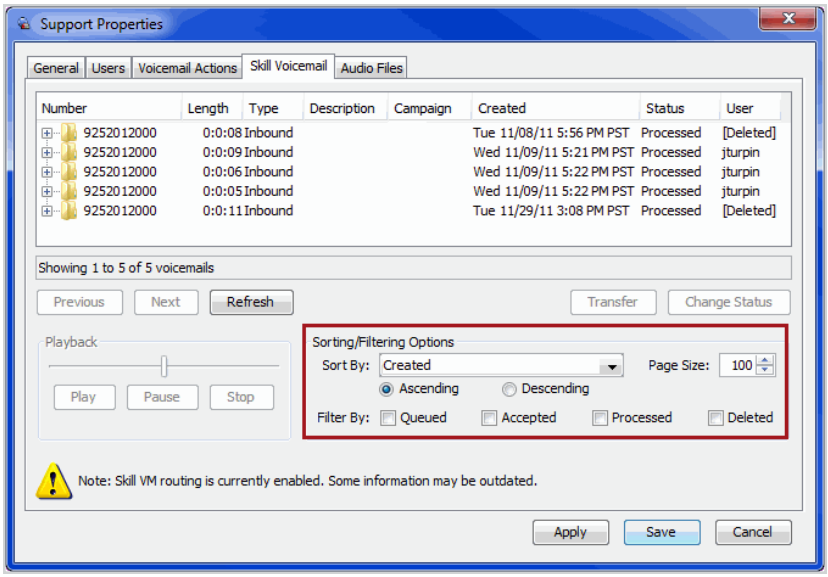
Messages are delivered to agents only if **Route Voicemails for This Skill** is enabled in the skill properties. If this option is disabled, the skill group accumulates messages, but they are not routed to agents. In this case, only administrators and supervisors can process the messages.

> **Note**
>
> If **Route Voicemails for This Skill** is enabled in the Voicemail Actions tab, changes might overlap while messages are routed to agents.

Accessing Skill Voicemail Messages

1. Open the skill group properties.
2. Click the **Skill Voicemail** tab.

   This tab contains the description of the skill voicemail. The display can span several pages. The total number of voicemails appears below the table.



Customize the Voicemails Display

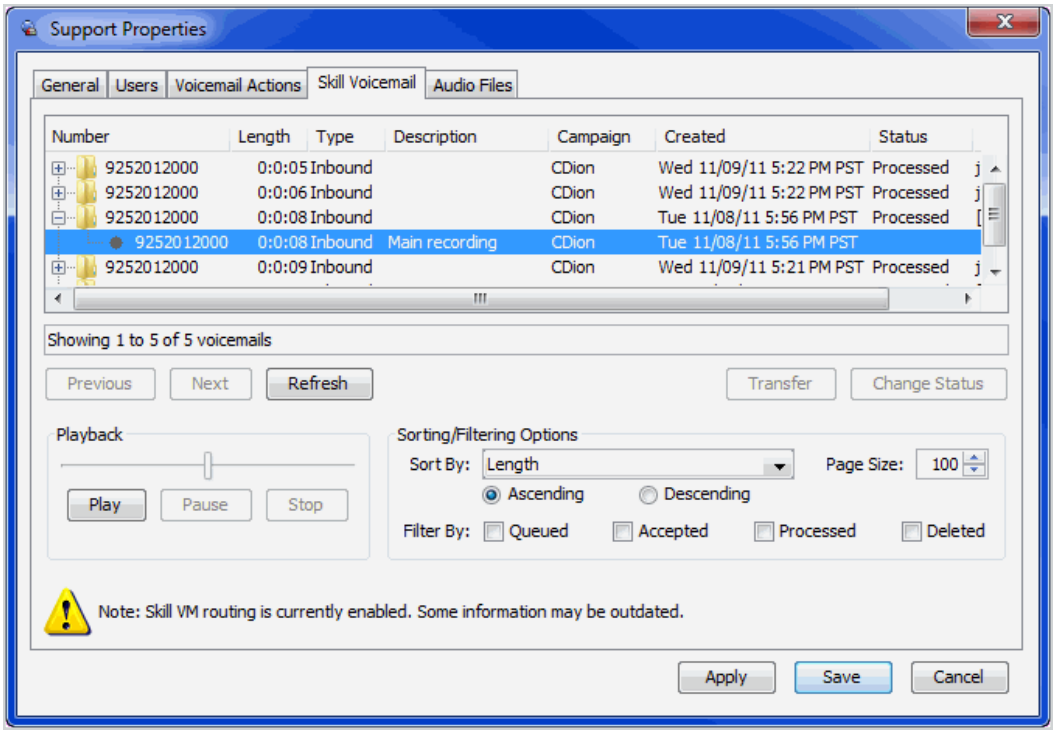
Page Size	Specify the number of records that appears on each page
Select a Sort Option	Choose the sorting option from the drop-down menu. sort by Creation Date, Number Description, status, Campaign, or Length.
Rearrange Columns	Click and drag the column headings left or right. With this method, the sort order is applied only to the messages shown on the current page.
Filter the List	Select the filtering option by message status: Queued, Accepted, Processed, or Deleted.

After applying the options, click **Refresh** to see the changes.

Processing Voicemail Messages

Messages may contain multiple recordings if an IVR Script is configured to send several voice recordings to a mailbox. In this case, all recordings appear under the same folder in the table.

To see the recordings, open a folder and select a recording.



Play a Voicemail Message

Click **Play** in the Playback section of the screen to play the selected message.

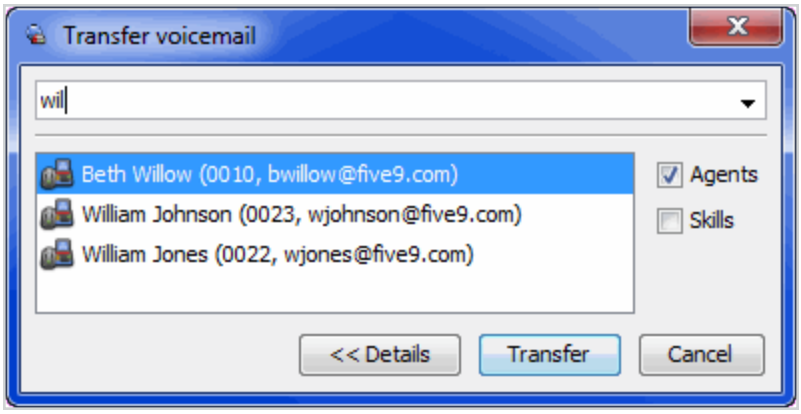
Use the slider to jump to various parts of the message. Use the Pause and Stop buttons to control the message playback.

Transfer a Voicemail Message to Another User

Select a voicemail folder and click **Transfer**.

Check **Agents** or **Skills** to display the appropriate group of names to which you can transfer the message.

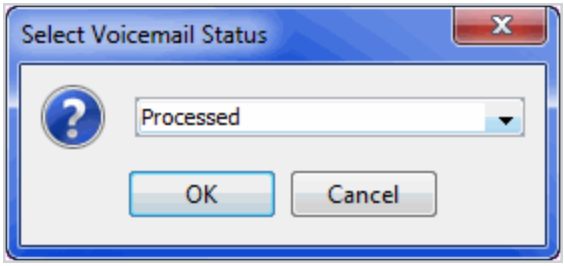
To narrow the search results, start typing a name in the search box.



Select a name from the list and click **Transfer**.

Change the Status of a Voicemail Message

You can change the status of a message at any time. You can also revert a Deleted message to Queued and deliver the message to agents. Click **Change Status** and select the status you want to apply to the message.



Click **OK** to save the status change.

Managing Skill Voicemail Greetings

A greeting is a message that is played to callers before a call reaches skill group voicemail box. Greetings can be set for skill and user voicemail. See Managing Voicemail Greetings.

To use a voicemail greeting, record a greeting as for prompts or agent voicemail greetings. The requirements for the audio files used as voicemail greetings are the

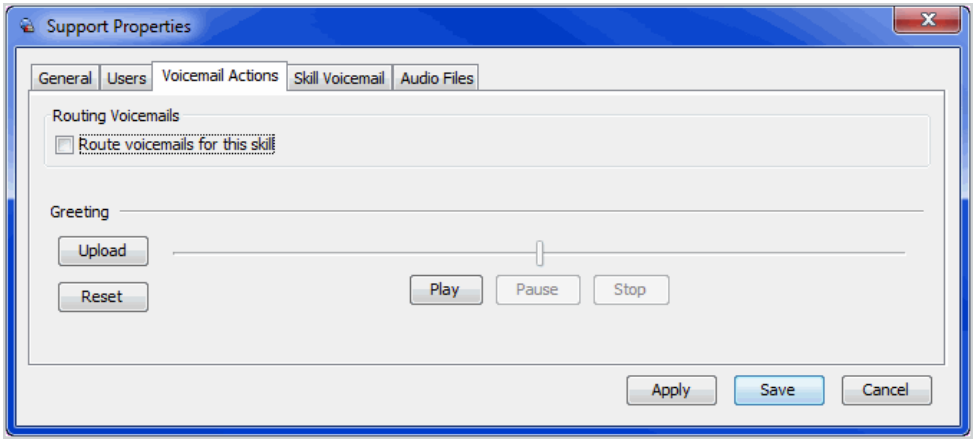
same as for prompts. The supported format for new files uploaded to the system is WAV audio, ITU G.711 mu-law, mono 8000 Hz. In some applications, it is also listed as CCITT u-Law, 8.000 kHz, 8 bit, Mono, 7 kb/sec. To record greetings, see **Managing Voice Prompts**.

When you reset a greeting, the uploaded greeting is replaced by the default voicemail greeting.

Uploading Voicemail Greetings

The last uploaded file overwrites the previous one.

1. Open the skill group properties.
2. Click the **Voicemail Actions**tab.



3. Click **Upload**.
4. Browse to a WAV file on your computer, and click **Select**.

Listening to Voicemail Greetings

To play a greeting, in the **Voicemail Actions** tab, click **Play**. Pause and Stop the recording as needed.

Managing Audio Files for Skill Groups

Skill group audio files are whisper prompts for call announcement and prerecorded messages assigned to a skill group that can be played by agents while on a call.

Audio Files for Agent Use

Audio files can be used by agents for things such as playing a legal disclaimer that must be read precisely or leaving a message on an answering machine. You can add up to 20 files to a skill as files available for agent use.

Audio Files for Whisper Announcement

An audio file may be used for call announcement, otherwise known as whisper, that is played on call connection. These whisper announcements prepare the agent for what type call is arriving, such as "Sales call" or "Support call". Only one whisper prompt may be associated to a skill; a whisper prompt associated to a skill overrides a whisper prompt set at the campaign level.

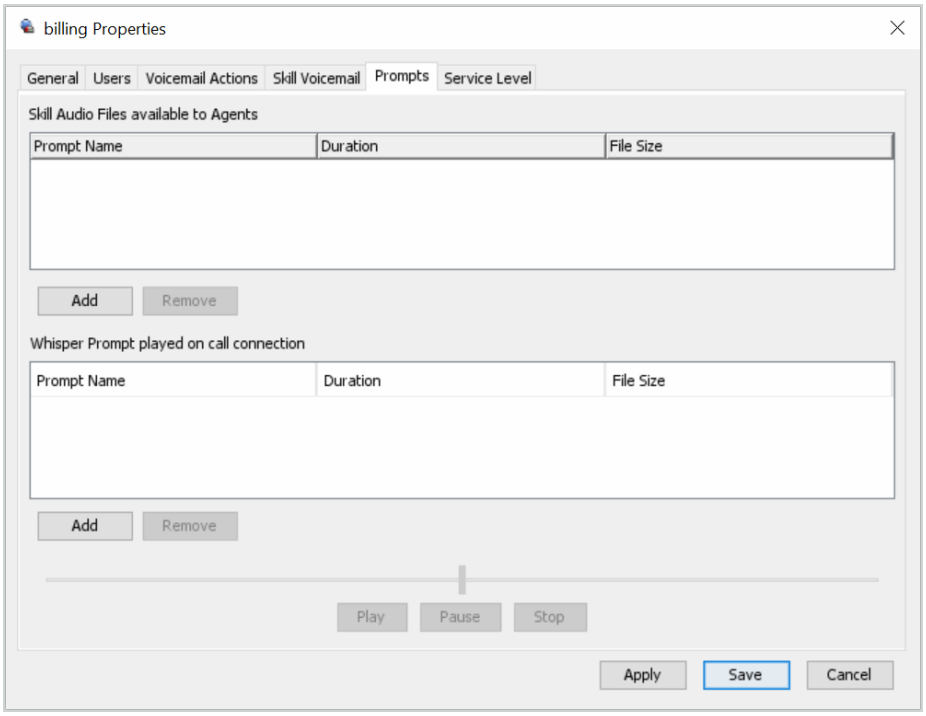
See also **Managing Voice Prompts** and **Text to Speech**.

Adding Skill Audio Files

To associate prompts with a skill, follow these steps.

1 In the skill group properties, click the **Prompts** tab.

2 Click **Add** for your desired audio file upload.



3 Select one or more prompts.

4 Click **OK**.

Removing Skill Audio Files

1 Select one or more prompts.

2 Click **Remove**.

3 Click **OK**.

Managing Skill Group Service Levels

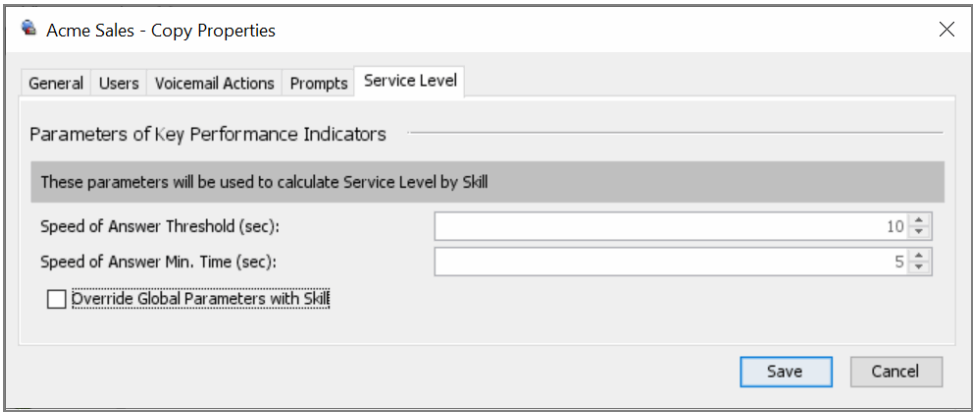
Assigning Service Levels to Skill Groups

You can define Quality of Service (QoS) parameters by skill groups to calculate and report on service level by skill.

Adding KPIs to Skills

1. Open the skill group properties.
2. Click the **Service Level** tab.

   Enter skill-specific service levels for the skill group.



3. Set the **Speed of Answer Threshold (sec)**.
4. Set the **Speed of Answer Min. Time (sec)**.
5. To override the global KPIs, enable **Override Global Parameters with Skill**.
6. Click **Save**.

Communicating With Skill Group Members

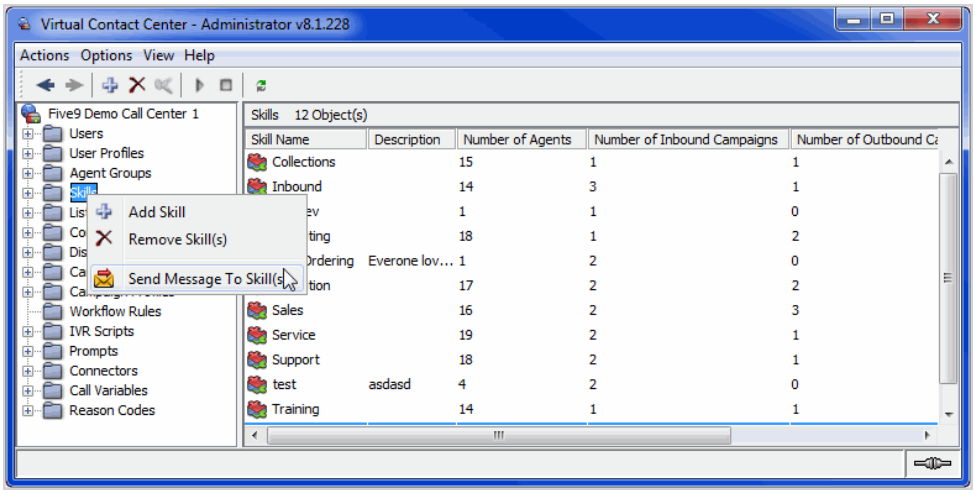
In addition to sending messages to skill groups, you can send individual instant messages to a user, to multiple selected users, or to send a broadcast message to all users. You can also start a chat session with one or more users. See also **Communicating With Users**.

Sending Instant Messages

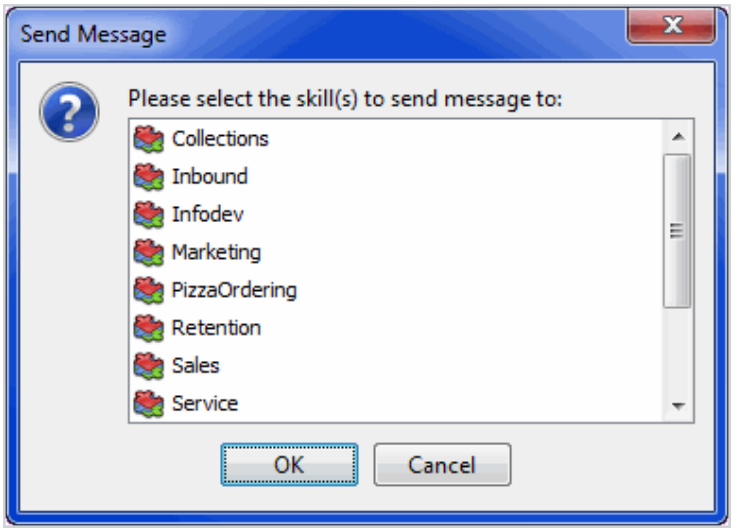
Only users who are logged in can receive messages.

Sending Messages to One or More Skill Groups

1 In the navigation pane, right-click **Skills**, and select **Send Message to Skill(s)**.

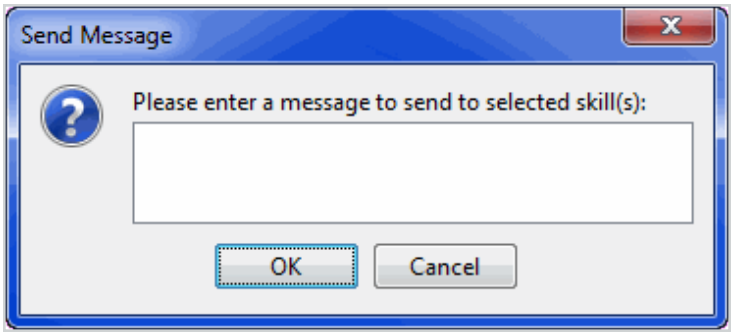


2 Select one or more skill groups.



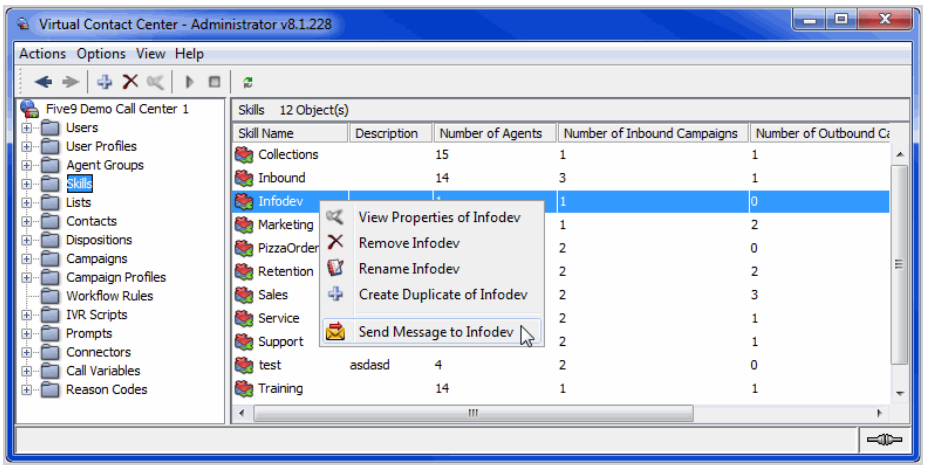
3 Click **OK** to open the message window.

4 Type a message, then click **OK** to send.



Sending a Message to All Members of a Skill Group

1 Right-click a skill group, and select **Send Message to Skill Group**.

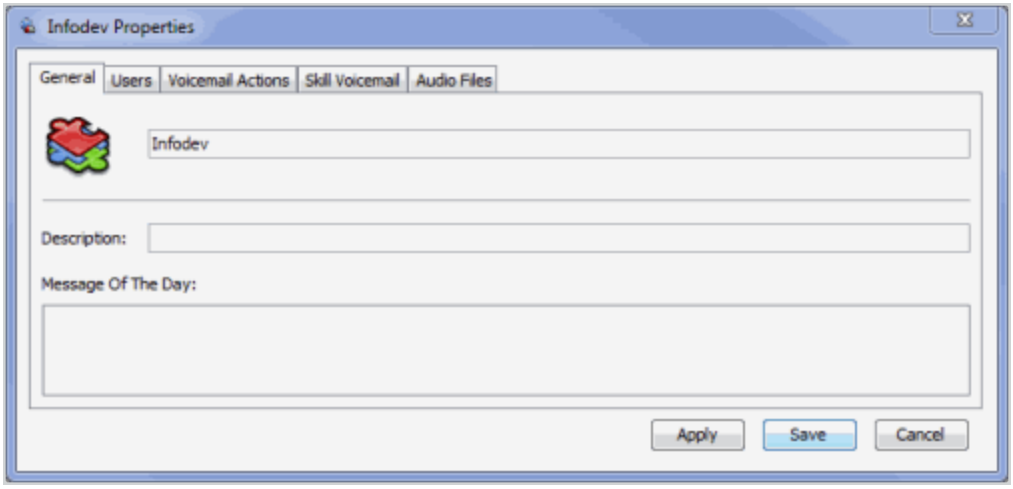


2 Type a message, then click **OK** to send it.

Defining a Message of the Day

The message of the day appears on the Summary page in the Skill Group Messages section of the agent's desktop until it is changed or deleted. A separate message of the day can appear for each skill to which the user is assigned.

In the General tab of the skill group properties, a message. Click **Save** or **Apply**.



Call Lists

Updating Call Lists for Telemarketing Campaigns
Managing the Size of Lists
Understanding Field Mapping and Unique Keys
Creating Call Lists
Importing and Updating Call Lists
Scheduling Call List Updates
Removing Records and Call Lists
Preparing International Dialing Lists
Exporting Call Lists

A call list is a list of records from your contact database. Call lists are used for dialing phone numbers in outbound and autodial campaigns.

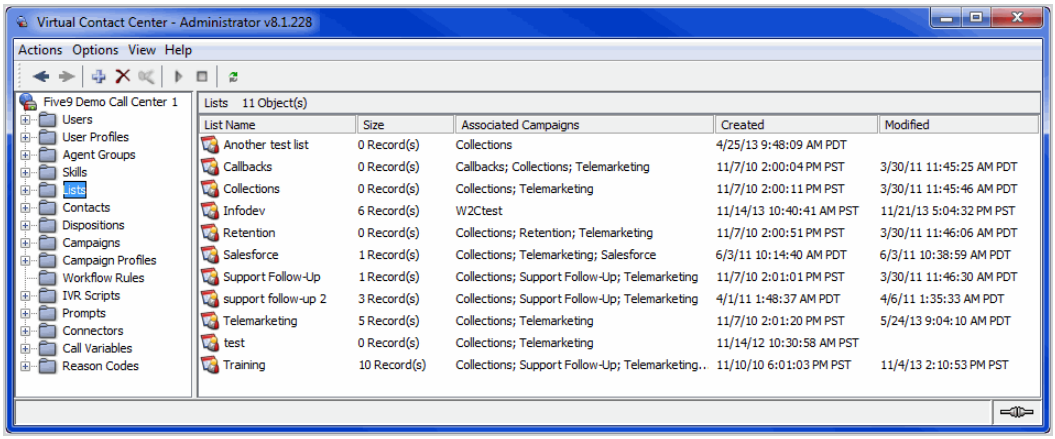
Although a contact record may be added to the Virtual Contact Center (VCC) without being added to a list, a list record cannot be added to a list without also adding a corresponding contact record.

Every contact record includes a number of default contact fields, for example:

- Primary number (number1)
- Alternate number 1 (number2)
- Alternate number 2 (number3)
- First name
- Last name

A contact record must have at least one valid phone number and you may store up to three phone numbers for a contact (fields number1, number2, or number3 of the contact record). You can create custom contact fields. For more information, see **Managing Contact Fields**.

You access Call lists by selecting **Lists** in the navigation pane. All available call lists appear in the main pane.



You can add, update, rename, and remove call lists. You can update a call list manually, by importing a file, or using an API. You can schedule list updates by pulling lists from an FTP server. Updating a list may create or update contact records in the contact database.

You can organize your lists in any order prior to uploading. Unless a different sort order is specified in a campaign profile, the system follows this order while dialing these records for the first time. By default, the dialer processes a list in the uploaded order of the records.

Disposition settings, campaign profiles, and other options may affect the dialing order of list records. The **List Dialing Mode** option in campaign properties defines how the dialer handles the dialing process. You can use a campaign profile to change the dialing order of a call list based on any of the contact fields or filter list records that are dialed in a campaign by adding filters. See **Filtering Contacts**.

You can use work flow rules to automatically reset the dial position to the top of the list based on specified conditions, or manually reset the dial position by right-clicking on the outbound or autodial campaign and selecting **Reset List Position**.

Updating Call Lists for Telemarketing Campaigns

Important

For telemarketing campaigns, you are required to check each list against the appropriate Do Not Call lists before you import a list into Five9.

Lists are not automatically checked against your domain's DNC List during the upload process. Phone numbers in a list are checked against your local DNC list before they are dialed. See also **Managing Do Not Call (DNC) Lists**.

Managing the Size of Lists

When lists are very large, sorting and dialing automatically can slow down list processing. The dialing queue is limited to 20 concurrent calls. If you do not sort the list, the maximum suggested number of records is 500,000. If you sort the list by using more than one field, Five9 recommends that the list not exceed 10,000 records. Smaller lists are quicker to upload; campaigns start faster.

You can process your list for upload at any time. Files larger than 50,000 records will upload in 50,000 increments in the background. Five9 processes 50,000 records from each file in the job queue before returning for another 50,000 records. This is to make certain that upload speeds are not compromised and that all jobs have enough numbers to begin any production campaign. This may cause interruptions to running campaigns as additional 50,000 row increments are uploaded.

To maximize performance, periodically remove from the list all records that are not new or in progress. When records from a list, proceed as follows to avoid losing data:

Prepare a custom report of the leads that you want to remove from the list.

1. Transfer those leads by FTP to a local server.
2. Delete the data from the list.

For more information on removing records from lists, see **Removing Records and Call Lists**.

Understanding Field Mapping and Unique Keys

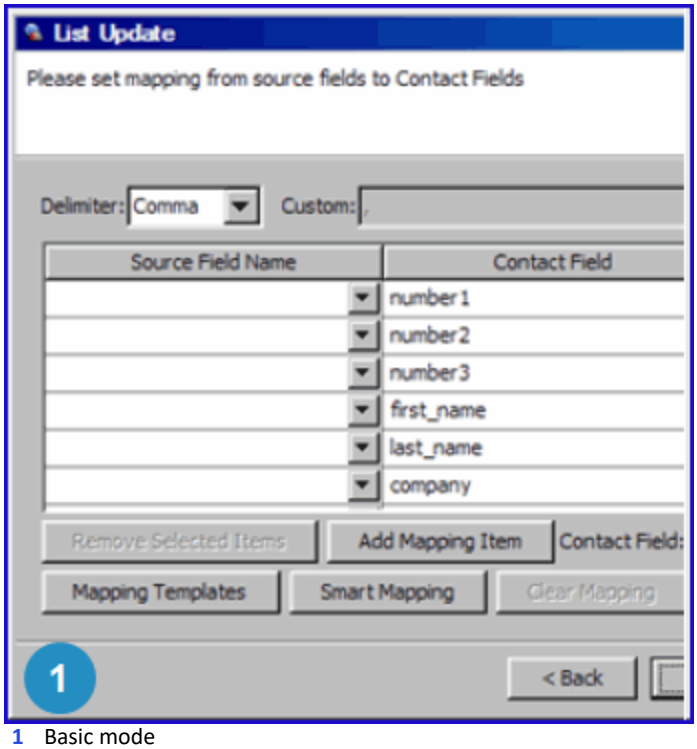
A list that you import may contain duplicate records, and duplicate records may already exist in your contact database. The same contact may appear in multiple lists, so you can have multiple records for the same contact.

If a contact was entered into the database with the same unique key, that one record can point to multiple lists. The unique key enables you to identify and remove duplicate

records so that each record is unique. Records are considered duplicates if the unique key matches more than one contact record.

You set the unique key in the field mapping step of the update wizard.

- In the Basic mode, the unique key is **Number1** (primary phone number). When you encounter duplicates during updates, only the first duplicate record is processed.



1 Basic mode

- In the Advanced mode, the unique key can be set to one or more contact fields. The default unique key is Number1+ first_name + last_name.

  However, in outbound campaigns, you might prefer to use an account number or email address. When multiple contact fields are selected as the key, all fields must match for two contact records to be considered duplicates.

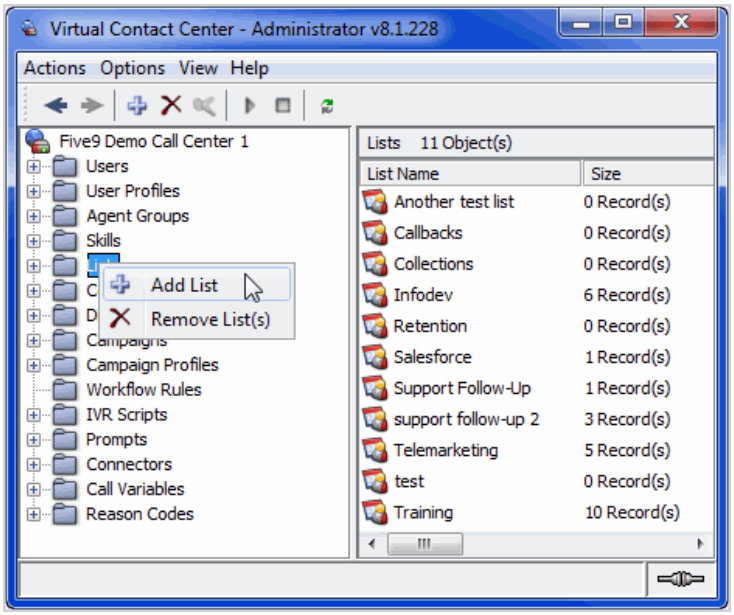
  .

To dial multiple contacts at the same phone number, choose a unique key other than only the phone number, such as the first and last names. In this case, the key might be number1+ first_name + last_name.

Creating Call Lists

To add a contact record, follow these steps.

1 Right-click Lists and select **Add List**.

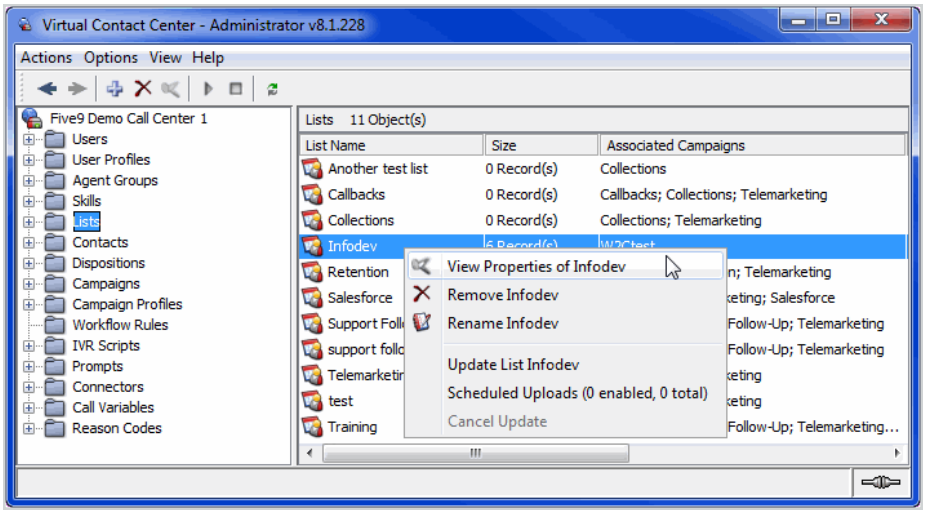


2 Name your list.

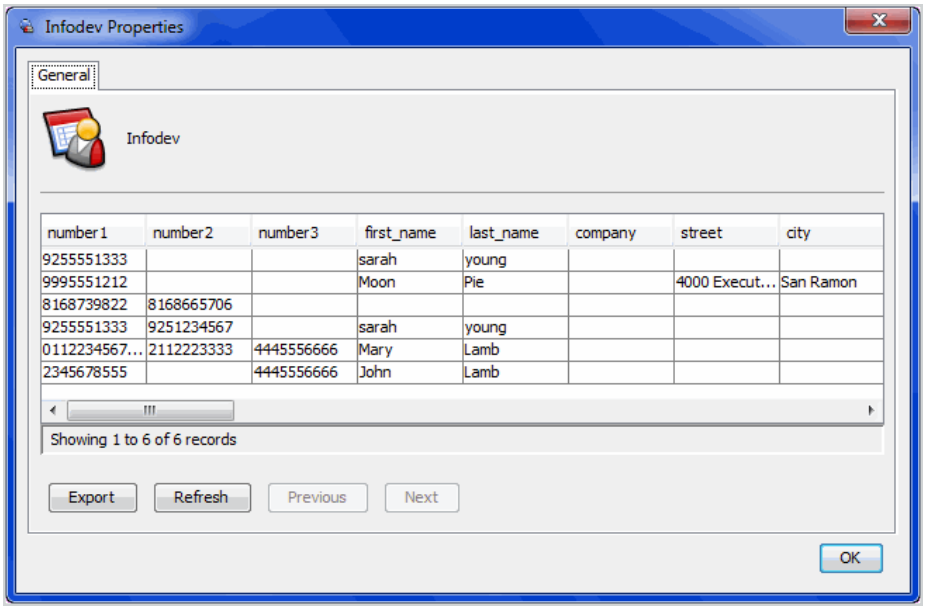
3 To add the list to the system, click **OK**.

You can rename a list at any time. To do so, right-click the list and select **Rename**.

4 To access the properties of the list, double-click the list in the main pane, or right-click and select **View Properties**.



The new list does not contain any data. To add information, you have to update the list by entering records manually, by importing a file, or by scheduling an FTP update. Later, the list records are displayed in the list properties. If the list contains many records, you may browse through multiple pages.



Importing and Updating Call Lists

You need to update call lists to add records to lists and update existing records. You can update lists by importing files or single records, by scheduling an automatic FTP transfer, exporting contacts from reports into lists, or by using an API (see Configuration Web Services).

Formatting a Call List Before you Import
Preparing Your Call List for Importing
Importing a List from a CSV File
Mapping Fields During List Update
Converting a Spreadsheet to CSV Format

Formatting a Call List Before you Import

The most common format for a list is comma-separated values (CSV) list. The other supported options for delimiters are colon, semicolon, or a custom delimiter.

The phone number can contain special characters, such as spaces, dashes, and parentheses, but should be limited to ten digits. For example, (925) 555-1212 is valid, but (925) 555-1212 x123 is not.

International Dialing

If you are dialing international numbers from either the U.S. or Canada, include the exit code 011 in front of each number. The international phone numbers are between 10 and 20 digits long. The format is **011** + *country code* + *phone number*.

All phone numbers must be entered into lists by using the format in which all numbers begin with a plus (+) sign. Numbers can contain up to 15 digits, not including the plus (+) sign.

The VCC dialer automatically includes the plus (+) sign for all outbound calls; the plus (+) sign signals to the carrier that an international number follows, an standard call possibly to another nation without needing to include the originating country's prefix.

If you have lists which are not currently in format, you must convert them before you attempt to use them.

Outbound Telemarketing

If you are conducting outbound cold-call telemarketing, you might need to check your lists against the appropriate state or national Do Not Call lists before you import them into your Virtual Contact Center (VCC).

> **Note**
>
> While Five9 makes no specific recommendations, compliance vendors can assist with list scrubs. For more information, see suppliers, such as Contact Center Compliance.

Preparing Your Call List for Importing

1. Open your list in a spreadsheet application.
2. Be sure your list has a row of column headings.

   You may also use source files without column headings. In this case, in the Field Mapping step of the List Update Wizard, do not check **Has Header**. For files without column headings and when scheduling list updates, use column numbers to map fields.
3. If your list contains fields that are not associated with contact field, add the new field (see **Managing Contact Fields**).

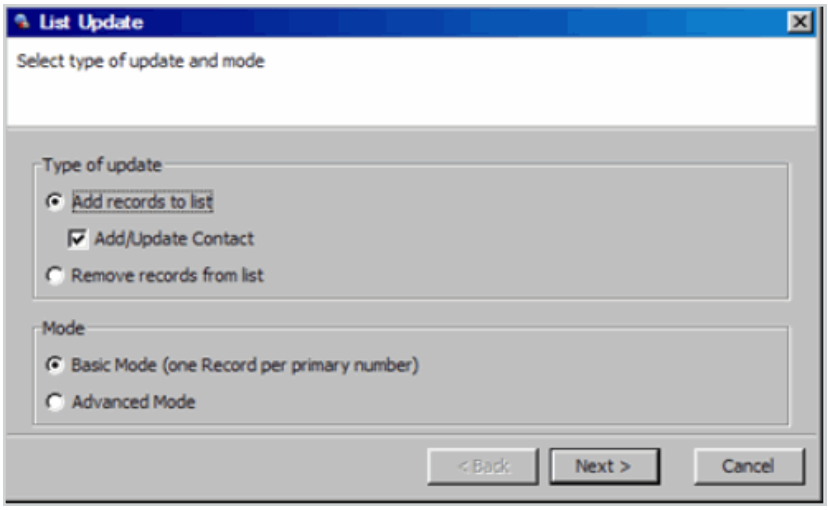
   The field must exist before importing the file, but the names of columns in your file do not need to match the names of corresponding fields in the VCC. If you have fields in your list that you do not want to import into Five9, you can ignore them during the import process.
4. Check the phone number field and other fields for commas.

   If your list shows zero records after the import, the phone number field may not formatted properly, or one of the fields contains a comma.
5. Check your data:
   - If the system encounters duplicate records and invalid phone numbers during the update process, all records may not be imported. Therefore, the VCC list may show fewer records than your original list.
   - The system does not import numbers with fewer than 10 digits and numbers that begin with a 1.
6. Delete any blank columns in the list, unless the blank column is needed.
7. After you import the list, apply a dialing order by using campaign profiles.

Importing a List from a CSV File

Use this method if you already have a list of numbers in a comma-separate file.

1 Right-click a call list, and select Update List.



2 In the wizard, select your **List Update** options.

- **Type of Update**: Add records to list

  New contact records are added if records matching the key fields do not already exist in your contacts. Existing records are also updated with information in your source file. Disabling this option allows only existing contact records that match the values in the key fields to be added to the list. Records with keys that do not match existing records are not added to the list or Contacts.

- **Mode**: Basic Mode

  One record for each primary number. Use only if your contacts have unique primary numbers (`number1` field).

  – Records with keys that do not match records in your contact are added to your list and to the database.

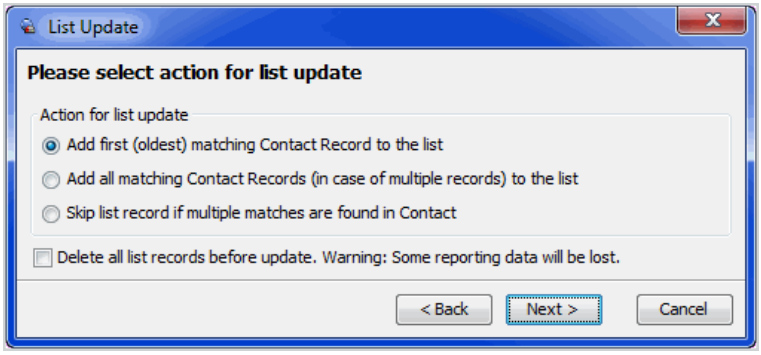
  – Records with keys that match existing records in your contact are updated with the information in the source file. If multiple matches occur in your contact, only the matching record that was created first is updated.

- **Mode**: Advanced Mode

  Multiple unique keys and manually set mapping. The Advanced Mode contains an additional step. The unique key of a record (field mapping step of the wizard) may be changed to any combination of contact fields.

  If you enable **Add records to list**, disable **Update Contact**, and enable **Advanced mode** contacts are not updated. Instead, any records in the source file with keys that do not match any records are not added to the list or to your contacts. However, records with keys that match existing records are added to your list as they appear in your contacts.

  This step appears only if you selected the Advanced mode.



3 Select your **Record Update** options:

- **Add first (oldest) matching Contact Record to the list**: Add only one record to the list if multiple matches are found for a record in the contact.
- **Add all matching Contact Records (in case of multiple records) to the list**: Add all matching records from the contact to the list.
- **Skip record if multiple matches are found in Contact**: If duplicate records are found, skip the record and do not apply any changes to the record in the list. The match is based on the unique key defined on the next step.
- **Delete all list records before update**: Use this option to clear the list before adding new records. This feature removes all records in the list before adding the new records. When enabling this option, reporting data about the deleted list records is lost.

4 Click **Next** to begin adding records.

- If you are using **Advanced Mode**, Add records to list, and Add/Update Contact, you can select the action for contact update.
- If you are using the **Basic mode**, this step is not available.

5 Define how the records are updated:

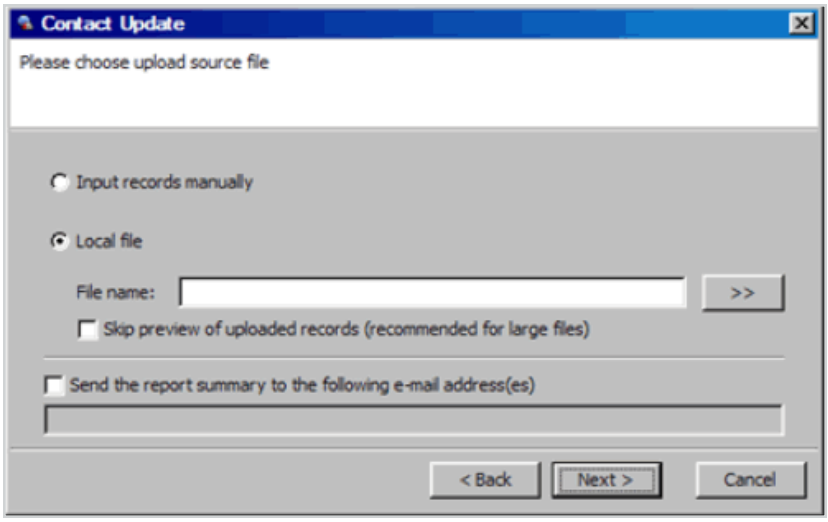
To update records, you must check at least one box.

- Add new record if matching key is not found in Contact - new records are added to your contacts if they are not already found.
- Update existing Contact record(s) with matching key - existing records are updated with the data from the source file.
  - First (oldest) matching record: Only the record that was created first is updated.
  - All matching records (in case of multiple matches): All matching records are updated.
  - Only if single match in Contact: Records are updated only if other matching records are not found.
- Action on data type format error: This setting determines how to treat records with field values that do not conform to data types selected in the Contacts folder.
  - Report as error and skip: The error is reported, and the record is skipped.
  - Leave field blank: The non-conforming field is left blank; the other fields of the contact record are added or updated.

6 Click **Next** to open the **Contact Update** screen.

7 Select either manual import or a file in CSV format.

- Manual import: to edit a number of existing fields or add a few records. You can update the call list by manually entering data in the fields of the table.
- File in CSV format: to add or update large numbers of records. See also **Importing and Updating Call Lists** and **Converting a Spreadsheet to CSV Format**.



8 Optionally, to skip the last step of the wizard, check **Skip preview of uploaded records (recommended for large files)**.

9 Optionally, check **Send the report summary to the following e-mail address(es)**, and enter a comma-separated list of the email addresses.

10 Click **Next** to open the **List Update** screen.

Set Field Mapping from Source Fields to Contact Fields

If you do not select a field for the displayed contact fields, they are not updated.



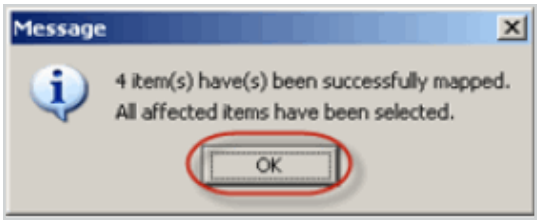
1 From the Delimiter menu, select a delimiter to separate the fields in the file: comma, colon, semicolon, or custom (you select the character(s) used as delimiters in the source file).

2 If the first row in the file contains the column headings with the names of the fields, check **Has header**.

   Column headings are listed in the Source Field Name column menus. Smart Mapping is now enabled.

3 To quickly map fields by using the existing configuration, click **Smart Mapping**.

   The system remembers your last mapping and applies it: the mapped fields are highlighted and a notification message appears.



4 Map the file fields to the contact database fields.

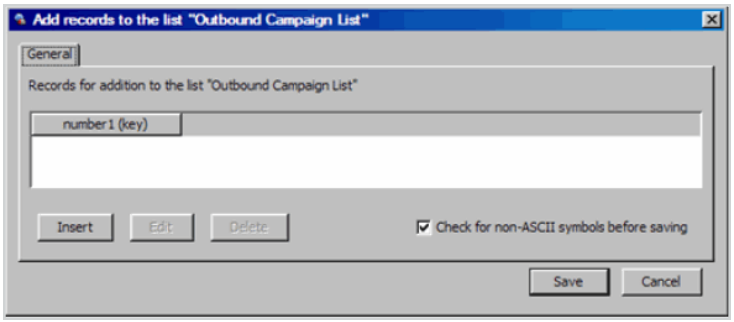
   See Mapping Fields During List Update.

5 When done, click **Finish**.

A message indicates the number of records read from the file. The preview screen shows the records read by the system. The preview screen appears only if the Skip preview of uploaded records (recommended for large files) option was not selected on a previous step.

6 Check the list to make sure all fields are correct.

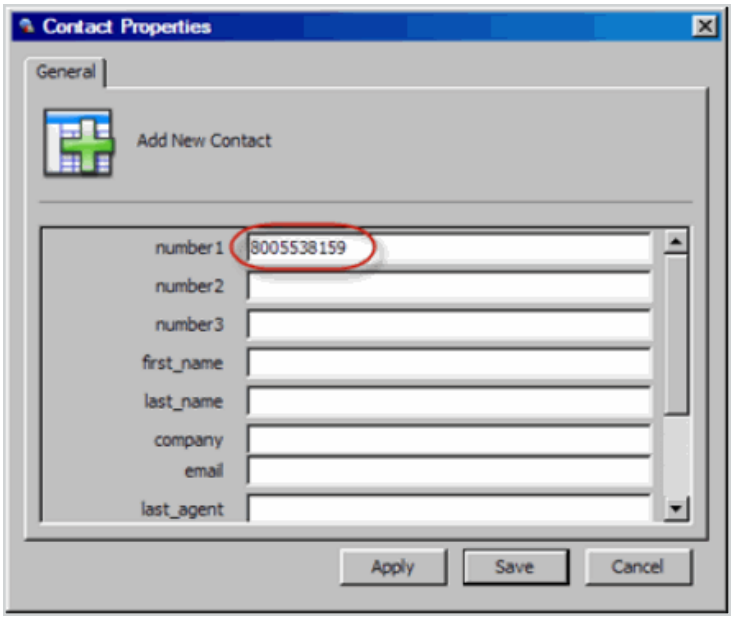
This list contains only the records you are going to import. For the manual update type, the list of records is empty.



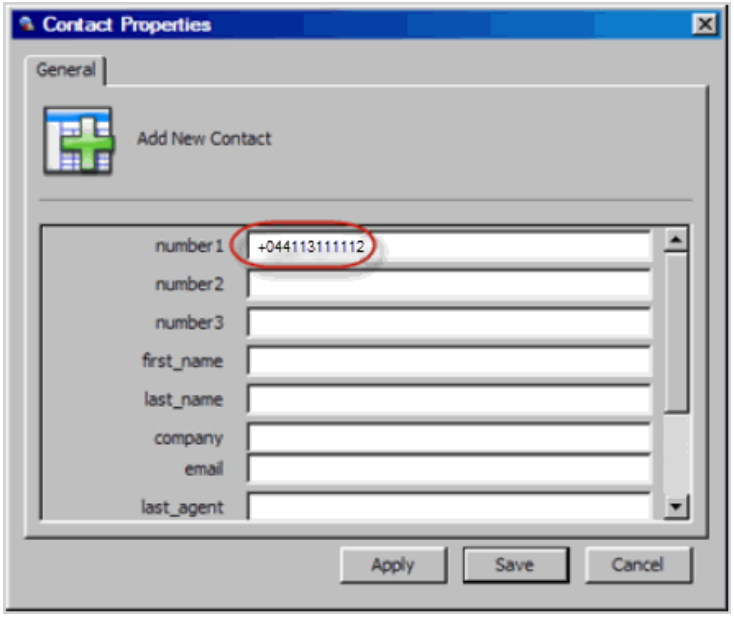
Insert a Record into Your List

1 To insert a record, click **Insert**.

Phone numbers must be either 10 digits for dialing within North America or begin with 011 for International numbers. International numbers length should be no more than 20 digits.

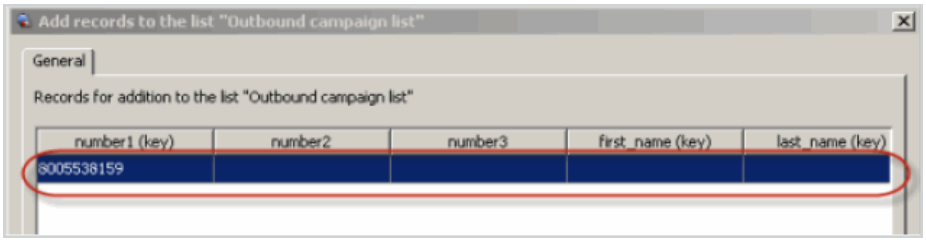


Phone numbers must be entered in standard format beginning with the plus (+) sign. The plus (+) sign indicates to carriers that an international number follows.



2 Enter the key fields to insert into the list and click **Apply** or **Save**.

A new line appears.



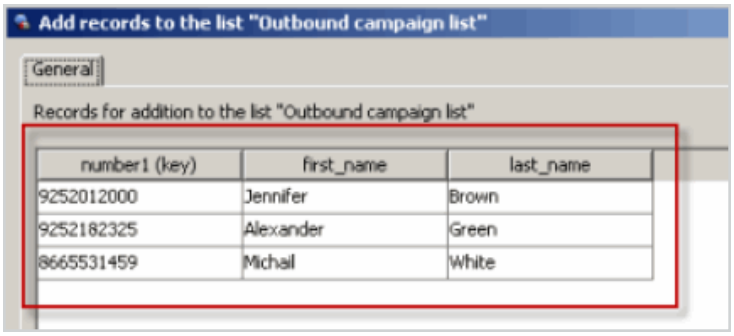
3 To edit data for that record, double-click a row.

Check for Non-ASCII Symbols

This section is optional. To prevent errors, this option checks for non-ASCII symbols entered into any fields. To update large lists more quickly, disable this option.

Add Records to the Database

1 To add the records to the database, click **Save**.



2 Click **Yes**.

3 Click **OK** twice.

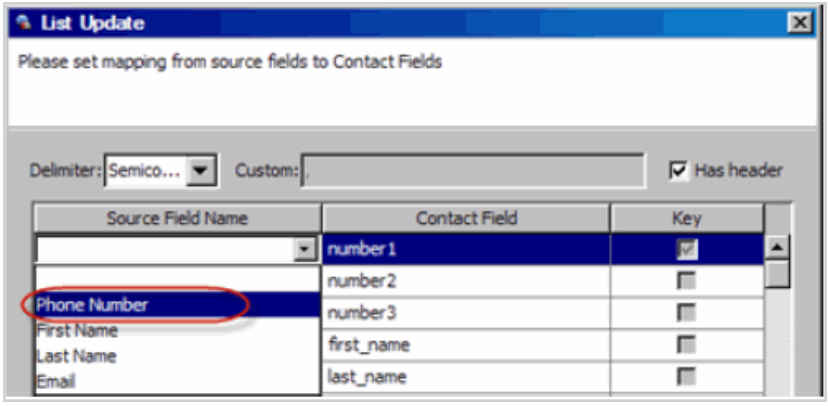
You can see the new number of records for the updated list in the Size column of the list pane. The list is now ready to be added to an outbound or autodial campaign.

Mapping Fields During List Update

Mapping the Source Field Name

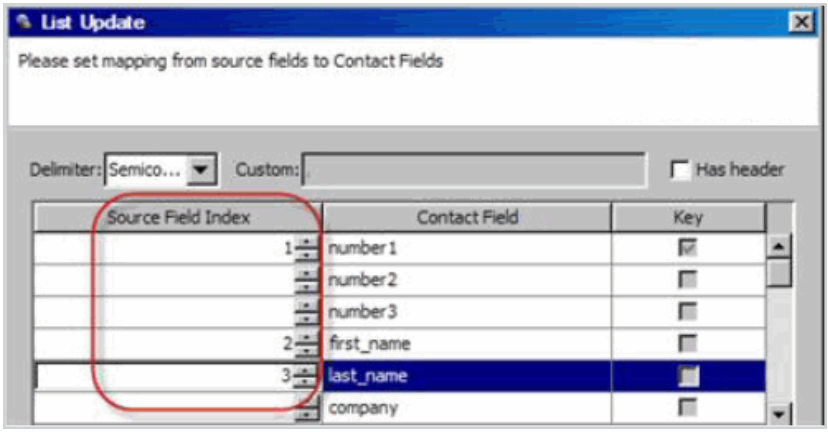
1 In step 14 of the wizard, associate the columns in your file with the fields in the contact database by using the menus under the Source Field Name column.

In this example, we select the Phone Number field from the menu to match the number1 Contact Field.

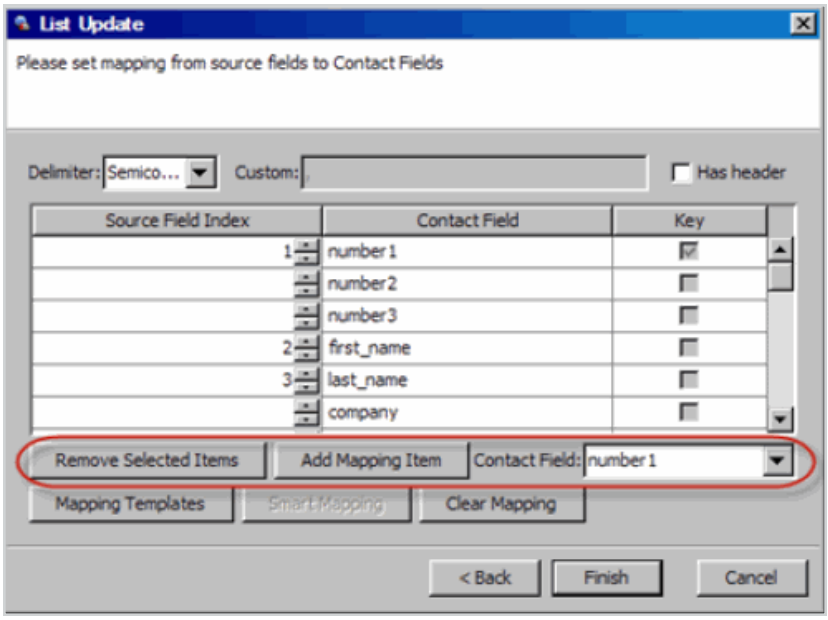


2 If the file does not contain column headings, specify the field order in the file instead. Field number1 is the first field from the left in your file.

The order of the fields in the source file are set using the Up and Down arrows in each Source Field Index field for the Contact Fields that is mapped with columns in your file.



3 To remove fields from the mapping list, optionally click **Remove Selected Items**.



4 **Add Mapping Item** is used to add the fields from the Contact database to the mapping list.

These options are useful to remove contact fields from the mapping list that you do not typically use. For example, if you do not use alternate phone numbers, you can remove the number2 and number3 fields. Removing unmapped fields from the list is not required but can be used for convenience, especially if your system contains many contact fields.

5 To restore the current mapping, click **Clear Mapping**.

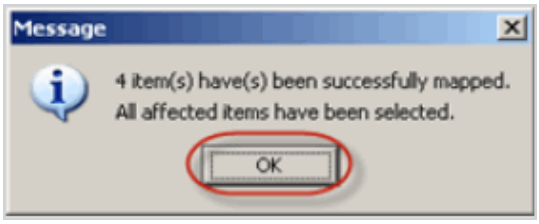
Smart Mapping

1 If the first row in the file contains the column headings with the names of the fields, check **Has header**.

Column headings are listed in the Source Field Name column menus. Smart Mapping is now enabled.

2 To quickly map fields by using the existing configuration, click **Smart Mapping**.

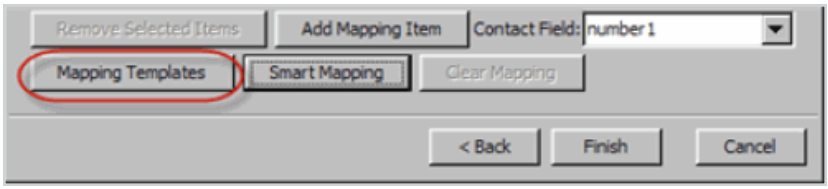
The system remembers your last mapping and applies it: the mapped fields are highlighted and a notification message appears.



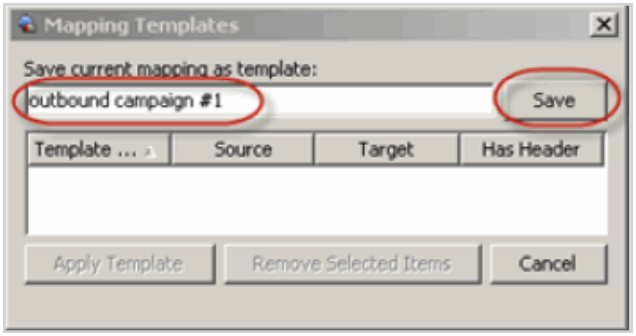
Using Mapping Templates

You can create Mapping Templates to save frequently used mappings.

1 To create or apply a mapping template, click **Mapping Templates**.



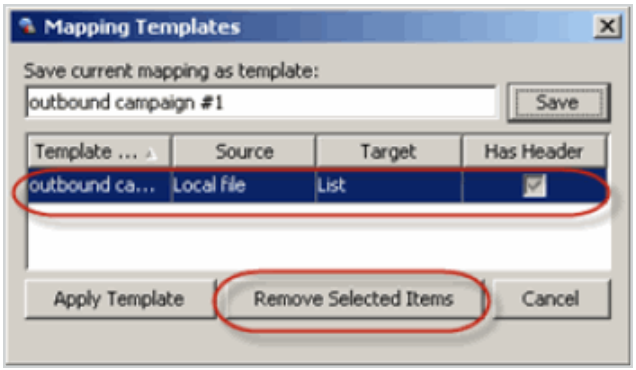
2 Enter a name for the mapping template, and click **Save**.



3 To use a mapping template, select it from the list and click **Apply Template**.

4 To remove a mapping template, select it from the list, and click **Remove**

Selected Items.



Selecting the Fields to Form the Unique Key

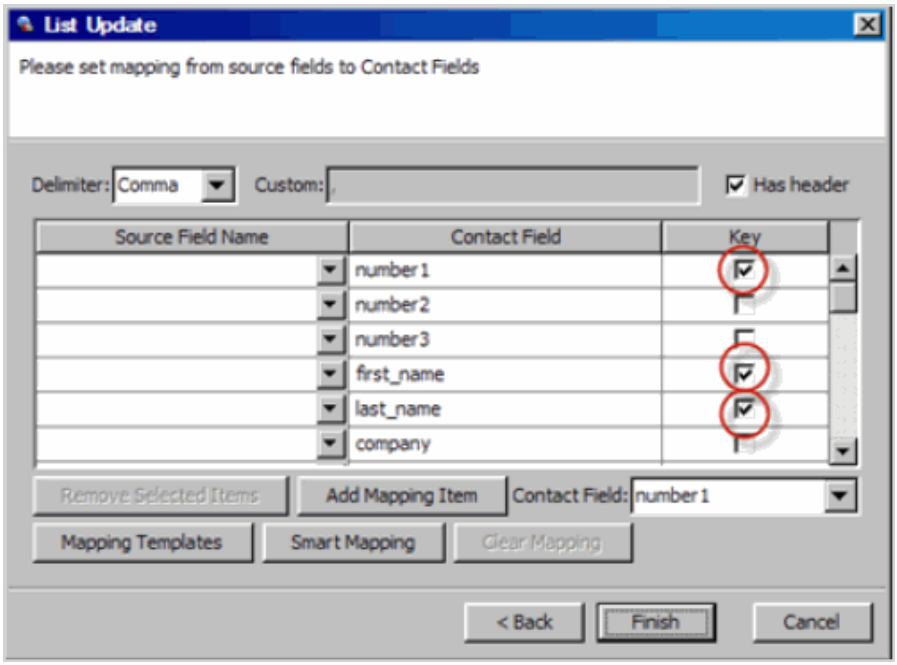
The unique key identifies duplicate records in the contact database and in the list when importing a list. The key enables you to specify how duplicate records are identified.

When updating a contact or a list from a file that contains duplicate records, the first of these duplicate records are processed. Records are considered duplicates if the key matches more than one of the records in the file.

The unique key for outbound campaigns can be a phone number when you want to dial only one contact per number. However, for example, you can create a unique key by combining the phone number, first name, and last name.

To dial multiple contacts at the same phone number, the unique key must be something other than phone number, such as first and last names. Otherwise only one contact record for each phone number are added.

In the Key column, check the boxes next to the fields that you want to use as the unique key. In the Basic Mode, the number1 field is always selected as the key. You can select keys only in the Advanced Mode. By default, the number1, first_name, last_ name fields are selected keys.



Converting a Spreadsheet to CSV Format

To convert a spreadsheet (XLS file extension) to a CSV file, follow these steps. You may need to convert each worksheet separately. After conversion to a different file format, you may lose some of the formatting, data, and other features.

1. Open the list in your spreadsheet application.
2. Select **File > Save As**.
3. Select the **Comma Separated Value (CSV)** file type.
4. Click **Save**.

Scheduling Call List Updates

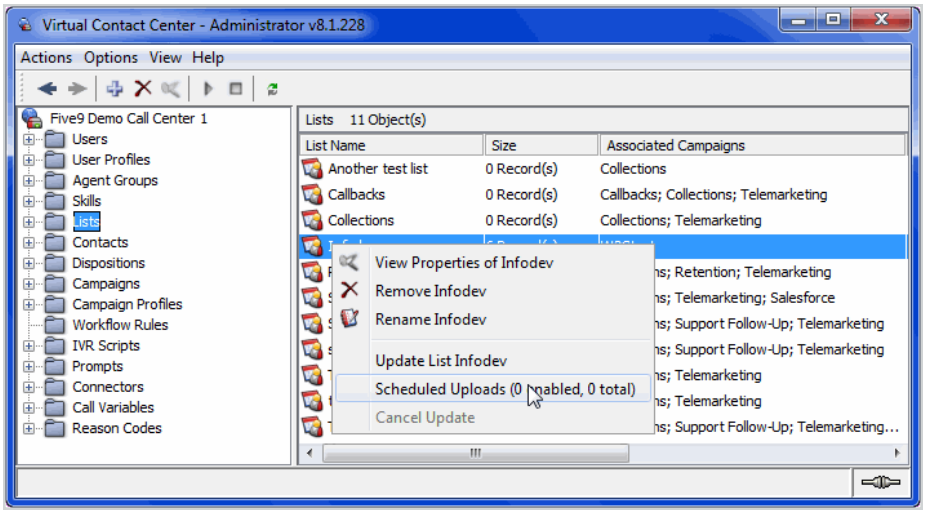
When using a scheduled update, the system pulls a list from an FTP server at a scheduled time and date. If you need to frequently update lists, automate the process by using an FTP server to store the lists and then schedule routine updates according to your needs. You must have an FTP server to use this option. You may want to schedule

list updates to add contacts to new lists and update contacts in existing lists. You can schedule contact record export from reports to call lists.

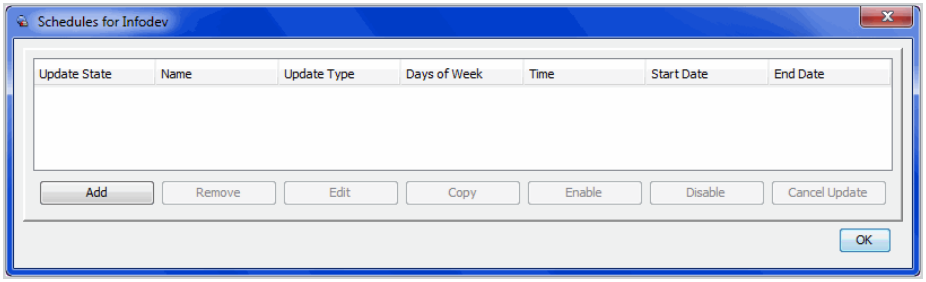
You can add, modify, delete, copy, or disable a schedule at any time.

To create a scheduled update for a call list, follow these steps.

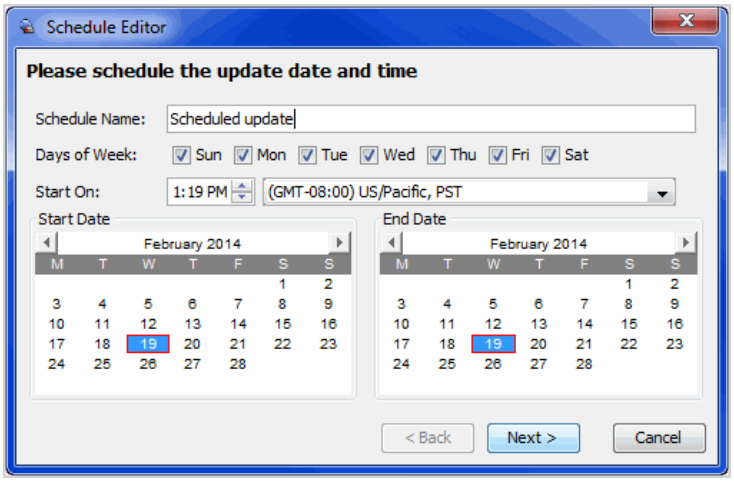
1 Right-click a list name, and select **Scheduled Uploads**.



2 Click **Add** to create a new schedule update.



3 Set the date and time options.



4 Click **Next**.

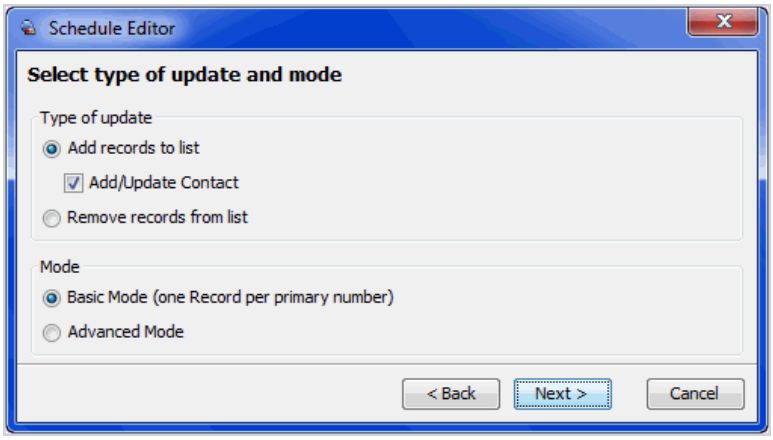
Type of update: Add records to list

- Add/Update Contact - new contact records are added if records matching the key fields do not already exist in your contacts. Existing records are also updated with information in your source file. Disabling this option only allows existing contact records that match the values in the key fields to be added to the list.
- Remove records from list

Mode:

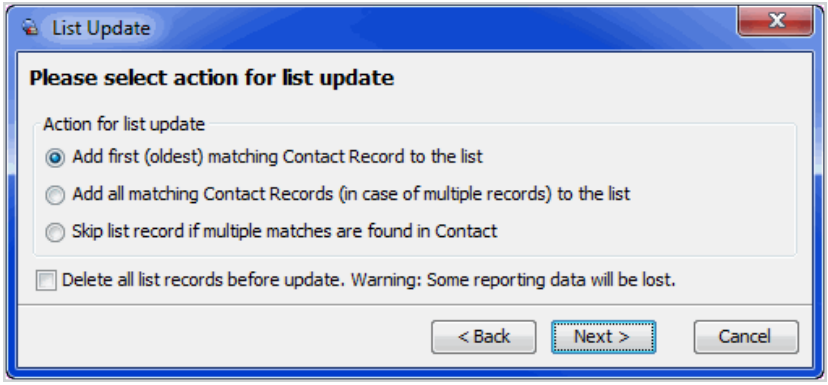
- Basic mode: one record for each primary number. Use only if your contacts have unique primary numbers (`number1` field)
  - Records with keys that do not match records in your contact are added to your database.
  - Records with keys that match existing records in your contact are updated with the information in the source file. If multiple matches occur in your contact, only the matching record that was created first is updated.
  - Advanced mode: multiple unique keys and manually set mapping. See **Understanding Field Mapping and Unique Keys**. The Advanced Mode contains an additional step. The unique key of a record (field mapping step of the wizard) may be changed to any combination of

contact fields.



5 Click **Next**.

This step appears only if you selected the Advanced mode.



6 Select your options:

Adding records to list:

- Add first (oldest) matching Contact Record to the list - Add only one record to the list if multiple matches are found for a record in the contact.
- Add all matching Contact Records (in case of multiple records) to the list - Add all matching records from the contact to the list.
- Skip record if multiple matches are found in Contact - If duplicate records are found, skip the record and do not apply any changes to the record in the list. The match is based on the unique key defined on the next step.

- Delete all list records before update - Use this option to clear the list before adding new records. This feature removes all records in the list before adding the new records. When enabling this option, reporting data about the deleted list records is lost.

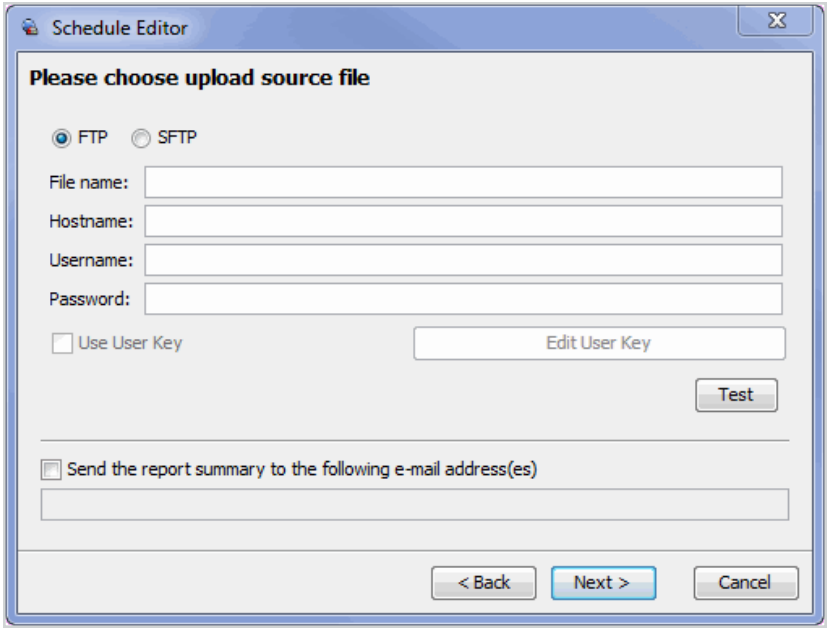
Removing records from list:

- Remove all matching records from list
- Remove all matching list records, and add first (oldest) matching Contact Record to list - Recommended only for cleaning a list with duplicate records.

7 Select your FTP file upload settings.

All fields are required. Verify that the entries are correct to avoid FTP connection problems.

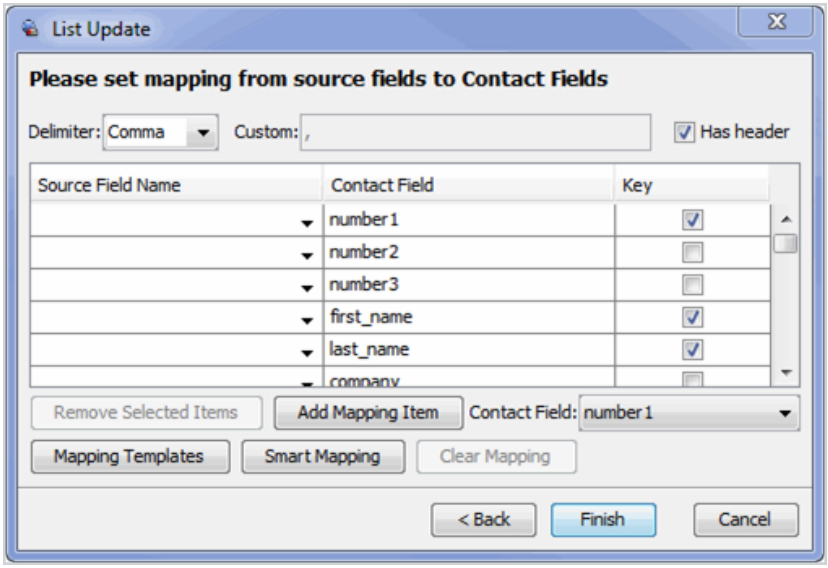
- File name - The name of the file containing the list updates.
- FTP address - The FTP server address.
- Login - The user name that is used to access the FTP server.
- Password - The password that is used to access the FTP server.



8 Optionally, check **Send the report summary to the following e-mail address(es)**, and enter a comma-separated list of the email addresses.

9 Click **Next**.

If you do not select fields for the displayed contact fields, they are not updated.



10 From the Delimiter menu, select a delimiter to separate the fields in the file: comma, colon, semicolon, or custom (you select the character(s) used as delimiters in the source file).

11 If the first row in the file contains the column headings with the names of the fields, check **Has header**.

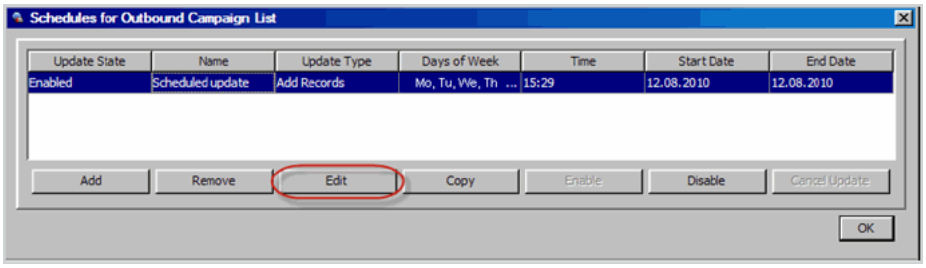
Column headings are listed in the Source Field Name column menus. Smart Mapping is now enabled.

12 Map the file fields to the contact database fields.

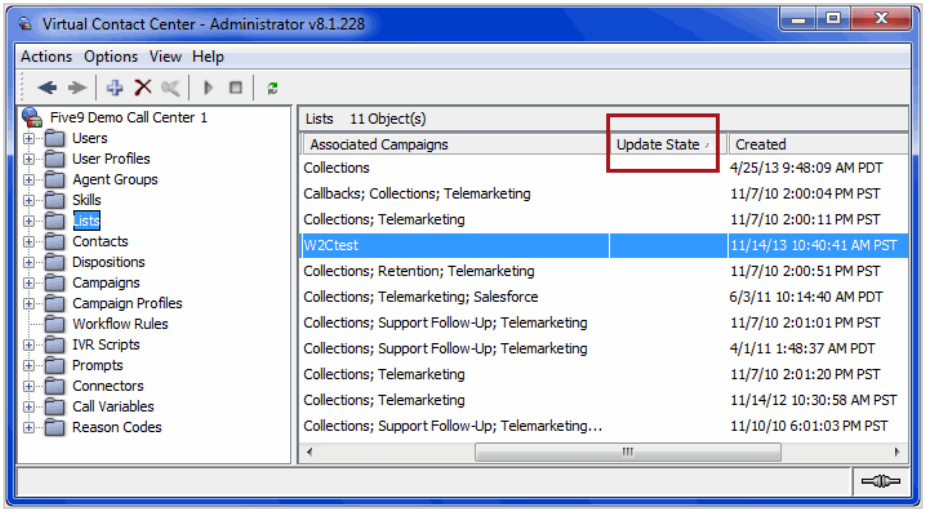
See Mapping Fields During List Update. When the updates occur, fields are mapped by using column position numbers instead of the column headings.

13 When done, click **Finish**.

The new schedule appears in the list of schedules. You can edit or remove the schedule at any time.



The status of the update is indicated in the Update State column of the list.



Removing Records and Call Lists

When deleting list records, you have these options:

- Deleting records by using a CSV file: delete large numbers of records from the list. To use this option, you need to prepare a list of records to delete.
- Deleting records manually: manually enter the key fields of the records to delete.

You can also delete records in the Contacts folder. See **Removing Contacts**.

Removing Records

All records, including duplicates, with keys that match existing records in your contacts are removed from the list, but not from the contact database. Records are deleted only

from the list. To permanently delete contact records from your system, see Removing Contacts.

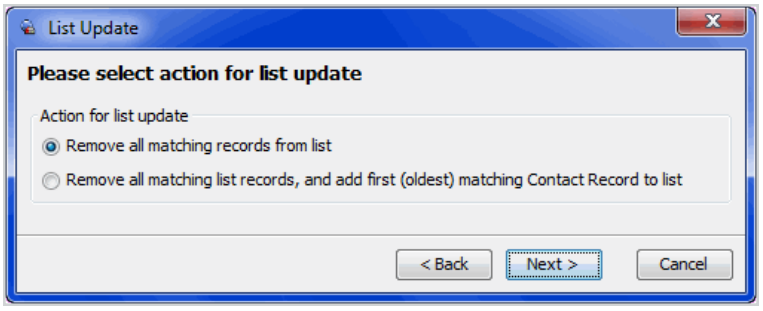
1 Right-click a list name, and select **Update List**.

2 See Importing and Updating Call Lists and follow the steps.

a In Type of update, select **Remove records from list**.

b If you select the Advanced mode, choose a record removal option.

- Remove all matching records from list.
- Remove all matching list records, and add first (oldest) matching Contact record to list: Recommended only for clean a list containing duplicate records.



c Follow the rest of the steps in the wizard.

As a result of records removal, the new number of records for the updated list appears in the Lists page. If the number of list records does not change, the phone number field may not be formatted properly, or one of the fields may contain a comma. For more information, see Formatting a Call List Before you Import.

Removing Call Lists

Follow these steps.

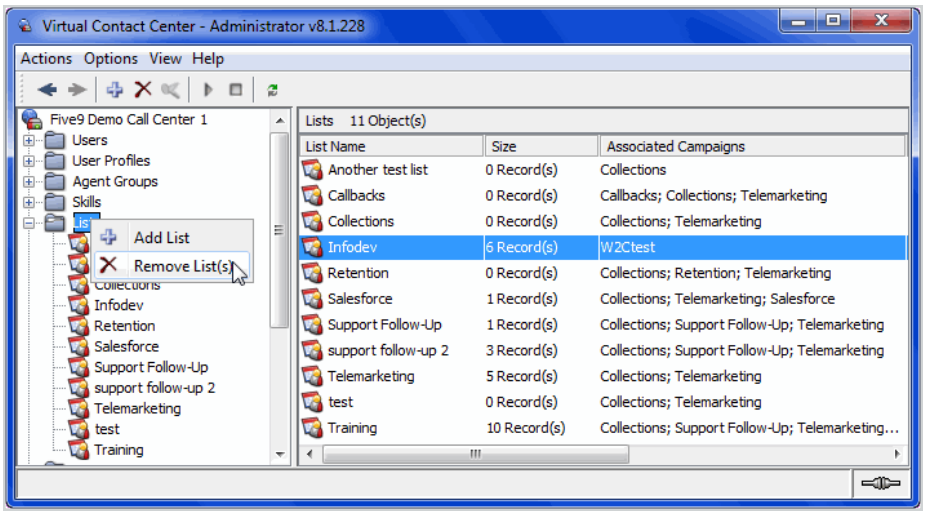
Deleting Single Lists

1 Right-click a list name, and select **Remove List**.

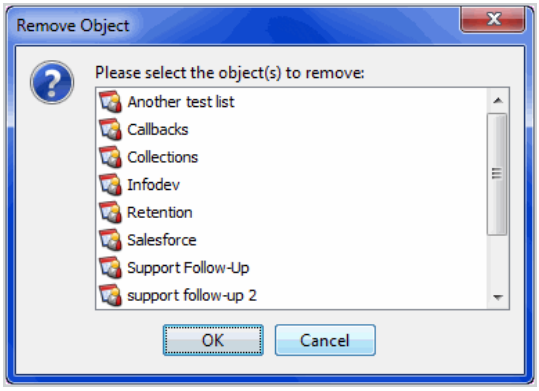
2 Click **Yes**.

Deleting Multiple Lists

1 In the navigation pane, right-click **Lists**, and select **Remove Lists**.



2 Select one or more lists.



3 Click **OK**, and **Yes to all**.

Preparing International Dialing Lists

Outbound calls follow the same default settings as domestic calls. To change dialing hours for a campaign, associate a campaign profile with the campaign. International call rates can change frequently. Currently, over 2,000 international dialing locations exist.

Toll-Free Numbers and International Calls

The origin of your inbound calls determines the type of toll-free numbers that you need. Typically, toll-free numbers cannot receive inbound international calls. Some toll-free numbers are geographically specific; others are country specific.

- **Universal International Freephone Numbers** (UIFN) allow calls between countries participating in the UIFN program. Currently, 65 countries participate.
- **International Toll-free Freephone Numbers** (ITFN) are country specific.
- **Toll-free Numbers for U.S and Canada**

To receive calls from international callers, speak with your account representative about ordering local toll circuits at the Five9 data center:

- Order international toll service from other providers, such as Sprint, AT&T, and MCI, which are forwarded to the Five9 toll circuit.
- Request that your international customers call you at a U.S. local number.

With international calls, ANI delivery is not guaranteed. Generally only about 10% of calls placed or received internationally have a caller ID.

If an error message states that the billing ID cannot be found, you have dialed a number that is currently not supported by the VCC.

Because the Five9 VCC is located in the U.S., you must use the North America Numbering Plan for numbers outside the United States and Canada. International numbers contain a maximum 20 digits, for example: **011442079294765 98**

- U.S. international access code: **011**
- Country code, such as **44**
- National destination code, such as **207**
- Subscriber number, such as **929476598**

Convert your Call List to the Correct Format

If the numbers in your calls list include the country call-out code (011), and you are converting an existing list to conform to international number format, replace the call-out country code (011) with the plus (+) sign. numbers may contain up to 15 digits.

Note

Excel sometimes removes leading zeros (0). Be sure to check your numbers and replace them if necessary.

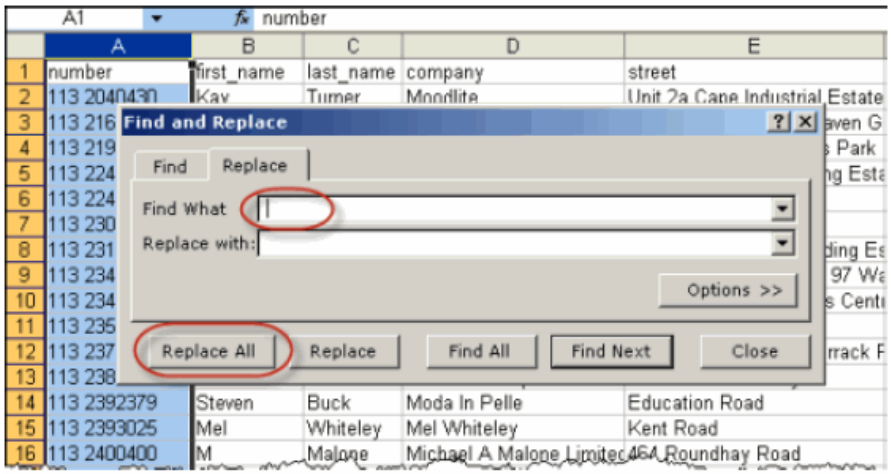
1 Open the call list in your spreadsheet program.

2 Remove leading and trailing spaces in the Phone Number column.

a To highlight the phone number column, click the column letter.

b Select **Edit > Replace**.

c In the Find What text box, press the <Backspace> key to make sure there are no extra spaces and press the <Space Bar> once.



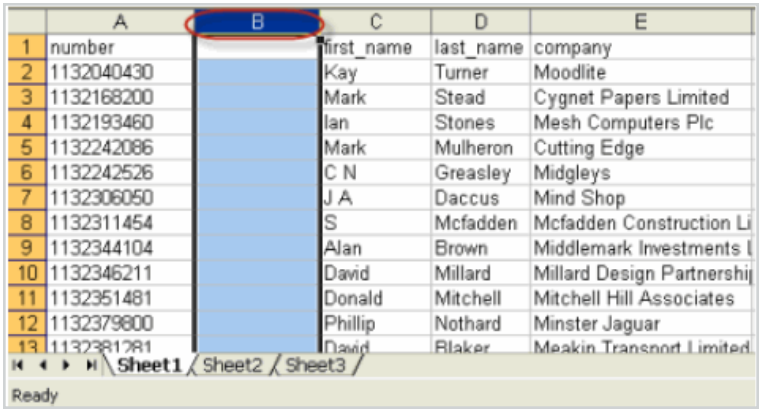
d Click **Replace All**.

3 Add the international and country codes.

To facilitate processing, group numbers in the list by country code.

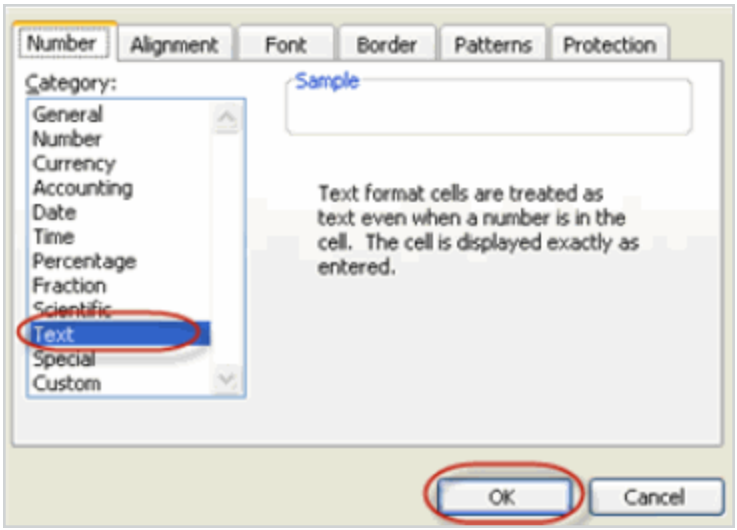
a Insert a new column to the right of the phone number column.

b Highlight the new column.



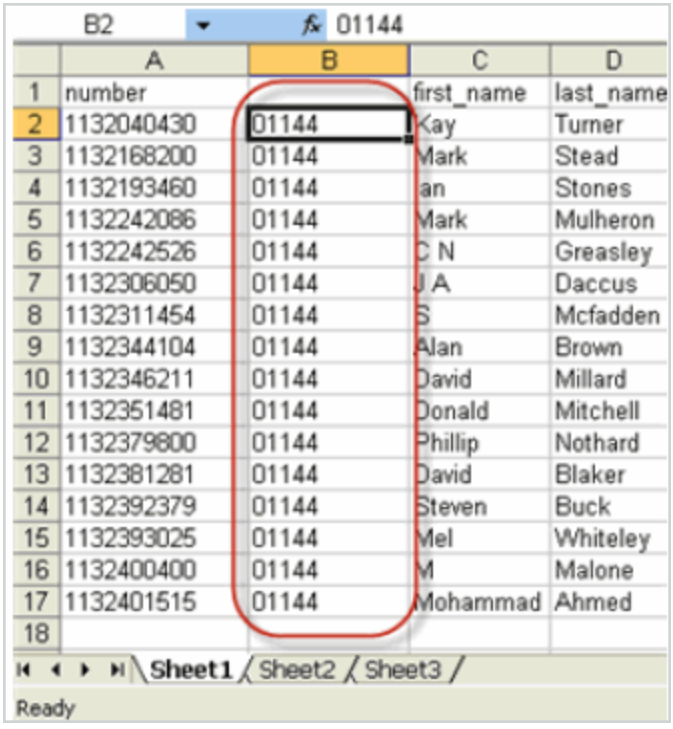
c Right-click the column heading, and select **Format Cells**.

d In the Number tab, click **Text** and **OK**.



e In the second line below the header line, enter 011 and the country code.

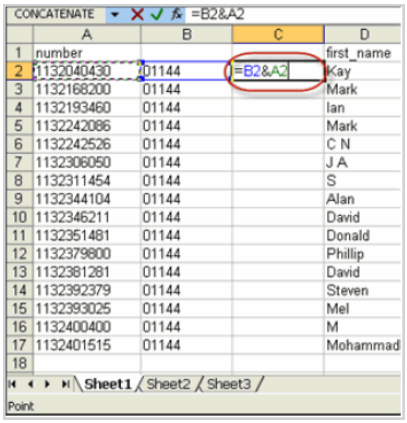
f Copy this value to all the cells below.



4 Combine the codes and number columns.

a Insert another column to the right of the 011+ country code column.

b In the second row, enter this formula: **=B2&A2**



c The new cell now contains 011 + country code + phone number.

d Copy the formula to all the cells in the new column.

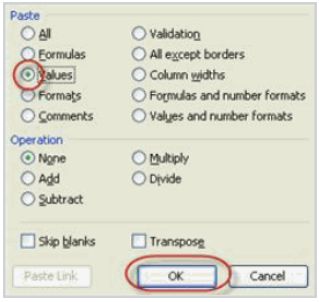
5 Replace the formula with the value or result of the formula.

a Select the column with the combined phone number (the column with the formula).

b Right-click the column, and select **Copy**.

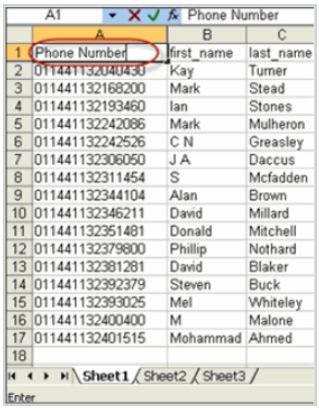
c Right-click the column again, and select **Paste Special**.

d From the Paste Special window, select **Values**, and click **OK**.



e Delete the *original number* and *011+country code* columns.

f Enter a name for the new phone number column in the first line.



g Save the file as CSV format.

If you reopen a file as created above after saving it, the application removes the leading zero in the phone number. It is important to complete all editing before closing the file. You may a text editor to edit the file after saving it.

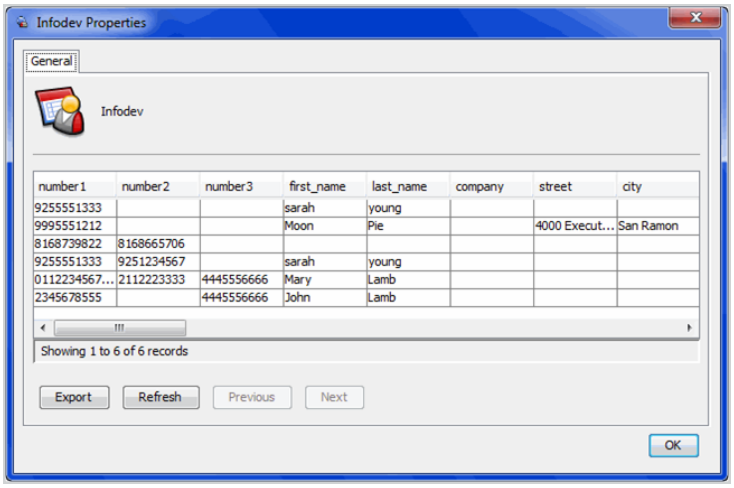
The file can now be uploaded as a list. See **Importing and Updating Call Lists**.

Exporting Call Lists

Follow these steps.

1 Double-click a list, or right-click a list and select **View properties**.

Depending on the size of your list, you may need to wait a few minutes.

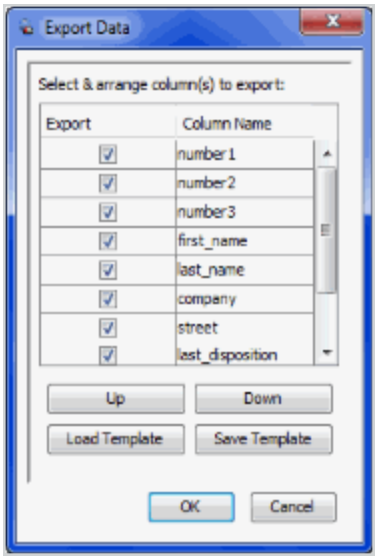


2 To export the list, click **Export**.

3 Save the file on your computer.

4 Click **Save**.

5 Check the boxes of the fields that you want to export.



6 To arrange the order of fields, click **Up** or **Down**.

7 Choose a template:
   - To open an export template, click **Load Template**.
   - To save the current template for future use, click **Save Template**.

8 When done, click **Export**.

   A message with the export results appears.

Contacts

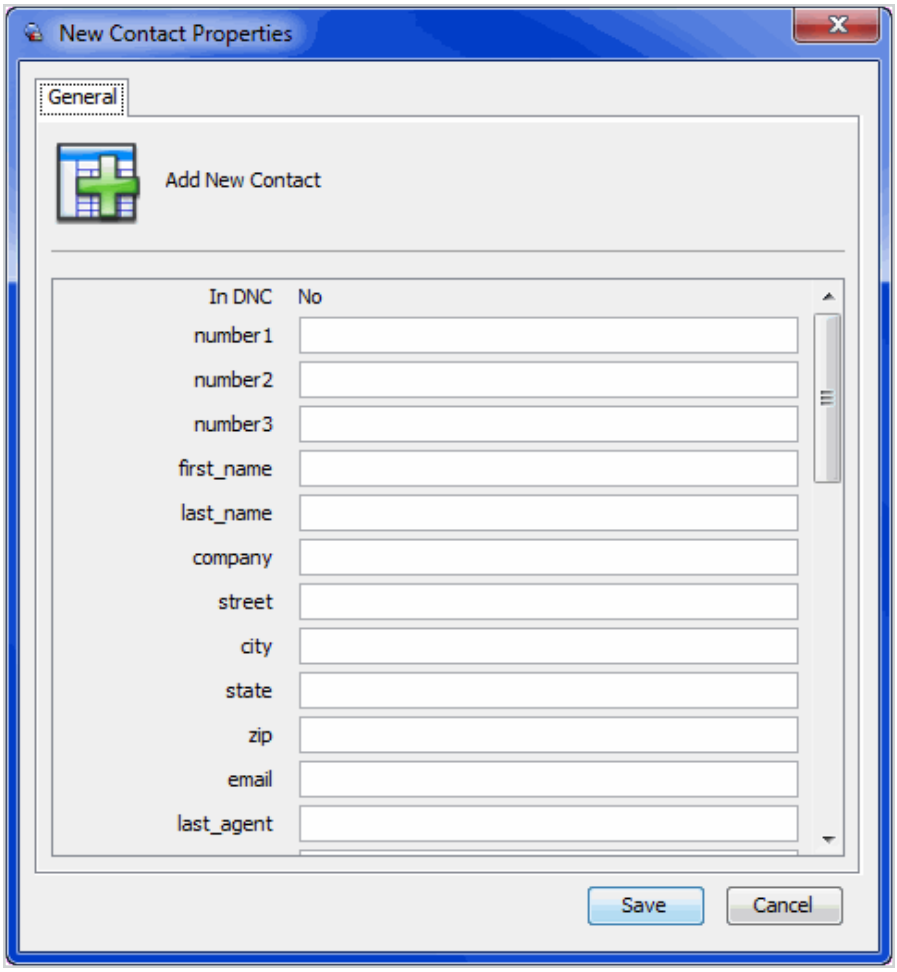
Contact Data Fields
Adding Contact Records
Filtering Contacts
Updating Contacts
Scheduling a Contact Database Update
Removing Contacts
Managing Contact Fields
Data Types

Your Virtual Contact Center (VCC) contacts are stored in a database that you update by importing a list, importing contact records, or updating individual contact records. When a call is connected to an agent, the information for that contact is displayed to the agent.

Contact Data Fields

The contact database has eight default data fields that cannot be deleted, but you can add custom fields as needed. This table describes the default fields:

Number fields	Enter up to three phone numbers for a contact.
first_name	First name of the contact. Text field; up to 250 characters
last_name	Last name of the contact. Text field; up to 250 characters
Company	Company name. Text field; up to 250 characters
Street	Street address of the contact's company. Text field; up to 250 characters
City, State	Text field; up to 250 characters
Zip Code	Text field; up to 250 characters



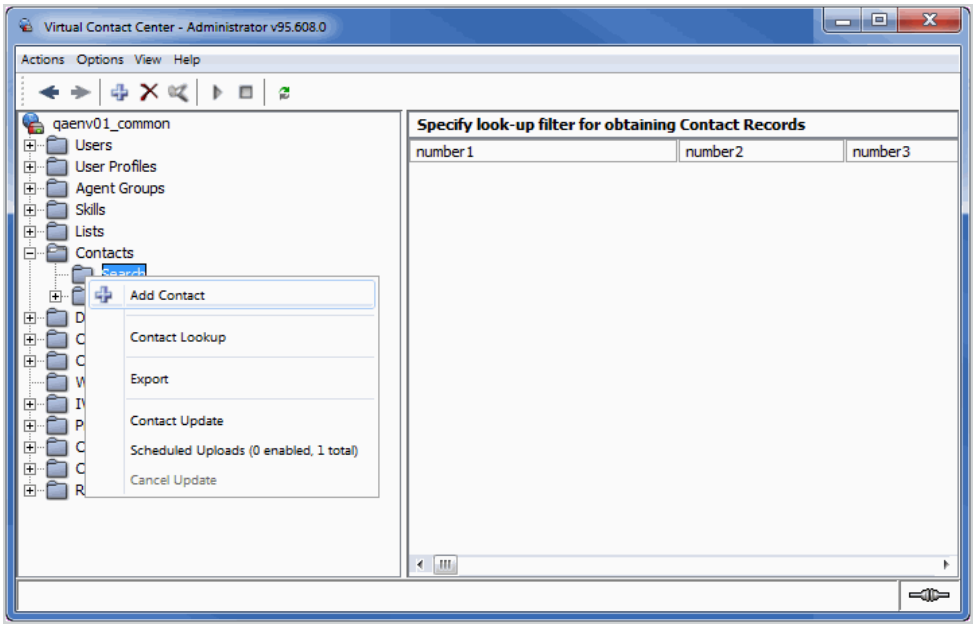
Multiple records can contain the same number.

If your lists or contact records contain one or more fields that do not currently have an associated contact field, add the new field your the Virtual Contact Center (VCC) domain definitions before you update your lists and contact record. You may configure custom contacts fields to accept only certain text formats.

To display records, use the **Lookup Contact Record** function. Contact records matching search criteria appear in the **List** pane on the right. See **Filtering Contacts**. You can use Lists to add, edit, or remove a contact record or work directly in **Contact** folder.

Adding Contact Records

1 Open the Contacts folder, and right-click the Search folder.



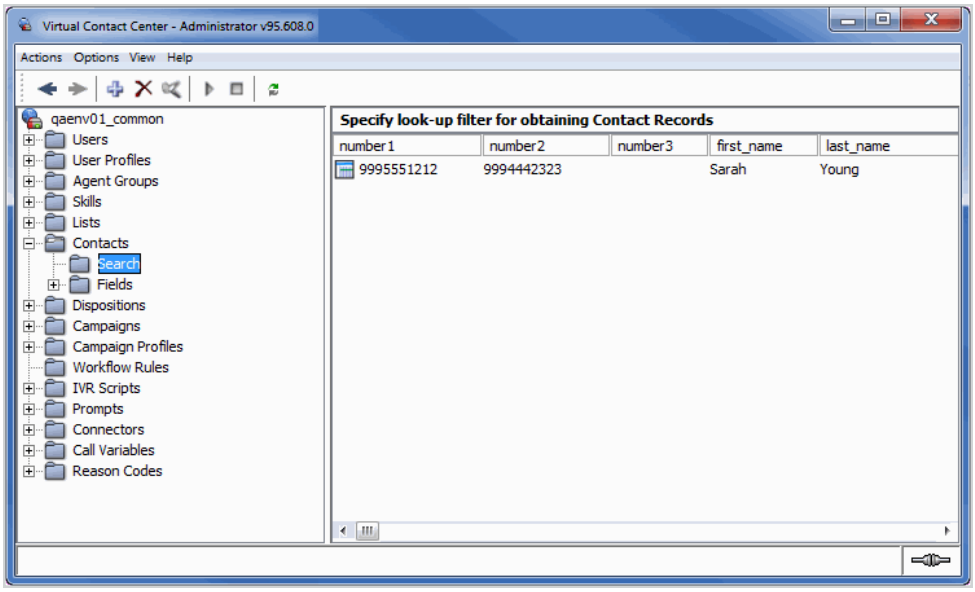
2 Select **Add Contact**.

3 Enter the details of the new contact record.

You can use standard and custom fields.

4 Click **Save**.

A new row appears in the list.

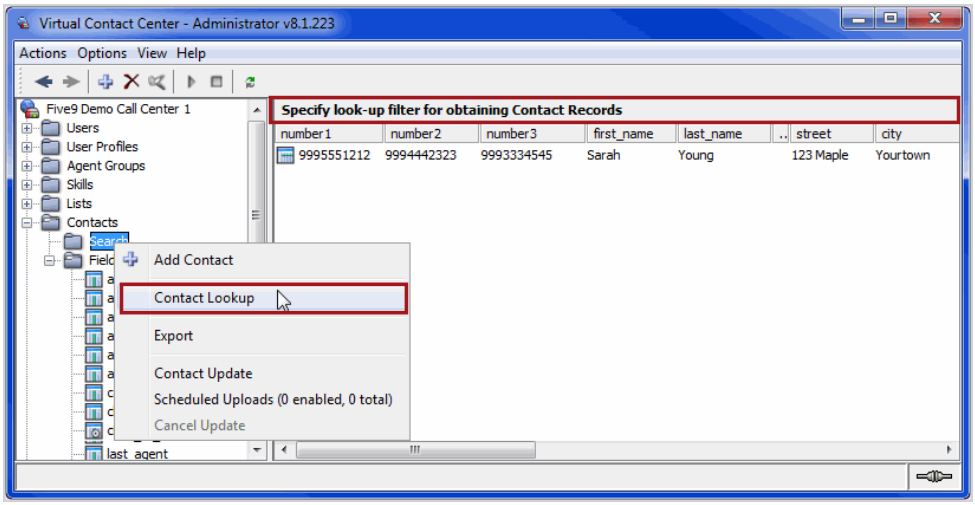


Filtering Contacts

You can see all contact records or only records with specified criteria. The results of a search are limited to 1,000 contact records.

1 Select **Contacts > Search**, and select **Contact Lookup**, or click the line above the fields in the main window.

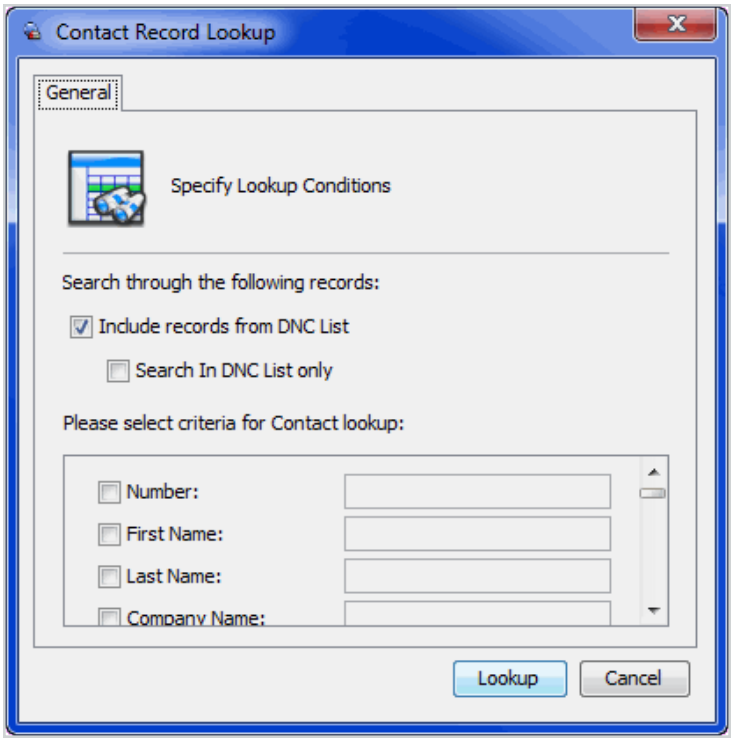
Both options are highlighted in this figure.



2 To define your search options, check the appropriate boxes and enter a value.

To display all existing records, do not define values. To define a subset of all possible characters, use wild cards:

- To match zero or more characters, use the percent sign (%), for example: `%555%` to find 9255572000, 9289235552 or 9234555233.
- To substitute a single character, use underscores (_), for example: to find 1235551234, use `___555____` (3 underscores + 555 + 4 underscores).



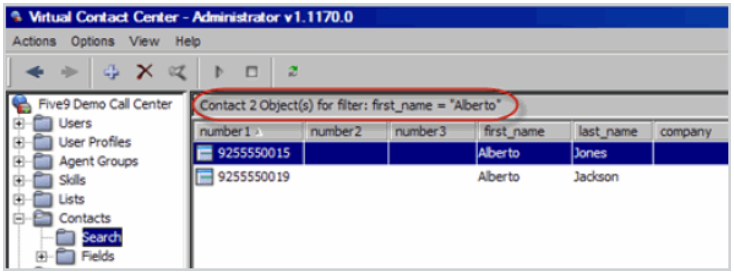
3 Optionally, search the DNC list:

a To include records with all numbers in the Do Not Call list, check Include records from DNC List.

b To search only for records that have all numbers in your Do Not Call list, check the Search In DNC List Only options.

4 Click **Lookup**.

Only complete matches appear. The number of matching records and the filters appear in the line above the columns in the main pane.



Updating Contacts

You can update contact records in many ways:

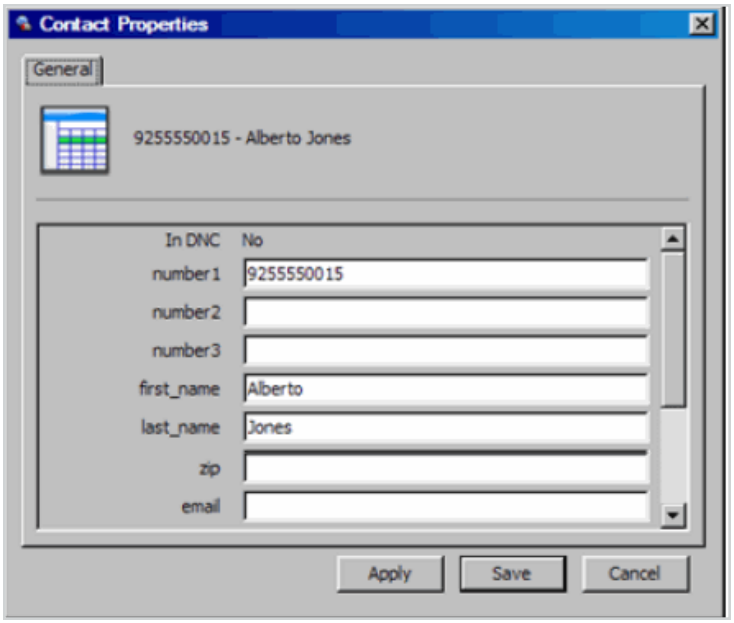
- Editing the properties of individual records
- Importing a file
- Manually editing the table
- Scheduling automatic updates by FTP
- Importing/Updating Call Lists
- Enabling agents to update Contact records

Editing Individual Records

1. Search for the records that you want.
2. Select up to 10 contacts to edit.
3. Double-click a record, or right-click several records and select **Edit Selected Contact Record(s)**.



The properties window appears. If you selected several records, each record appears in a separate window.



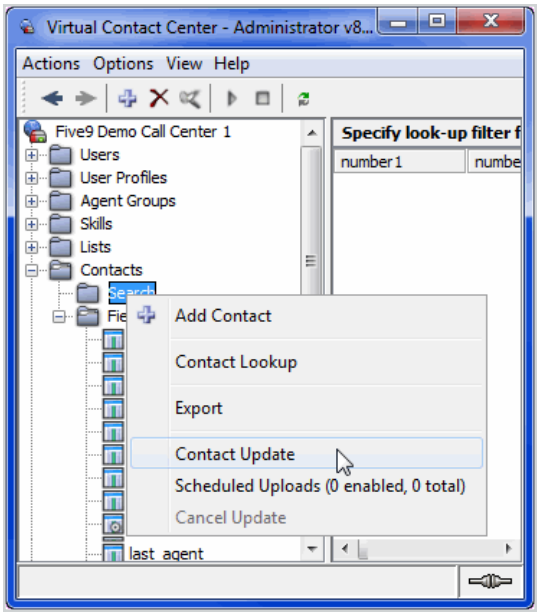
4 Modify the fields.

5 When done, click **Save** or **Apply**.

Importing Data Manually or from Files

Use this method to update your database.

1 Right-click the Search folder, and select **Contact Update**.

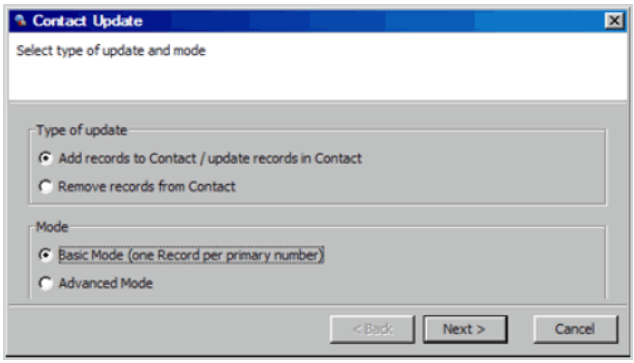


2 In the wizard, select your options.

Type of update: Add records to Contact/update records in Contact

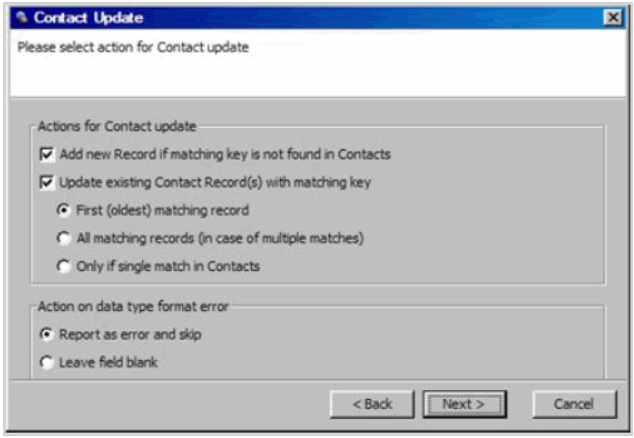
Mode:

- Basic mode: one record for each primary number. Use only if your contacts have unique primary numbers (`number1` field).
  - Records with keys that do not match records in your contact are added to your database.
  - Records with keys that match existing records in your contact are updated with the information in the source file. If multiple matches occur in your contact, only the matching record that was created first is updated.
- Advanced mode: multiple unique keys and manually set mapping. See **Understanding Field Mapping and Unique Keys**. The Advanced Mode contains an additional step. The unique key of a record (field mapping step of the wizard) may be changed to any combination of contact fields.



3 Click **Next**.

This step appears only if you selected the Advanced mode.



4 Select your options:

To update records, you must check at least one box.

- Add new record if matching key is not found in Contact - new records are added to your contacts if they are not already found.
- Update existing Contact record(s) with matching key - existing records are updated with the data from the source file.
  - First (oldest) matching record: Only the record that was created first is updated.
  - All matching records (in case of multiple matches): All matching records are updated.
  - Only if single match in Contact: Records are updated only if other matching records are not found.
- Action on data type format error - This setting determines how to treat records with field values that do not conform to data types selected in the

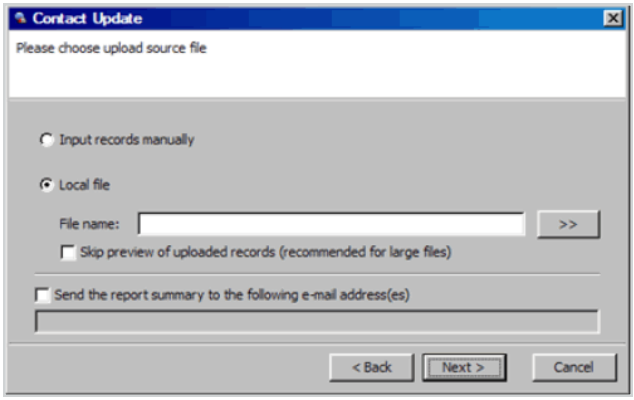
Contacts folder.

- Report as error and skip - The error is reported, and the record is skipped.
- Leave field blank - The non-conforming field is left blank; the other fields of the contact record are added or updated.

5 Click **Next**.

6 Select either manual import or a file in CSV format.

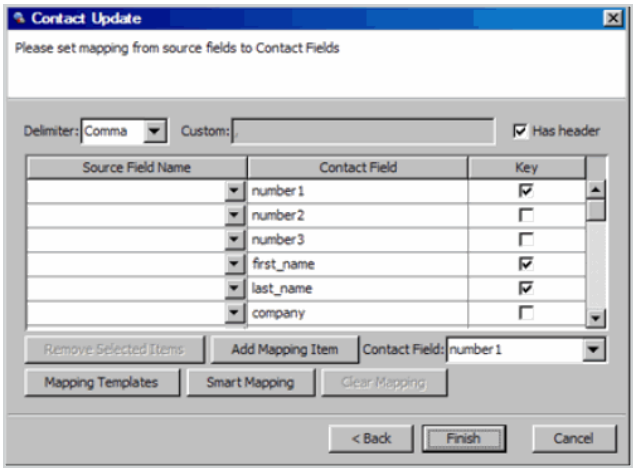
- Manual import: to edit a number of existing fields or add a few records. You can update the call list by manually entering data in the fields of the table.
- File in CSV format: to add or update large numbers of records. See also **Importing and Updating Call Lists** and **Converting a Spreadsheet to CSV Format**.



7 Optionally, to skip the last step of the wizard, check **Skip preview of uploaded records (recommended for large files)**.

8 Optionally, check **Send the report summary to the following e-mail address(es)**, and enter a comma-separated list of the email addresses.

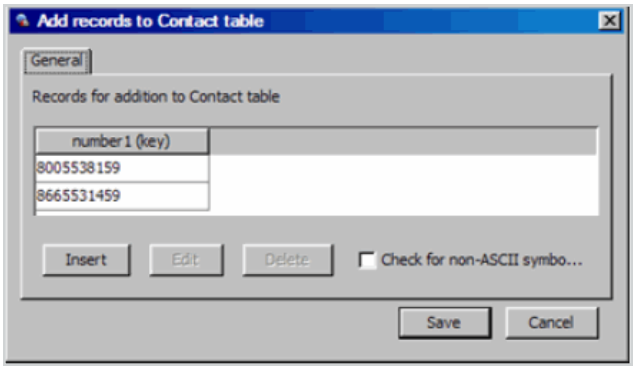
9 Click **Next**.



10 In the Source Field Name column, select the corresponding columns or the position number of the columns in your source file if your file does not have a header that you would like to update.

11 Click **Finish**.

12 To add the records to the database, click **Save**.

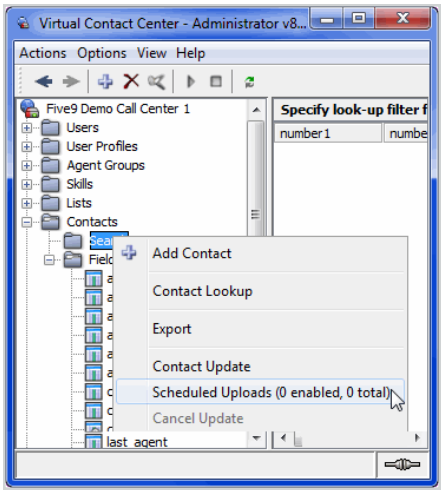


13 Click **OK** twice.

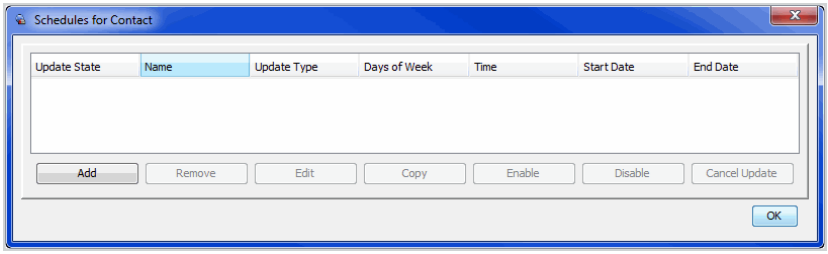
Scheduling a Contact Database Update

You can schedule the database update for a specific date and time.

1 Right-click the **Search** folder, and select **Scheduled Uploads**.

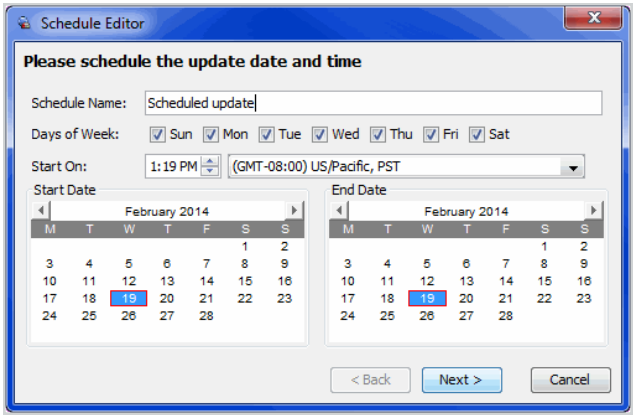


2 Click **Add** to create a new schedule update.



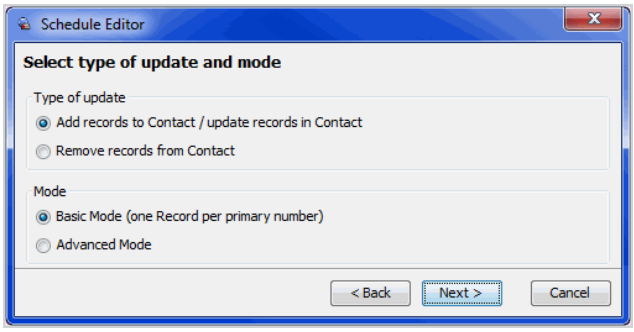
See [Scheduling Call List Updates](). The next step in the process is the same.

3 Set a date and time.



4 Click **Next**.

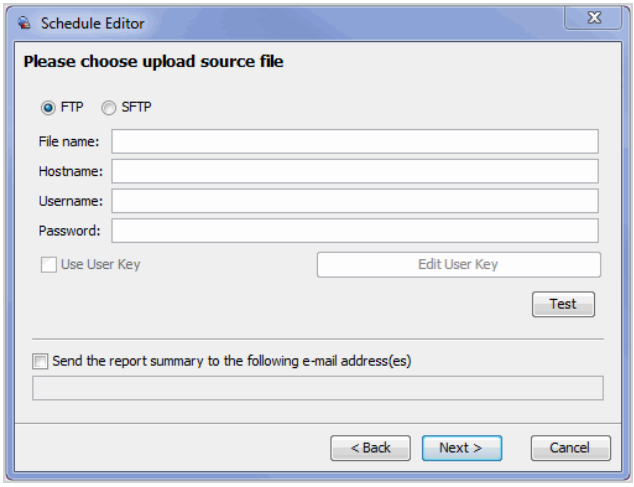
5 Select a type and mode.



6 Select your FTP file upload settings.

All fields are required. Verify that the entries are correct to avoid FTP connection problems.

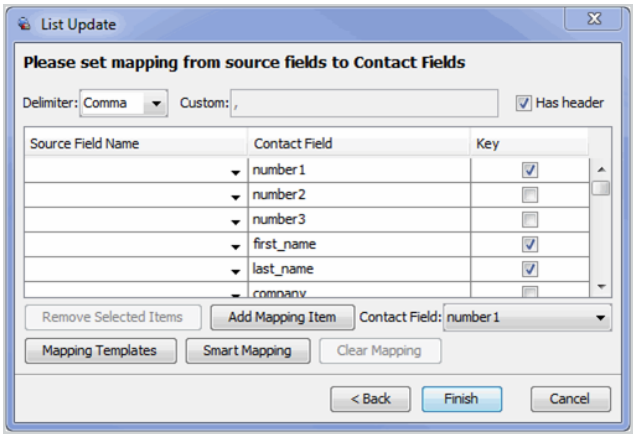
- File name - The name of the file containing the list updates.
- FTP address - The FTP server address.
- Login - The user name that is used to access the FTP server.
- Password - The password that is used to access the FTP server.



7 Optionally, check **Send the report summary to the following e-mail address(es)**, and enter a comma-separated list of the email addresses.

8 Click **Next**.

If you do not select fields for the displayed contact fields, they are not updated.



9 From the Delimiter menu, select a delimiter to separate the fields in the file: comma, colon, semicolon, or custom (you select the character(s) used as delimiters in the source file).

10 If the first row in the file contains the column headings with the names of the fields, check **Has header**.

Column headings are listed in the Source Field Name column menus. Smart Mapping is now enabled.

11 Map the file fields to the contact database fields.

See Mapping Fields During List Update for instructions. When the updates occur, fields are mapped by using column position numbers instead of the column headings.

12 When done, click **Finish**.

The new schedule appears in the list. The status of the update is indicated in the Update State column.

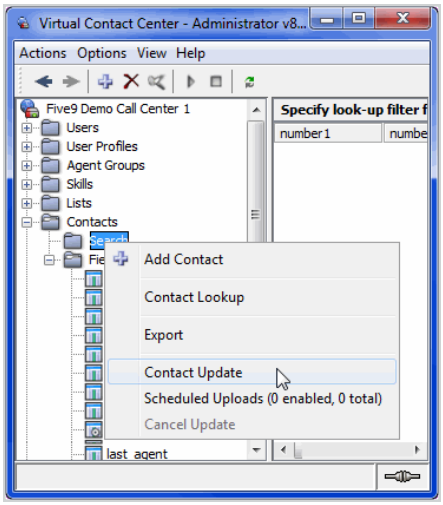
Removing Contacts

You can also delete Contact records from a particular call list.

Removing Records Manually or from File

You can use this method if you have contacts in a file in CSV format. This method is appropriate for removing large numbers of records in the database. See **Importing and Updating Call Lists** for more information about this file format.

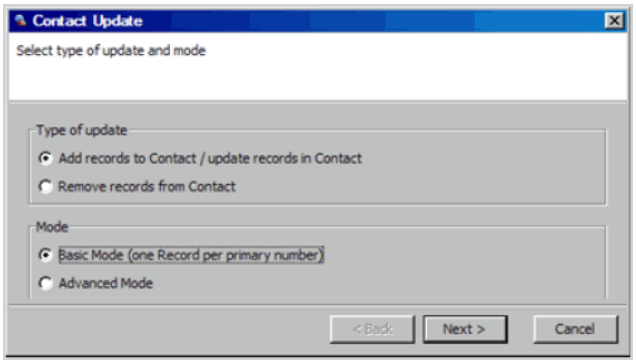
1 Right-click the Search folder, and select **Contact Update**.



2 Select your options.

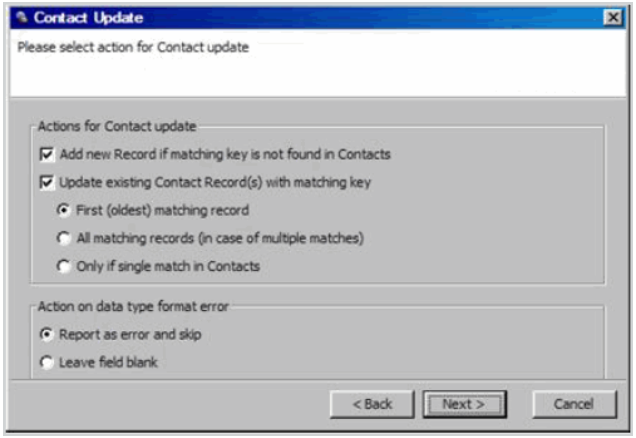
Type of update: Remove records from Contact.

- Basic mode: one record for each primary number. Use only if your contacts have unique primary numbers (`number1` field). All records, including duplicates, with keys that match existing records in your contact are removed.
- Advanced mode: multiple unique keys and manually set mapping. The Advanced Mode contains an additional step. The unique key of a record (field mapping step of the wizard) may be changed to any combination of contact fields. See **Understanding Field Mapping and Unique Keys**.



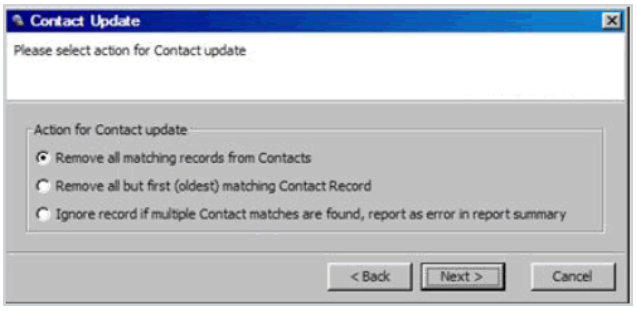
3 Click **Next**.

This step appears only if you selected the Advanced mode.



4 Select your options:

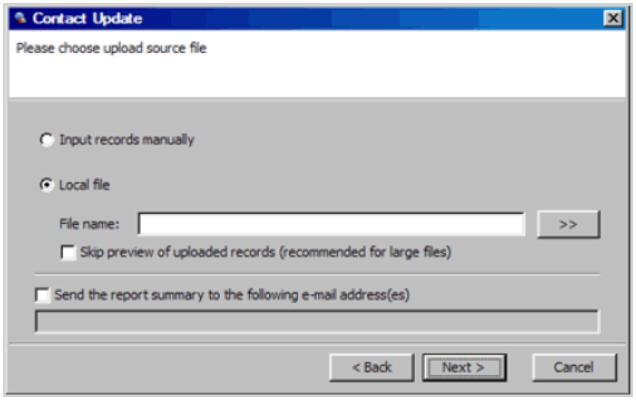
- Remove all matching records from Contact.
- Remove all but first (oldest) matching Contact Record - Recommended only for cleaning up a database with duplicate records.
- Ignore record if multiple Contact matches are found, report as error in report summary - Recommended only if checking report emails to see which records are duplicates.



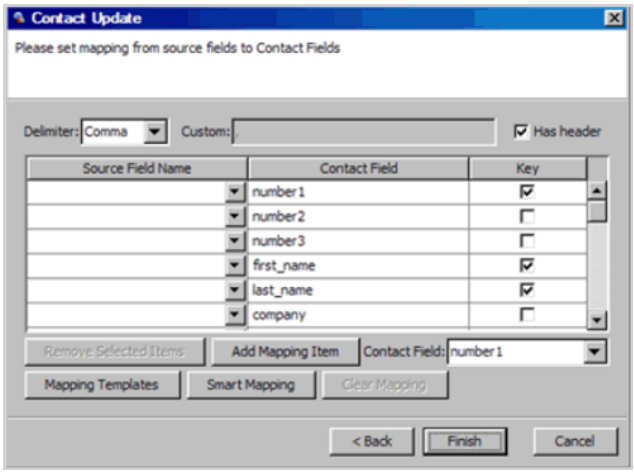
5 Click **Next**.

6 Select either manual import or a file in CSV format.

- Manual import: to edit a number of existing fields or add a few records. You can update the call list by manually entering data in the fields of the table.
- File in CSV format: to add or update large numbers of records. See **Importing and Updating Call Lists** and **Converting a Spreadsheet to CSV Format**



7 Click **Next**.



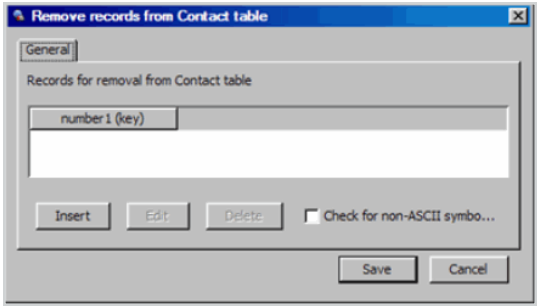
8 In the Key column, select the boxes next to each key field.

By default, the `number1`, `first_name`, and `last_name` fields are checked.

9 Click **Finish** and **OK**.

10 Check the list to ensure that the fields are correct.

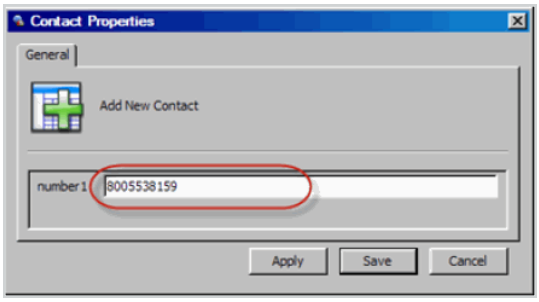
For the manual update type, the list of records is empty. This window enables you to manually add records to be removed from the list.



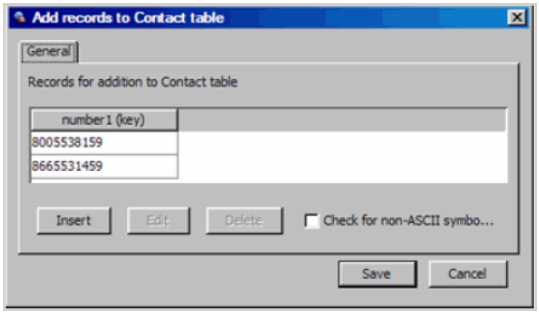
11 To insert a record, click **Insert**.

12 Enter the key fields to insert into the list and click **Apply** or **Save**.

Phone numbers must be either 10 digits for dialing within North America or begin with 011 for International numbers. International numbers length should be no more than 20 digits.



A new line appears.



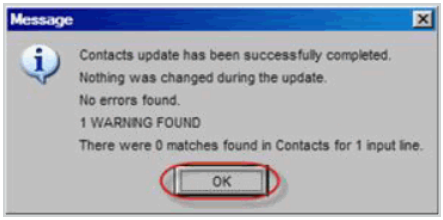
13 To modify the information, click a row and **Edit**, or double-click the row.

14 When done, click **Save**.

15 To delete the listed records from the database, select **Yes**.

16 Click **OK** twice.

You see messages about the results of the removal. In the following example, the process results with a warning: one of the entered records did not match an existing entry in the Contact database.



To see the updated record information, see Filtering Contacts.

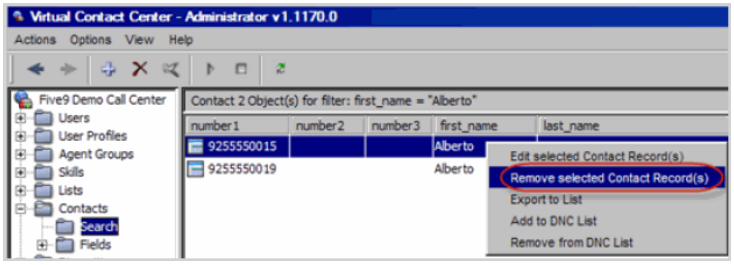
Removing Contact Records with the Search Option

Use the search option to delete records.

1 Search for the records that you want.

2 Select up to 10 contacts to edit.

3 Double-click a record, or right-click several records and select **Remove Selected Contact Record(s)**.

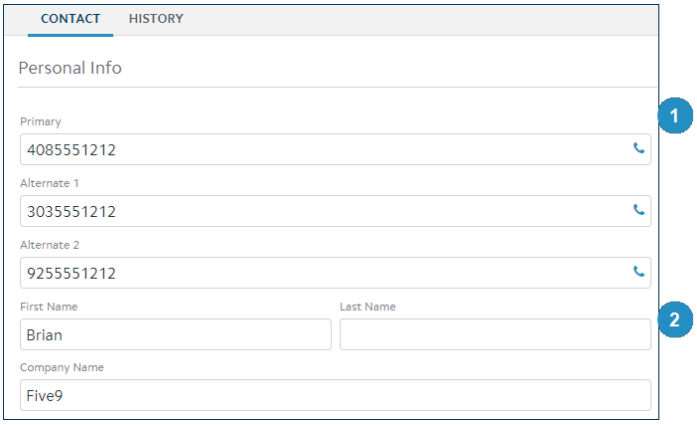


4 Click **Yes**.

Managing Contact Fields

Your contacts are stored in a database that you can update by importing a list or when an agent updates a contact record. The contact database has eight standard data fields. You can access the contact fields under **Contacts > Fields**. The list contains these columns:

- Field Name
- Data Type: See **Data Types** for a list of data types.
- Field Type (System, Mapped, Custom): See the descriptions of each type below.
- Display As: How fields appear in the agent application. Custom fields may be hidden or displayed as long or short fields on the agent's Current Call window.



1 Long Field Display
2 Short Field Display

The Contacts folder contains 10 system contact fields, which you cannot modify or delete. You can only choose how to display them.

number	company
number2	street
number3	city
first_name	state
last_name	zip

Adding Contact Fields
Removing Custom Contact Fields

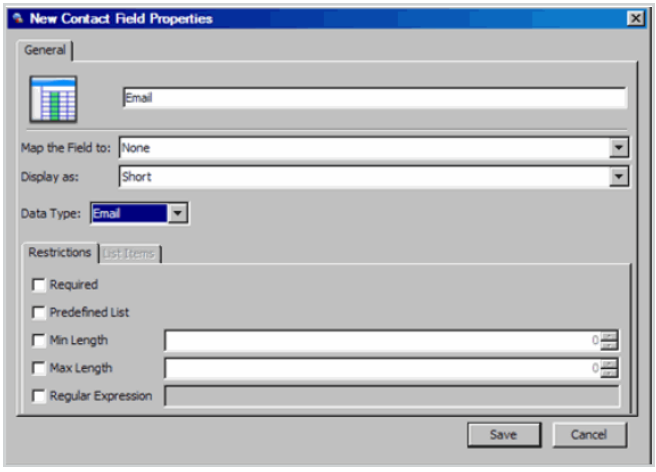
Adding Contact Fields

You can have a total of 125 contact fields. Because you already have 10 system fields, you can create up to 115 contact fields.

Before importing a list or adding contact records, check for any new fields that you may need to add. If your dialing list or contact list contains one or more fields that do not currently have an associated contact field, add the new field.

Example

Email is not a default field. Therefore, you need to add a custom contact field if you want to store this information. It is important that you create only one field with the email field type for digital engagement use.



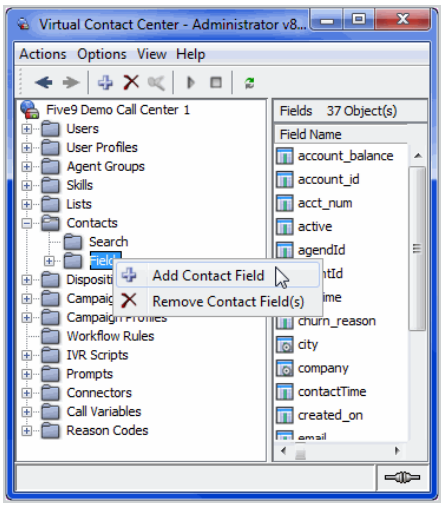
A field must exist before you can import data, but the names do not need to match exactly. In addition, if you have fields that you do not want to import into Five9, you can ignore them during the import process. Fields are not set until the record is assigned a disposition either by an agent or with a system disposition.

Important

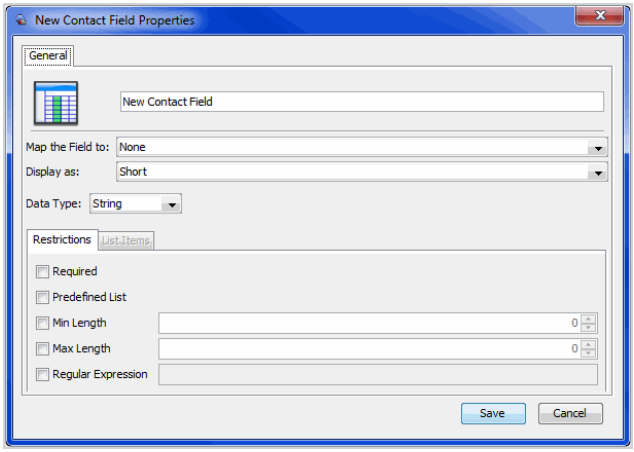
If you are enabled for the multi-channel features and plan to use the email functionality, you must create a contact field labeled email and of Data Type: Email.

1 Open the Contacts folder.

2 Right-click the Fields folder, and select **Add Contact Field**.

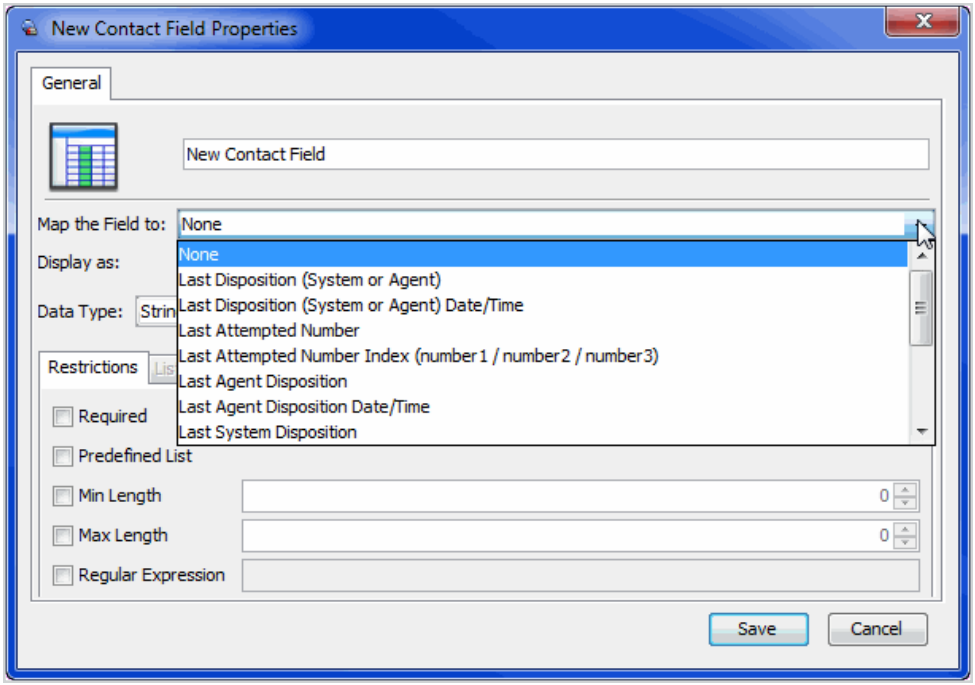


3 In the properties window, enter a field name, and select your options:



4 If needed, select an automatic mapping for the field.

Mapped fields can be used to store information about the last system and agent dispositions, the last attempted phone number, last campaign, last list, dialer, and last agent to use the record, with the fields being updated at the time that a disposition is set. Fields can be configured to save time stamps for when the record was last modified or originally created. These fields can be used with campaign profile filtering and sorting criteria for optimal dialing of your contacts. They can also be used for reporting. Some of the options for mapped fields, such as Last Disposition, are available as variables or functions in campaign profile filter configuration and do not need to be added as Contact Fields to be used for filtering.



- None: Custom fields that you do not want the system to automatically populate or is filled in manually by list upload.
- Last Disposition (System or Agent): Last call disposition recorded for the contact record. It does not matter if the disposition is set by an agent or the system. This information is updated the next time that a disposition is set.
- Last Disposition (System or Agent) Date/Time: Date and time that the last disposition is set. This information is updated the next time that a disposition is set.

- Last Attempted Number: Phone number last attempted by the dialer. Useful if dialing multiple phone numbers for contact records. This information is updated the next time that a disposition is set.
- Last Attempted Number Index (number1/number2/number 3): `number1`, `number2`, or `number3` indicating the phone number last dialed. This information is updated the next time that a disposition is set.
- Last Agent Disposition: Only dispositions selected by agents are populated to the field. System dispositions are excluded. This information is updated the next time that a disposition is set.
- Last Agent Disposition Date/Time: Time and date that the last agent disposition is set. This information is updated the next time that a disposition is set.
- Last System Disposition: Only system dispositions are populated to the field. Agent dispositions are excluded. This information is updated the next time that a disposition is set.
- Last System Disposition Date/Time: Time and date that the last system disposition is set. This information is updated the next time that a disposition is set.
- Last Campaign: name of the last campaign that dialed the contact record (if using multiple campaigns). This information is updated the next time that a disposition is set.
- Number of Attempts for Last Campaign: Number of dial attempts made to the contact record for the last campaign that dialed it. This information is updated the next time that a disposition is set.
  - This mapping supports Number and String data types. Number data type is the default value for new contact field mappings.
  - Number data type can be used for number-based sorting and filtering.
- Contact Record Created Date/Time: Date and time that the contact record was created. This field is populated if the record was created by an agent, API or Web2Campaign request, or manually by an administrator with List Update or Contact Update.
- Contact Record Last Modified Date/Time: Date and time that the contact record was last modified. Modifications performed by using List Update or Contact Update are displayed.

- Last List: Last list from which the record was dialed. This information is updated the next time that a disposition is set.
- Last Agent: Last agent to process a call for this contact record. This information is updated the next time that a disposition is set.

5 Select the display mode.

This option enables you to control how contact fields appear in the Agent Current Call screen by default. Settings in User and Campaign Profiles can override this setting.

- Short - length of the field as seen in the agent screen.
- Long - length of the field as seen in the agent screen.
- Do Not Display - Hides the field from the agent's view. This option can be used for information that is not needed by agents for processing calls but is needed for reporting or contact criteria in a profile. For example, it may not be necessary to display some of the mapped contact fields to agents.

6 Select the data type and the options (display format) for the selected data type: String, Number, Date, Time, Date/Time, Currency, Boolean, Percent, Email, URL, Phone, and Duration.

See **Data Types**.

7 Define the Restrictions options.

- Required - required for every contact record. Fields marked Required are visible and editable in all user profile and campaign profile screens.
- Predefined List - Not available for Date, Time, Date/Time, Boolean, Duration data types. This option enables the List Items tab.

> **Note**
> If the type is string, you cannot use the custom field as report criterion.

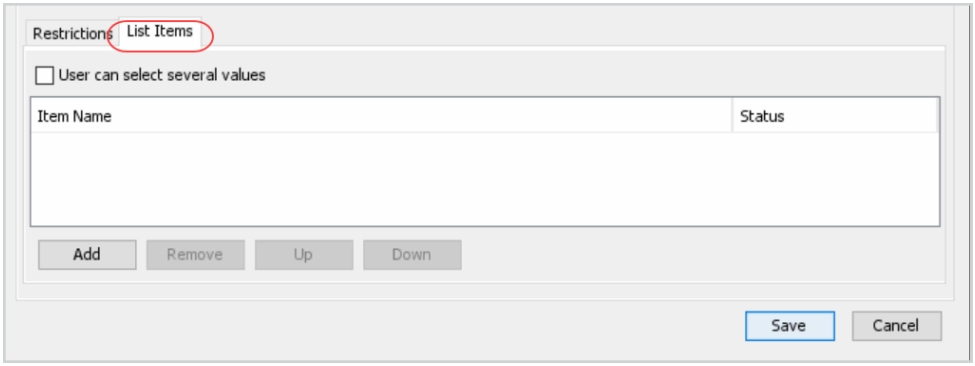
- Min Length/Min Value - minimum number of characters that may be entered in this field. Not available for predefined list. Not available for Phone and Boolean data types.
- Max Length/Max Value - maximum number of characters that may be entered in this field. Not available for predefined list. Not available for Phone and Boolean data types.

- Regular Expression - Not available for predefined list. Not available for Date, Time, Date/Time, Boolean, and Duration data types. Regular expressions are an option to use for input validation to ensure consistent data entry. For instance, a regular expression can be used to validate that a record locator in a travel reservation conformed to a specific pattern or combination of alphanumeric symbols (for example, ABC123). Patterns are defined using POSIX, Perl, or ASCII regex syntaxes. For example, using the ASCII syntax, a pattern with three upper-case letters, followed by three digits, could be configured as:

  [A-Z][A-Z][A-Z][0-9][0-9][0-9]

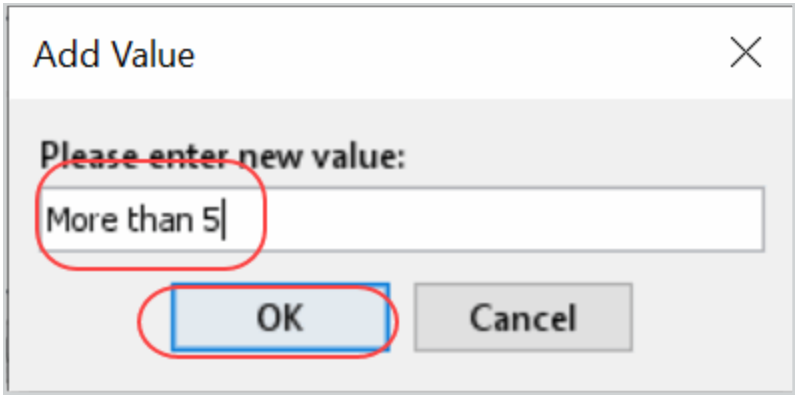
8 Define the List Items that users may select.

You can add up to 80 list items.

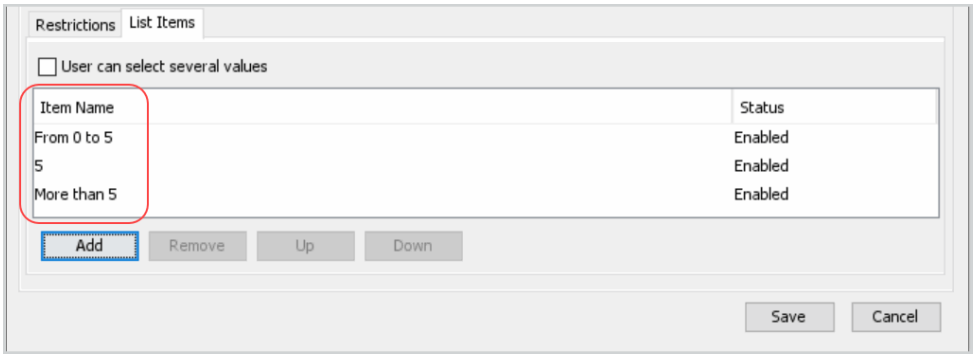


9 To create a value, click **Add**.

10 Enter a value, and click **OK**.



11 Configure possible values and answer criteria.



12 Optionally, to allow users to select multiple items from the list, check **User can select several values**.

For example, for a Pets field, you may allow users to select Cat *and* Dog values.

13 To arrange the values, click **Up** and **Down**.

14 Click **Save**.

A new row appears in the list. It is marked Custom or Mapped.

Removing Custom Contact Fields

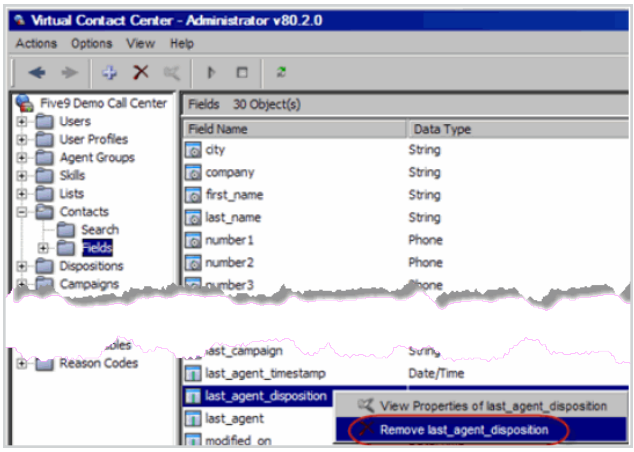
You can remove custom contact fields but not default contact fields. Before removing contact fields, stop all running campaigns.

Important

Before deleting a custom contact field, ensure that the field is not used in any campaign profile. Otherwise you see an error message.

1 Open the Contacts folder, and click the Fields folder.

2 In the list, right-click a field and select **Remove**.



3 Click **Yes**.

Data Types

Five9 supports multiple field data types. Data types apply to worksheets, variables, and contact fields. This table contains all options for each data type. Use these data types to simplify data consistency control.

Data Type	View Type *(not predefined lists)*	Other Options	Display Format *
String	• Multi-line • Single Line		
Number	• Single Line	• Digits before decimal point (1–16) • Digits after decimal point (0–15) Total available number of characters = 16.	

Data Type	View Type *(not predefined lists)*	Other Options	Display Format *
		Note: The system doesn't support negative numbers.	
Date	• Multi-line • Single Line		• yyyy-MM-dd • MM/dd/yyyy • MM-dd-yyyy • MM-dd-yy • MMM dd • yyyy • dd MMM • dd-MM • MM-dd
Time	• Multi-line • Single Line		• HH:mm:ss.SSS • HH:mm:ss • HH:mm • hh:mm a • HH • hh a • H:mm • h:mm a
Date/Time	• Single Line		Same as Date and Time
Currency	• Single Line	• Digits before decimal point (1–16) • Digits after decimal point (0–15) Total available number of characters = 16. • Currency Type ($, €, £)	
Boolean	• Single Line		
Percent	• Single Line	• Digits before decimal point (1–16)	

Data Type	View Type *(not predefined lists)*	Other Options	Display Format *
		• Digits after decimal point (0–15) Total available number of characters = 16.	
Email	• Single Line		
Phone	• Single Line		
Duration	• Single Line		• hh:mm:ss.SSS • hh:mm:ss • hh:mm • hh • mm:ss.SSS • mm:ss • mm • ss.SSS • ss SSS

**** The display format for custom date, time, or date and time fields doesn't affect the format used in connector parameter values:***

- ***Date values use the `yyyyMMdd` format.***
- ***Time values use the `HHmmssSSS` format.***
- ***Date/Time values use the `yyyyMMddHHmmssSSS` format.***

Dispositions

Types of Dispositions
Accessing Disposition Properties
Changing System Dispositions
System Dispositions
Adding Custom Dispositions
Configuring Custom Dispositions
Email Notifications for Dispositions
Instant Message Notification for Dispositions

A disposition is used by agents to set the status or result of an interaction. Dispositions appear in reports. Two types of dispositions are open and closed. Both system and custom dispositions are available:

- System Dispositions - System dispositions are provided by Five9 to help you improve the reporting results of your campaigns. You cannot remove or add system dispositions, but you can modify some of the parameters.

- Custom Dispositions - Created by you and assigned to campaigns by agents. Custom dispositions can be added, changed, or removed. Each disposition may be configured with its own parameters. For example, you may configure a disposition so that Busy numbers are redialed at five-minute intervals for up to ten times.

For outbound campaigns, you can reset dispositions for numbers that have already been dialed. When deciding on dispositions for outbound campaigns, consider these categories:

- Successful Calls (sale, lead, application taken, appointment set)
- Negative Calls (not interested, hung up, add to DNC List)
- Unknown Result (call back scheduled, left message, recycle, answering machine)

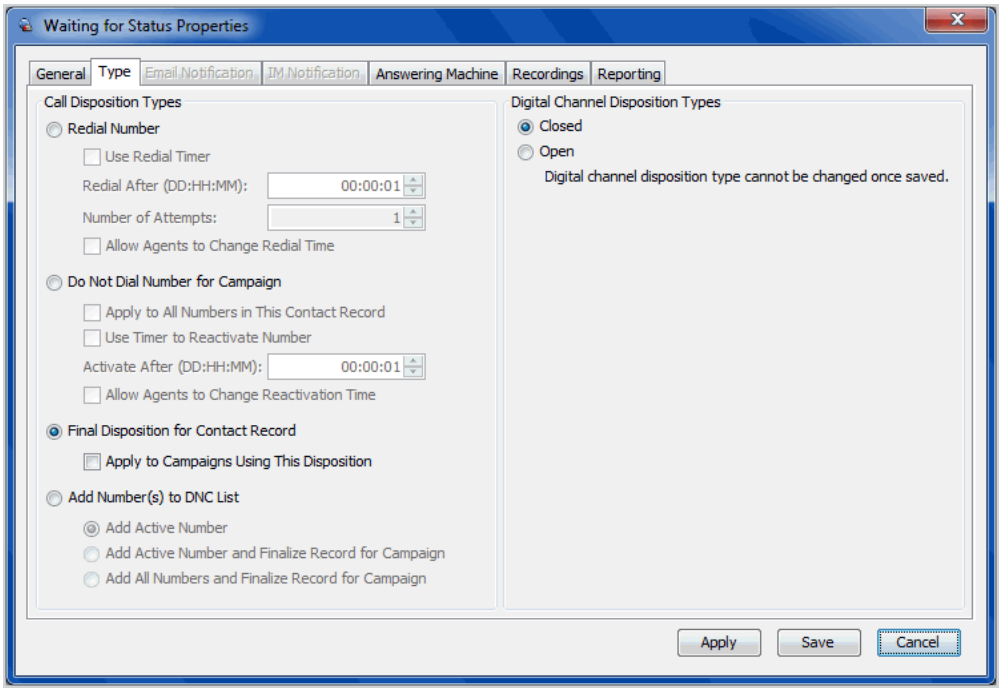
Inbound call dispositions depends on your business application. Start by creating a master list of dispositions for all campaigns. Then assign specific dispositions to campaigns from this list.

Types of Dispositions

Dispositions are always closed for voice interactions, but may be open or closed for text channel interactions. Each disposition is one of these disposition types, which may also include the **Digital Channel Disposition** type:

Redial Number Dispositions
Do Not Dial Number for Campaign Dispositions
Final Disposition For Contact Record Dispositions
Add Number To DNC List Dispositions
Digital Channel Disposition Types
Global Dispositions

The disposition type affects the behavior of the dialer. Select the type in the Type tab of each disposition. Any disposition type can also be flagged as a Digital Channel Disposition. For more detail, see the Digital Engagement Administrator's Guide.



Redial Number Dispositions

With this option configured without a redial timer, the number is dialed again when the dialer completes the list and starts over from the top. The redial time is unpredictable because you do not know when the dialer completes the first pass through the list.

When using this option without a timer, the *Minimum Duration Before Redialing Number* setting in Campaign Properties applies. See also *Number Redial Timeout* (Campaigns).

However, you can specify the redial time by selecting Use redial timer and entering the time you want to wait before trying the number again. The system attempts to dial the number as soon as possible, after that time (without first waiting to pass through the rest of the list). You can also specify the maximum number of attempts for a number when this disposition is selected consecutively.

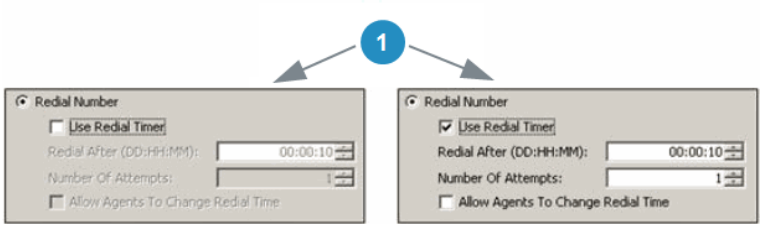
When using redial with a timer, the *Minimum Duration Before Redialing Number* setting in Campaign Properties is ignored, until the maximum number of redial attempts for the disposition is reached. You can set these additional parameters:

- Redial After (minutes) - The dialer redials the number as soon as possible after the specified time.
- Number of Attempts - The dialer redials up to the value defined in Number of Attempts if the same disposition is set sequentially.
- Allow Agents to Change Redial Time - Can be enabled only if Redial After is enabled. In the Agent application, the disposition displays an additional menu to select a redial time. The time configured in the Redial After setting is also shown to Agents as the default option for this disposition. When an agent specifies a redial time, the phone number is redialed by the campaign at the designated time and the call is delivered to any available agent that is qualified for the campaign.

This feature is useful for outbound customers whose agents work in shifts, such as when agents in the morning shift need to schedule campaign-related callbacks for agents in the evening shift.

campaign Profiles count all attempts to any of a contact record's numbers as a dial attempt, including redials due to disposition settings. The *Campaign Profile Number of Attempts* option overrides disposition counters, rather than work with them, in cases where the Campaign Profile option is set lower than a disposition option.

The profile and disposition counters restrict dialing to individual numbers within a record, rather than to the entire record.



1 Redial Type

When using redial dispositions, consider these points:

- Numbers without a redial timer is considered for dialing by a campaign on next cycle through the list.
- Number with a redial timer is dialed again after the time specified.
- If a number was assigned a disposition with a redial timer and the dialer reaches the number again while making a new pass through the list BEFORE the redial time has been reached, it is not dialed. The number is redialed at the time specified in the disposition as opposed to the list.
- If a number receives the same Redial disposition consecutively, the dialer stops attempts when the Number of Attempts has been reached.
- When using Redial with a redial timer, the alternate phone numbers for the contact record are not dialed until this redial number is tried again. The concept is that we do not know the outcome of the original number yet, so we try it again first before attempting other numbers for the contact record.
- When using Redial without a redial timer, the alternate phone numbers for the contact are dialed without waiting for the redial number to be tried again.
- If Allow Agents To Change Redial Time is selected, the redial timer set by agents works in the same way and follows the same rules as the redial timer set by administrators.

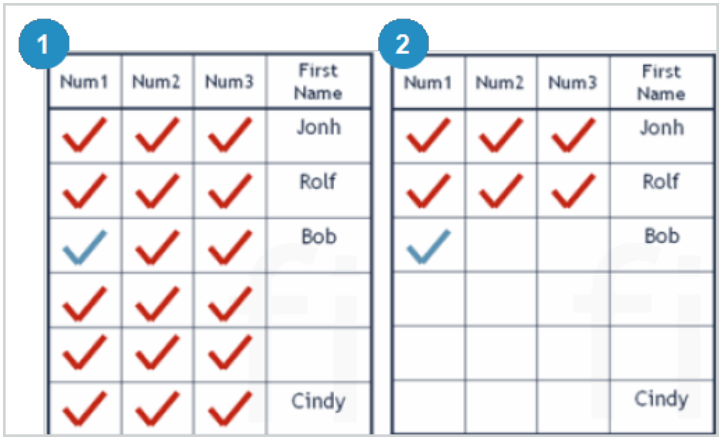
Example

Redial without redial timer: the campaign starts at 10:00AM; records are dialed consecutively.

1. At 10:10AM, the campaign dials a number that is assigned a disposition by a Redial Number disposition without a redial timer set.

2 By 2:00PM, the campaign has covered all records in the list. The first cycle of dialing took 4 hours.

3 By 2:30PM, the campaign reaches again the number that was assigned a disposition with a Redial Number disposition: the campaign attempts to dial the number again 4 hours 20 minutes after the first attempt.



1 Dial list (first pass)
2 Dial list (second pass)

Example

Redial with redial timer: the campaign starts at 10:00AM; records are dialed consecutively.

1 At 10:10AM, the campaign dials a number that was assigned a disposition as Busy (the Busy system disposition is a Redial Number disposition with the Redial After = 5 minutes and the Number of Attempts = 5).

2 By 10:15AM, the campaign tries the number again (5 minutes after receiving the original Busy disposition). It receives Busy again.

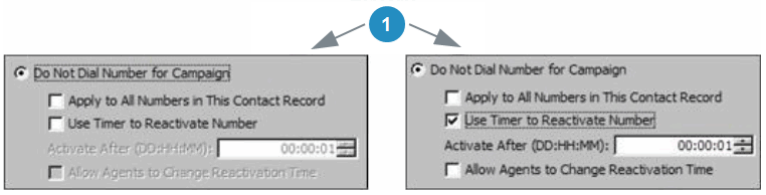
3 Four more attempts are made at 10:20AM, 10:25AM, 10:30AM, and 10:35AM. The number continues to be busy. The dialer stops dialing the number because the maximum number of attempts (5) has been

reached with this disposition.

Num1	Num2	Num3	First Name
✓	✓	✓	Jonh
✓	✓	✓	Rolf
✓	✓	✓	Bob
✓	✓	✓	
✓	✓		
			Cindy

Do Not Dial Number for Campaign Dispositions

The number is not dialed by the campaign, but other numbers from the contact record can be dialed unless the Apply to All Numbers in This Contact Record option is enabled. If the number is met in other contact records in the list, it can be dialed without restrictions.



1 DND Type

This type of disposition has three options:

- Apply to All Numbers in This Contact Record - If enabled, the dialer restricts all the contact record's numbers from being dialed, not only the number for which the disposition was set.

- Use Timer To Reactivate Number - The dialer does not dial the number in the current campaign. When this option is checked, you can set the additional parameter Activate After and set the time. This parameter means that the number becomes available again for dialing after the activation time. When using the Activate After selection, the number is dialed on the next pass through the list, assuming the activation time elapsed.

- Allow Agents to Change Reactivation Time - Can only be turned on if the Use Timer to Reactivate Number option is enabled. For the agent, the disposition enables an additional menu to select a reactivation time. The time configured in the Activate After setting is also shown to agents as the default option for this disposition. When an agent specifies a reactivation time, the phone number is reactivated by the campaign at the designated time and the dialer may later deliver the call to any available agent that is qualified for the campaign.

Example

Without an activation timer:

A record contains three numbers. The first number is assigned a do-not-dial disposition. Because every contact record can have up to three numbers to dial, the other two numbers can still be dialed. However, if Apply to All Numbers in This Contact Record is enabled, none of the numbers can be dialed.

Example

With an activation timer:

A called party asks not to be called again for at least 2 hours. The dialer considers the number on next pass in 1.5 hours but does not call, as this is before the 2-hour timer has expired. The next pass is in 3 hours. The number is redialed in 3 hours.

The vertical dialing mode does not wait until the next pass through the list to check if the timer has expired. The vertical dialing mode emulates a redial timer and redials the record when the time has expired, regardless of list position.

Final Disposition For Contact Record Dispositions

When you apply a final disposition, the contact record, including alternate phone numbers, is not dialed again by the campaign. A final decision has been made, such as Application taken or Not interested.



This type of disposition has one option: Apply To Campaigns Using This Disposition. When this option is enabled, the contact record is not dialed in any campaign that

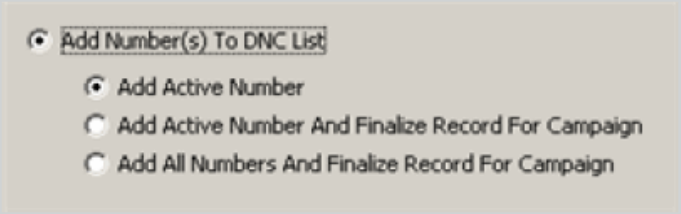
contains this disposition. A final disposition can be applied to multiple campaigns when the other campaigns are using this same disposition.

Campaigns that were created after a final disposition with the Apply To Campaigns Using This Disposition enabled was assigned to a contact record may still attempt to dial this contact record if the record exists in any lists assigned to the new campaign.

> **Note:** If the disposition is set to **Final Disposition** and if "Apply to Campaigns Using This Disposition" is enabled, the option "Apply to Campaigns Using This Disposition" does not work in the Campaign Profile Disposition menu. The disposition must be added to the Campaign Properties for "Apply to Campaigns Using This Disposition" to work.

Add Number To DNC List Dispositions

When using the **Add Number to DNC List** option, the customer's individual number or entire contact record is placed in the local Do Not Call list for the domain.



The option to assign only the contacted phone number can be used for cases when only one or two of a customer's phone numbers (for example, work or cell) should be avoided.

Example

A called party asked for one or all phone numbers to not be called again. There are the following options:

- Add Active Number - Adds only the current number (the number dialed) to the DNC list. Other numbers for the contact record can still be dialed.
- Add Active Number and Finalize Record for Campaign - Adds the current number and makes the record final for the campaign. This option stops dialing this record for this campaign but does not add the contact's

other phone numbers to the DNC list. This option allows you to dial the other numbers from another campaign.

- Add All Numbers and Finalize Record for Campaign - Adds all phone numbers for the contact record to the DNC list. This option prevents dialing to any of the contact's phone numbers from any campaign.

Digital Channel Disposition Types

Digital channel dispositions allow an agent to select a disposition on interactions, such as chat or email interactions, without closing the text interaction. This has no impact on voice calls.

Important

Digital channel disposition types cannot be changed once they have been saved.

Global Dispositions

You can create unified dispositions to use globally for text channel and voice interactions. These dispositions can be defined as open, enabling your agents to track the status of an interaction without closing that interaction, or closed to assign the final result of that interaction. This is different from voice channel dispositions, which are always closed.

Example

You can create a disposition named **Waiting for Status** that can be applied to an email interaction when the agent is waiting for a customer reply. The ability to keep this interaction open helps to track an issue without creating a new interaction for a continuing conversation, such as "Would you like for me to issue you a refund for the entire purchase price or would you prefer that I send you a replacement part?"

Digital channel dispositions may not be changes once they are saved. When converting campaigns using SCC dispositions to using global dispositions, Five9 recommends that you use identical naming to prevent duplicate dispositions in reporting. To enable your

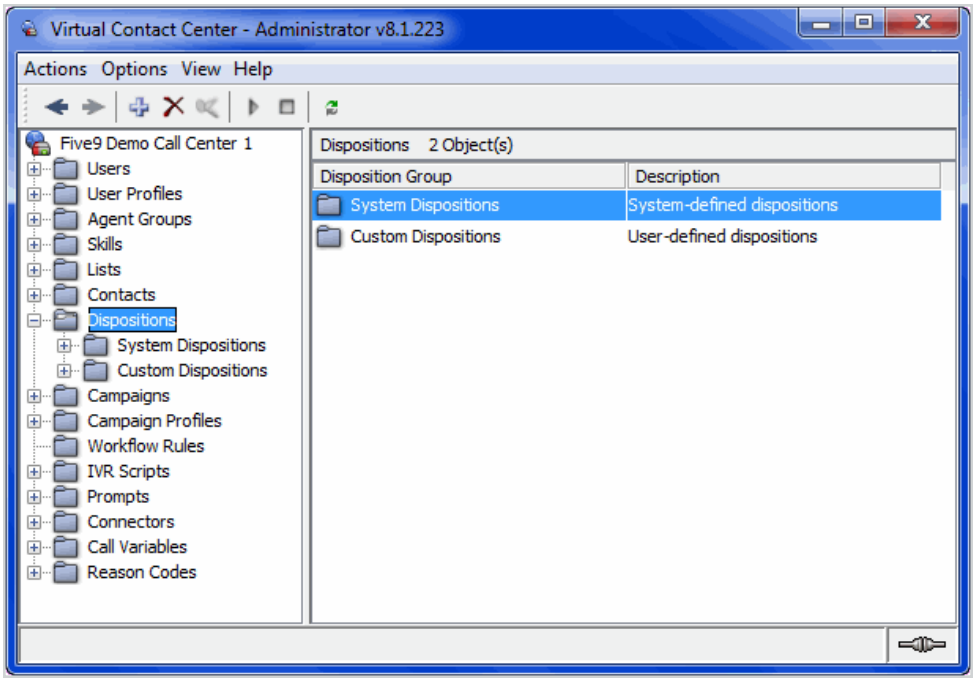
VCC dispositions for global use in text channel interactions, or to create dispositions specific to text channel interactions, see the Digital Engagement Administrator's Guide.

Accessing Disposition Properties

1 Click **Dispositions** in the navigation pane, and click the dispositions folder in the main pane.

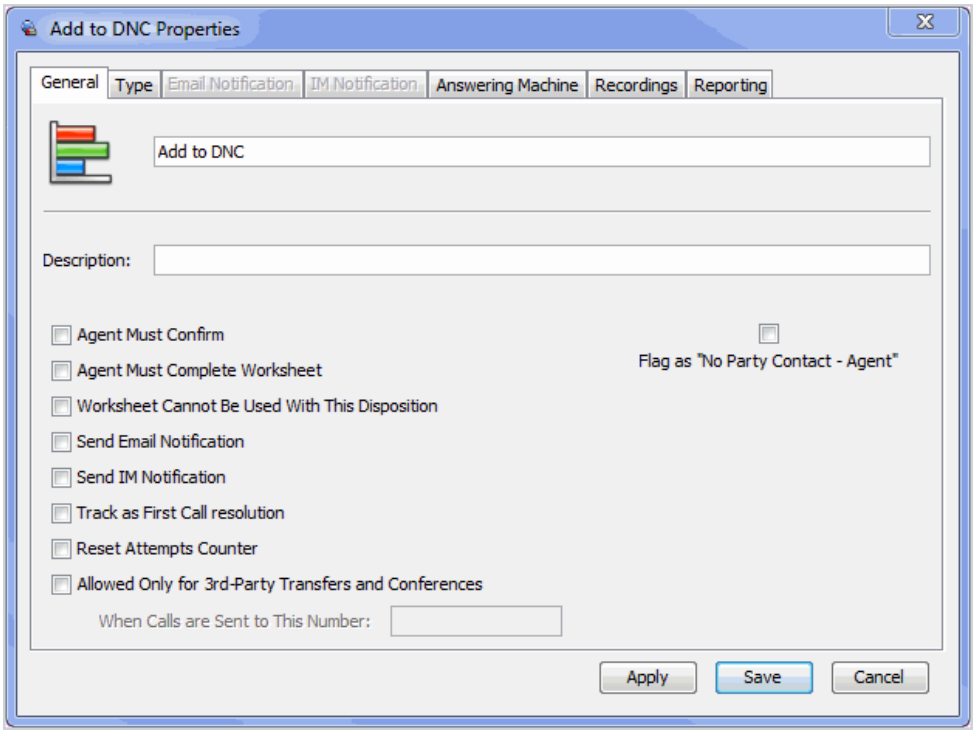
or

Open the **Dispositions** folder in the navigation pane, and open or select a dispositions folder.



2 To open the properties window, double-click the disposition, or right-click the

disposition, and select **View Properties**.



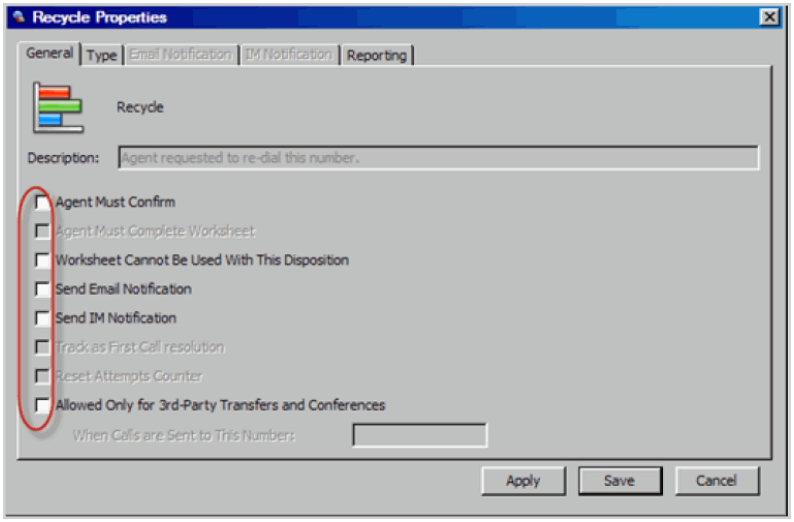
Changing System Dispositions

You cannot create, delete, or rename system dispositions. You can adjust some of the properties to make outbound or autodial campaign dialing more effective or keep users informed about campaign events. Some examples of changes you might make include:

- Change the redial parameters in the system disposition Busy to tune the dialing process for outbound and autodial campaigns.
- Configure email or instant message notifications for the system disposition Sent To Voicemail to keep users informed of new messages recorded during inbound campaigns.

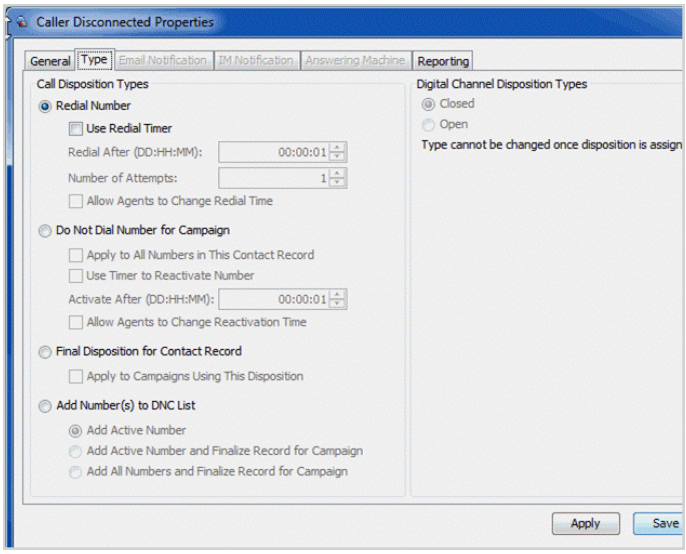
Changing Disposition Flags

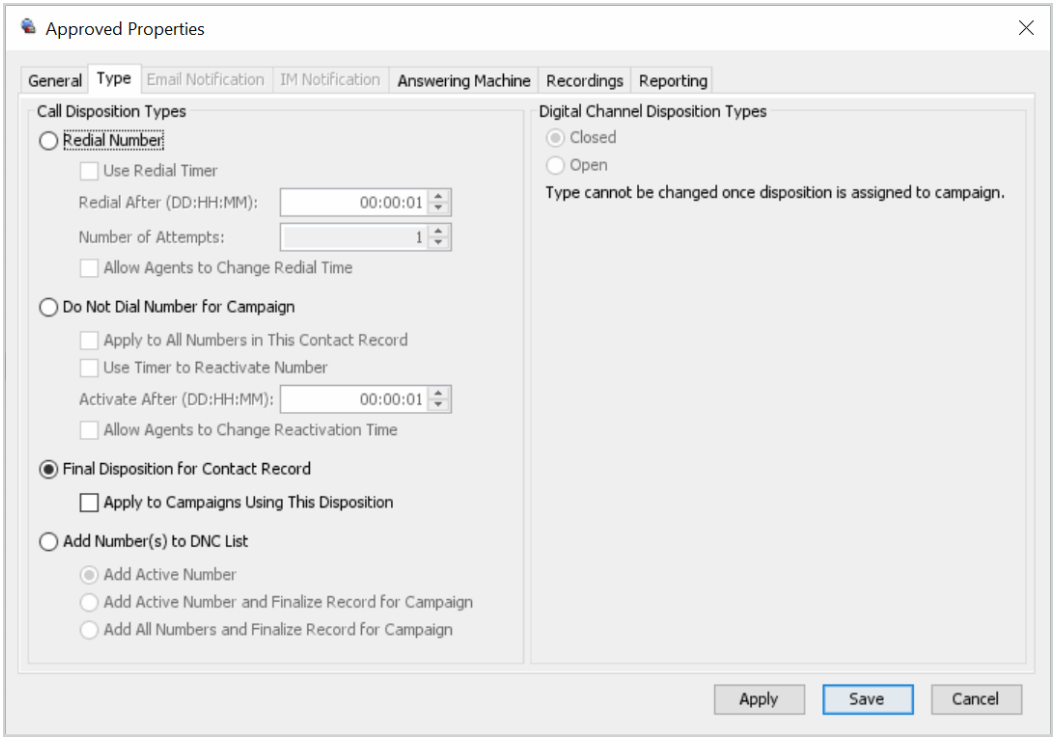
Some system dispositions allow changing Agent Must Confirm, Send Email Notification, and other options on the General tab. For enabled Email and IM notification, specify the recipients on the Email Notification and IM Notification tabs accordingly. See **Email Notifications for Dispositions**.



Changing Type and Options

The default disposition type can be changed for some system dispositions. You can do so on the Type tab.


Caller Disconnected Properties
General
Type
Email Notification
IM Notification
Answering Machine
Reporting
Call Disposition Types
Redial Number
Use Redial Timer
Redial After (DD:HH:MM):
00:00:01
Number of Attempts:
1
Allow Agents to Change Redial Time
Do Not Dial Number for Campaign
Apply to All Numbers in This Contact Record
Use Timer to Reactivate Number
Activate After (DD:HH:MM):
00:00:01
Allow Agents to Change Reactivation Time
Final Disposition for Contact Record
Apply to Campaigns Using This Disposition
Add Number(s) to DNC List
Add Active Number
Add Active Number and Finalize Record for Campaign
Add All Numbers and Finalize Record for Campaign
Digital Channel Disposition Types
Closed
Open
Type cannot be changed once disposition is assign
Apply
Save


Approved Properties
General
Type
Email Notification
IM Notification
Answering Machine
Recordings
Reporting
Call Disposition Types
Redial Number
Use Redial Timer
Redial After (DD:HH:MM):
00:00:01
Number of Attempts:
1
Allow Agents to Change Redial Time
Do Not Dial Number for Campaign
Apply to All Numbers in This Contact Record
Use Timer to Reactivate Number
Activate After (DD:HH:MM):
00:00:01
Allow Agents to Change Reactivation Time
Final Disposition for Contact Record
Apply to Campaigns Using This Disposition
Add Number(s) to DNC List
Add Active Number
Add Active Number and Finalize Record for Campaign
Add All Numbers and Finalize Record for Campaign
Digital Channel Disposition Types
Closed
Open
Type cannot be changed once disposition is assigned to campaign.
Apply
Save
Cancel

System Dispositions

Generally, system dispositions are used by the dialer to generate a report on dialing activity and control the dialing process. System dispositions have the same options and properties as the custom dispositions, but some options and properties cannot be changed. System dispositions cannot be created, deleted, or renamed.

Email notification and instant messages are available for most system dispositions. Reporting Call Variable configuration is available for all dispositions. You can configure different types (Redial, Add to DNC, and so on) for many system dispositions. Other options, such as timers, can be enabled for all system dispositions.

System Disposition Descriptions

The table below lists all the default system dispositions along with a description.

> **Note:** You can create a custom disposition along with a description. See **Adding Custom Dispositions**.

Name	Description
No Disposition	Default disposition selected by agents when no dispositions are defined for a campaign.
System Error	System failure, such as lost database connection.
Dial Error	Carrier failed to dial a number. A specific form of a system error.
Busy	Busy signal when number was dialed.
No Answer	Rang but no answer (dial timeout is set in profile).
Abandon	Caller hangs up when the call is in ACD queue, or queue time has expired for an outbound call that was not answered by agent.
Fax	Called party identified as fax machine.
Answering Machine	Called party identified as answering machine.
Declined	Default disposition for records skipped by agents during preview.

Name	Description
Do Not Call	Call blocked by carrier or other operator service due to number identified on Do Not Call List. May be assigned by the system or IVR. Do Not Call disposition may also be assigned by agent request. SIP response codes for DIAL_BLOCKED and DO_NOT_ CONTACT are mapped to this System disposition.
Recycle	Agent requested to redial this number.
Agent Error	Agent session terminated before a call is completed, which occurs when the agent's connection to the VCC is severed during a call.
System Shutdown	Domain host shut down during a call.
Caller Disconnected	Caller hung up while inside the IVR but not in an ACD queue (see abandon). Seen when caller disconnects during the IVR process or when listening to a prompt. Default disposition for many IVR modules.
Unknown Connection	System disposition used when a digital phone line is identified during call progress detection.
No Response From Caller	Caller did not provide a response to a prompt, such as entering digits. The disposition can be assigned to a module in an IVR script.
Sent To Voicemail	Caller was directed to Five9 VCC voicemail.
Operator Intercept	Called party was preempted by a telecom operator or other operator service due to invalid, unknown, or unidentified number or other operator blocking services.
Queue Callback Assigned	Queue callback request created and delivered to an agent in place of the call.
Queue Callback Timeout	Queue callback request created in place of the call, but no agents were available during the specified time.
Station Session	Used for calls by a PSTN telephone. The agent's connection time is billed as long distance for the leg between the agent's phone and the VCC.
Transferred To 3rd Party	Caller transferred to as third-party participant.
3rd Party Transfer	Recipient of a third-party transfer. 3rd party transfer participant - called party the first caller was transferred to.
Hardware	System encountered a timeout from the phone dialing

Name	Description
Timeout	hardware.
Hangup	On telecom level we send DialEvent CONNECT_HANGUP when outbound call is disconnected before ISDN connect or after it if channel performs Answering Machine Detection on this call. It is not similar to OPERATOR_INTERCEPT: no reason to repeat call to this number. Repeating call after CONNECT_HANGUP could be successful. Five9 dials a number. If the call is disconnected by the dialed party or the party's carrier, the Five9 dialing timeout was not yet expired when the disconnect occurred unlike a NO_ANSWER disposition. On further processing higher level (Campaign) DialEvent CONNECT_HANGUP cause HANGUP disposition to be set.
Voicemail Processed	Voicemail completely processed by agent. No further action required.
Voicemail Dump	System disposition used to indicate when a voicemail recording must be discarded by the system. Bad voicemail that should be deleted.
Forward Participant	Used for the forwarding leg of the call when a call is forwarded to an agent’s alternate phone number when using call forwarding and the agent is not logged in. A call to the campaign is forwarded to a specific agent (not to skill), this agent is not logged in and VCC forwards this call to the external number. So the VCC sets this disposition for the second call (from VCC to agent’s call forward phone).
Forwarded	Used for the initial leg of calls that are forwarded to agents’ alternate phone numbers when using call forwarding. Disposition for the first call (from customer to VCC).
Internal Call	Special disposition for internal calls (internal calls do not belong to any campaign).
Force Stop	Call is disconnected because a campaign is force stopped by an administrator or supervisor.
Resource Unavailable	Inbound call arrives in the system, but it is not handled because no virtual inbound lines are available. Applies to inbound campaigns only. No campaign lines or domain lines were available when the call was received. Call was rejected.

System Disposition Parameters

You can change the type of some system dispositions. The default options can be modified. For example, you can change the redial timer or number of attempts or disable and enable timers for Redial or DND disposition types.

The limitations for the redial type are as follows:

- Timer limitations: minimum = 1 min and maximum 60 days (2 months).
- Number of attempts: minimum = 1 and maximum 99

The limitations for the DND type are minimum = 1 min and maximum 60 days (2 months).

Name	Editable Options	Default Type	Default Parameters	Set By		
				IVR	System	Agent
No Disposition	Agent Must Confirm All types	FINAL	-	X	X	X
System Error	All types	REDIAL	Timer=1 min. Attempts=5	-	X	-
Declined	Agent Must Confirm Send Email Notification Send IM Notification All types	FINAL	-	-	-	X
Dial Error	All types	DND	Timer=5 min.	-	X	-
Busy	All types	REDIAL	Timer=10 min. Attempts=5	-	X	-
No Answer	All types	REDIAL	No Timer	-	X	-
Abandon	All types	REDIAL	No Timer	-	X	-
Fax	All types	DND	No Timer	X	X	-
Answering Machine	All types	DND	Timer=120min.	X	X	-
Do Not Call	Agent Must Confirm	DNC	-	X	X	X

Name	Editable Options	Default Type	Default Parameters	Set By		
				IVR	System	Agent
	Send Email Notification Send IM Notification					
Recycle	Agent Must Confirm Send Email Notification Send IM Notification Redial Number	REDIAL	Timer=30 min. Attempts=3	X	-	X
Agent Error	Send Email Notification Send IM Notification Redial Do Not Dial Number	REDIAL	No Timer	-	X	-
System Shutdown	Redial Do Not Dial Number	REDIAL	No Timer	-	X	-
Caller Disconnected	All types	REDIAL, all Types unlocked	No Timer	X	X	-
Unknown Connection	All types	REDIAL, all Types unlocked	No Timer	-	X	-
No Response From Caller	Send Email Notification Send IM Notification All types	REDIAL	No Timer	X	-	-
Sent To Voicemail	Send Email Notification Send IM	FINAL	-	X	X	-

Name	Editable Options	Default Type	Default Parameters	Set By		
				IVR	System	Agent
	Notification All types					
Operator Intercept	All types	DND	No Timer	X	X	X
Station Session	Redial Number	REDIAL	No Timer	-	X	-
Transferred To 3rd Party	Send Email Notification Send IM Notification All types	FINAL	-	X	X	-
3rd Party Transfer	Send Email Notification Send IM Notification All types	FINAL	-	-	X	-
Hardware Timeout	Send Email Notification Send IM Notification Redial Number Do Not Dial Number for Campaign	REDIAL	No Timer	-	X	-
Hangup	Send Email Notification Send IM Notification All types	REDIAL	No Timer	X	X	-
Voicemail Processed	All types	FINAL	-	-	-	X
Voicemail Dump	All types	FINAL	-	-	-	X
Forward Participant	Send Email Notification	FINAL	-	-	X	-

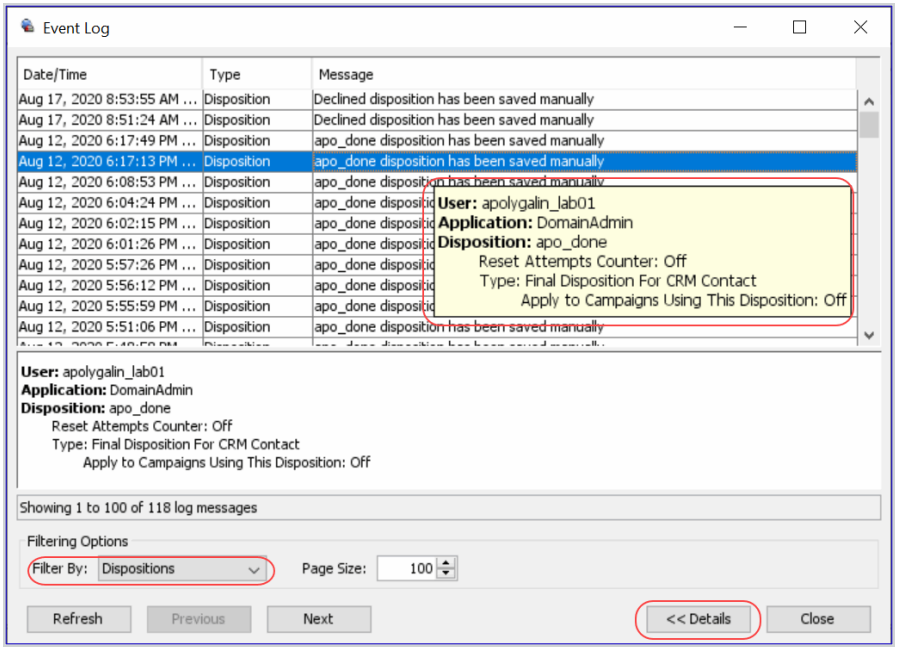
Name	Editable Options	Default Type	Default Parameters	Set By		
				IVR	System	Agent
	Send IM Notification Final Disposition for Contact Record					
Forwarded	Send Email Notification Send IM Notification Final Disposition for Contact Record	FINAL	-	-	X	-
Internal Call	Final Disposition for Contact Record	FINAL	-	-	X	-
Force Stop	Send Email Notification Send IM Notification All types	REDIAL	No Timer	-	X	-
Resource Unavailable	Send Email Notification Send IM Notification Redial Number Do Not Dial Number for Campaign	REDIAL	No Timer	-	X	-

Adding Custom Dispositions

You can see information about changes to custom dispositions by viewing the Event Log.

1. In the VCC Administrator application, click **Actions** and select **View Event Log**.
2. In the resulting Event Log window, in the **Filter By** menu, select **Dispositions**.

Select a row in the table of events. To see details about the event, hover over it or click **Details** at the bottom of the window.



You can create a new disposition or modify an existing one.

Ensuring that Dropped Call Percentages Comply with FCC Regulations

FCC regulations require that the percentage of dropped calls from all outbound campaigns fall within specified guidelines. The maximum percentage allowed for the call abandonment is currently 3% for each campaign every 30 days. However, you should refer to the FCC regulations for requirements and call abandonment rate calculation to ensure that you have the up-to-date information.

Five9 modified the calculation for the dropped call percentage to ensure that custom dispositions are not included in this calculation.

> **Note:** The abandon rate 2-second rule calculation option allows you to use a queue time of 2 seconds or higher to identify outbound calls as abandoned.

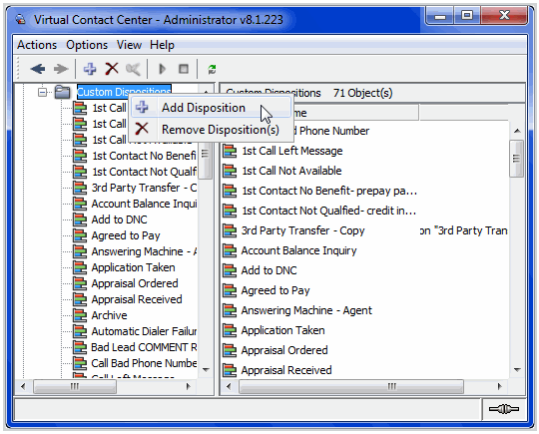
The **Outbound Campaign Abandon Rate % 2 Seconds Rule** standard report shows these values.

Agents can use the **No Party Contact** disposition when connected to a non-live entity (for example, an answering or fax machine). Because the FCC calculation for abandoned calls excludes calls connected to non-live parties, using the **No Party Contact** disposition for reasons other than not connecting to live parties increases the dropped call percentage and Dialer Drop Call % rates (abandoned call rates).

Creating Custom Dispositions

You can create a custom disposition for calls passed to an agent when no person is reached, such as when calls reach an answering machine. In these cases, agents should use the appropriate custom disposition to indicate that they did not reach a person.

1 In the Dispositions folder in the navigation pane, right-click **Custom Dispositions** and select **Add Disposition**.



2 Name the new disposition.

3 Click **OK**.

4 Configure the disposition as needed.

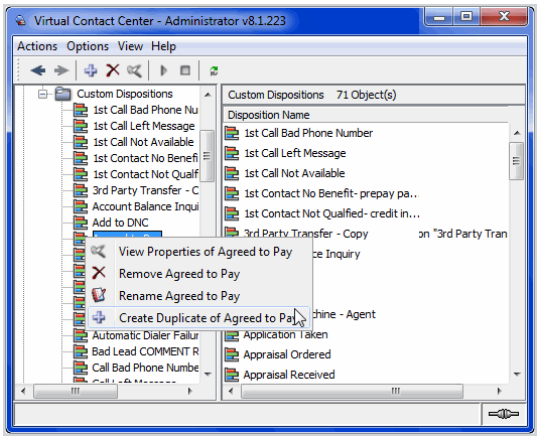
By default, the disposition type of a new disposition is Final Disposition for Contact Record. For more information, see Configuring Custom Dispositions.

Duplicating Dispositions

To copy a disposition, follow these steps.

1 Right-click a disposition, and select **Create Duplicate**.

The property window of the duplicate campaign opens, showing the name in this format: <original object name> - Copy. The copy of a system disposition is created under Custom Dispositions. All disposition options are available for the copy.



2 Make your changes to the duplicate, and click **Save**.

Renaming Custom Dispositions

To rename dispositions using the right-click menu. You can also rename dispositions in their properties window.

1 In the navigation pane, select **Custom Dispositions** in the Dispositions folder.

2 Right-click a disposition, and select **Rename**.

3 Enter a new name for the object instead of the old one, then Click **OK** to save your changes.

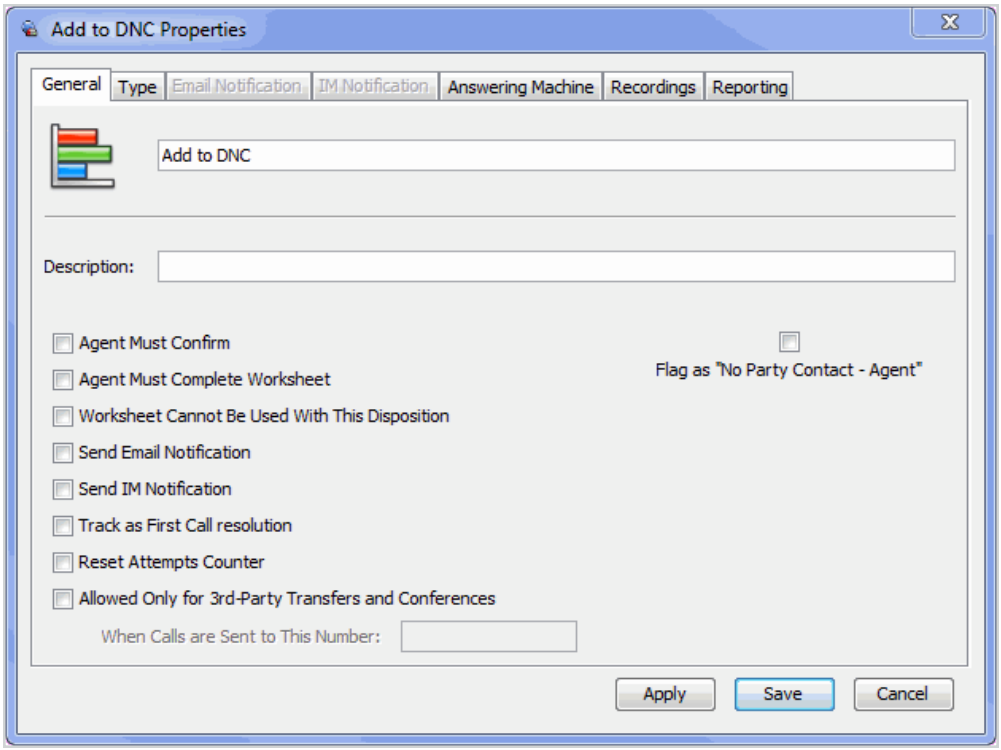
Configuring Custom Dispositions

By default, after a call is assigned a disposition with a final type disposition, the phone number is not dialed again by that campaign, even if that number appears in another list. By setting flags, you can adjust this behavior and/or extend the functionality.

Set General Properties for Custom Dispositions
Choose and Configure the Disposition Type
Set Dispositions for Answering Machines
Define the Target FTP Server to Upload Recordings
Configure Call Variables used for Reporting

Set General Properties for Custom Dispositions

Set the basic properties for custom dispositions in the General Properties tab. The name of a disposition can contain up to 255 characters.



- Description - statement or purpose that identifies the disposition.
- Agent Must Confirm - requires that agents confirm the choice of disposition.
- Agent Must Complete Worksheet - for campaigns that contain worksheets, requires that agents complete a worksheet before this disposition can be selected.
- Worksheet Cannot Be Used With This Disposition - for campaigns that contain worksheets, ensures that agents cannot use this disposition if they have completed a worksheet for the current call. This option works as a safeguard against accidentally setting incorrect dispositions when a completed worksheet indicates that a different disposition should be set.
- Send Email Notification - sends an email every time this disposition is selected. The email can contain details about the call, such as agent name, time, date, contact details, comments, and worksheet data (see **Defining Email Notifications**). The email can be sent to a fixed email address or an email address specified in a contact record.

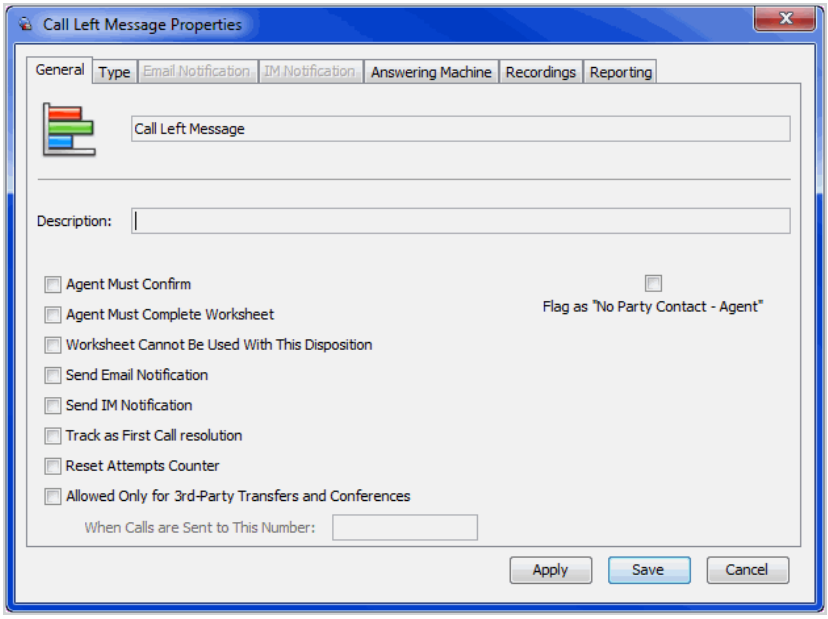
  Note

  Email notification for dispositions is not currently supported for text interactions.

- Send IM Notification - Similar to email notification except that call details are sent as an instant message. Use this option if call details must be immediately received by one or more users in your VCC.
- Track as First Call Resolution - primarily for inbound campaigns, includes the call in your first call resolution statistics for supervisors or reports: the customer's needs were addressed in the first call.
- Reset Attempts Counter - dispositions reset the dial attempts counter back to zero. Use for agent-selected redial dispositions when a contact has requested a callback after several failed attempts to reach the number (making the contact record at risk for reaching the dial attempts limit and not being dialed again).
- Allowed Only for 3rd-Party Transfer and Conferences - agents can use this disposition only for third-party transfers and conferences. If this option is enabled, you may optionally type a specific number to which calls are transferred or conferenced before assigning the disposition.

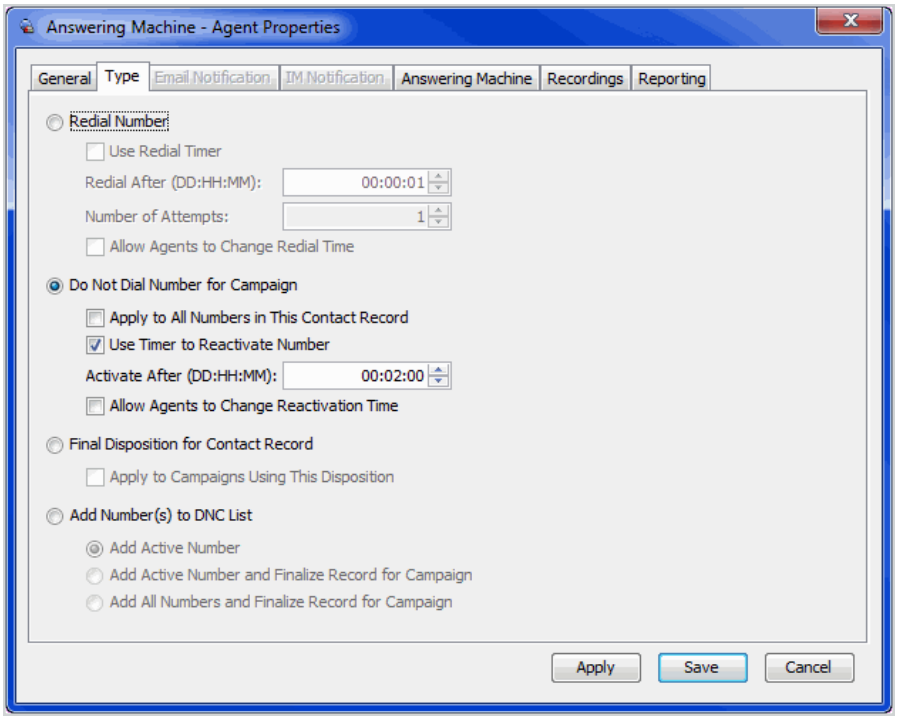
- **No Party Contact - Agent** indicates that no contact occurred with a person during the call. Because custom dispositions for **No Party Contact** or Abandoned Calls can affect FCC compliance, they are excluded from the abandoned call percentage calculation.

  You must acknowledge that such dispositions are not included in the calculation of the abandoned call percentage: after you check the box, a pop-up window asks you to acknowledge that this disposition is not used in abandoned call percentage calculation. When a custom disposition is used, the check box appears. You select the custom disposition from the disposition list and acknowledge that the disposition is excluded from the abandoned call percentage calculation.



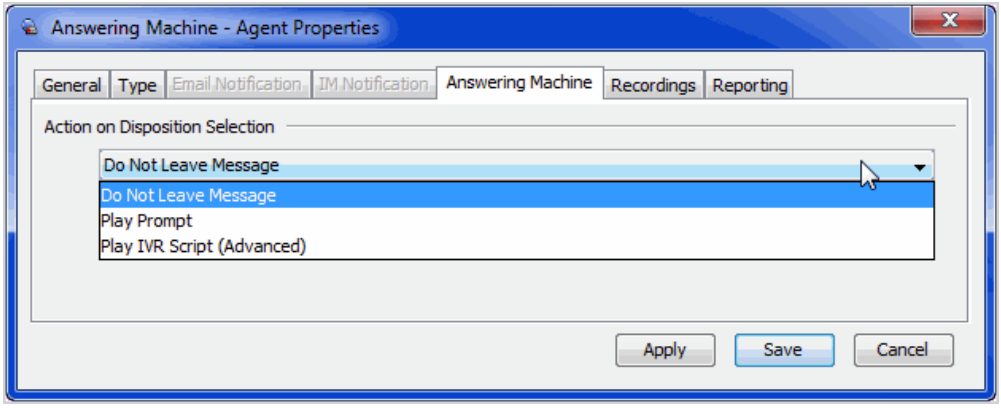
Choose and Configure the Disposition Type

You can choose and configure the disposition type. See **Types of Dispositions**.



Set Dispositions for Answering Machines

Set custom dispositions and the system (default) Answering Machine disposition on the Answering Machine tab. Agents can set the **Answering Machine** disposition as soon as they are connected to an answering machine and are ready for other tasks. One line remains connected with the other number until the message is left.



The options are similar to those available in the Dialing Options tab of outbound campaign properties for answering machine detection:

- Do Not Leave Message - default option.
- Play Prompt - agents who are connected to an answering machine or voicemailbox can disconnect from a call and leave a message for an answering machine. The prompt is played either after a two-second silence is detected (for example, after the tone, please leave a message... beep) or after the configured Max Answering Machine Greeting Time. One prompt can be configured per disposition.
- Play IVR Script (Advanced) - agents who are connected to an answering machine or voicemailbox can disconnect from a call but leave a message playing for an answering machine. The IVR script is played either after a two-second silence is detected (for example, after the tone, please leave a message... beep) or after the configured Max Answering Machine Greeting Time.

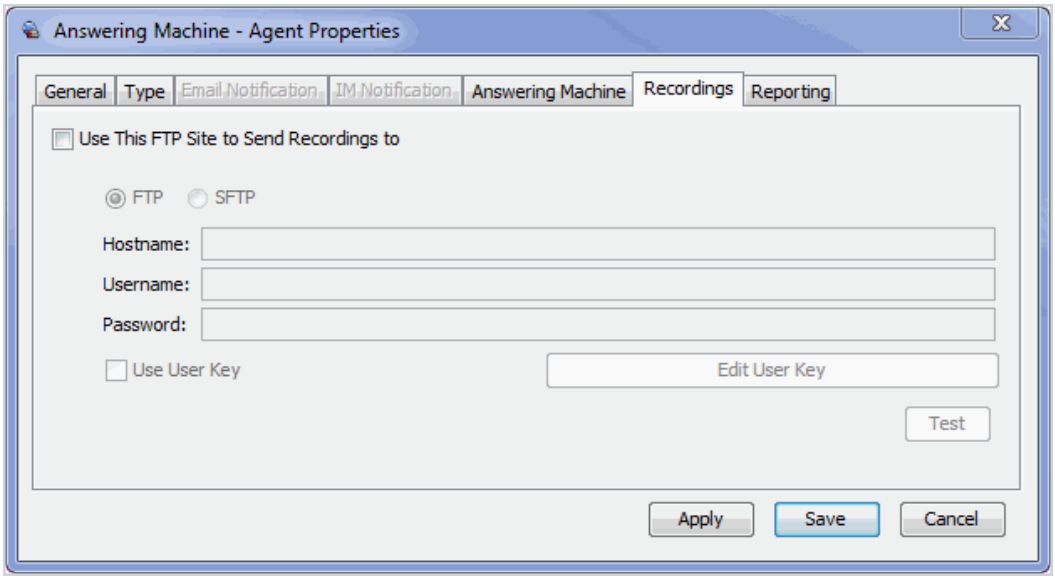
  The default Max Answering Machine Greeting Time is 20 seconds. If an outbound campaign that uses these Answering Machine prompt/IVR dispositions dials many cell phone numbers, Five9 recommends to raise this setting higher - for example, to 40 seconds - due to the usually longer voicemail greeting messages.

  You can use of branching logic or dynamic Text-to-Speech when leaving a message. For example, to configure an IVR script that plays a personalized message from the agent assigned to the call, you can configure a Case module, with the Agent.user_name variable and connect the branches to one Play module for each agent. Another example would be to leave a message with dynamic Text-to-Speech, which can play information such as an account balance to a client.

These options currently work only with automated dialing by outbound campaigns - such as, Power, Predictive, or Progressive dialing modes. Preview dialing, manual calls, and inbound calls are not supported, and the prompt or IVR script is not played.

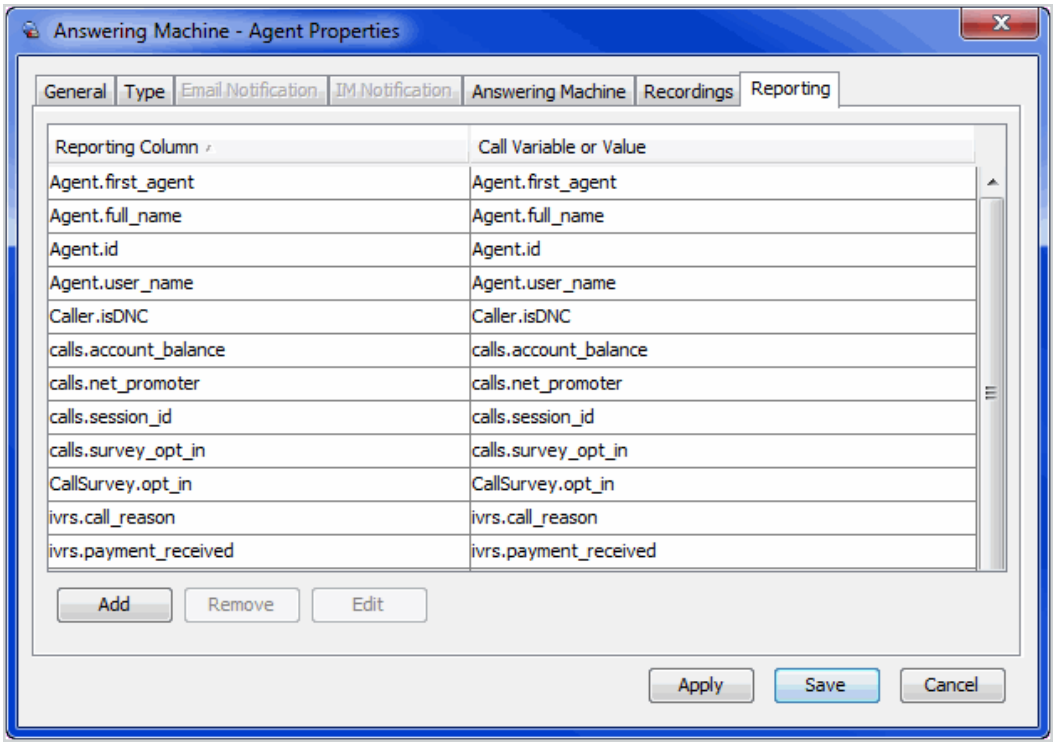
Define the Target FTP Server to Upload Recordings

Specify an FTP server to which a call recording file is automatically transferred for calls assigned the **Recording** disposition. See **Configuring Default FTP Settings** for more about transferring call recordings by FTP.

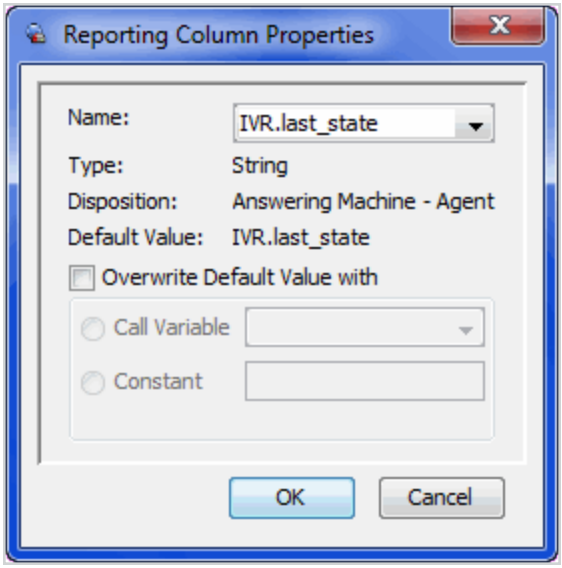


Configure Call Variables used for Reporting

You can specify reporting call variables that are affected and whose values should be written to the database when this disposition is set. Any variable with the Apply to All Dispositions option enabled cannot be removed from this lit. Use the call variable properties to edit the dispositions for which a reporting call variable value must be written.



Multiple call variables may be added for each disposition. To add or edit a reporting call variable whose value must be saved in the database and appear in reports when this disposition is set, click **Add** or **Edit**. Configure what should be done with the variable when this disposition is set:



- Name - Select the call variable to add or edit. Only variables with the reporting call variable option selected is shown. Once selected, the data type and the default value appear.
- Overwrite Default Value with - Enable this option if the value of the call variable must be different from its default value when the disposition is set. You may choose the desired value of the call variable:
    - Call Variable - Enables you to overwrite the value of the call variable with that of another reporting call variable of the same data type.
    - Constant - Enables you to overwrite the value of the call variable with a fixed value. Depending on the data type, you may select or type a valid value.

Email Notifications for Dispositions

You can configure email notifications for dispositions. This option applies to custom dispositions and to some system dispositions. You can enable and disable notifications as needed.

You can add the email addresses that receive notifications when the disposition is selected. As soon as the disposition is set for a call, an email can be sent to a fixed email address, such as an administrator or supervisor, or a contact record. The email address can be taken from a contact record field. The name of the disposition can be used as the subject in the email or a custom subject can be specified. Variables can be used to populate call or customer information in the email using a standard or custom HTML template. Up to five attachments can also be included in the email notification. You can add as many notifications as you need.

Configuring Email Notifications for Dispositions
Creating Custom HTML Templates for Email Notifications
Selecting a Custom Template for Email Notifications
Adding Attachments to Email

Configuring Email Notifications for Dispositions

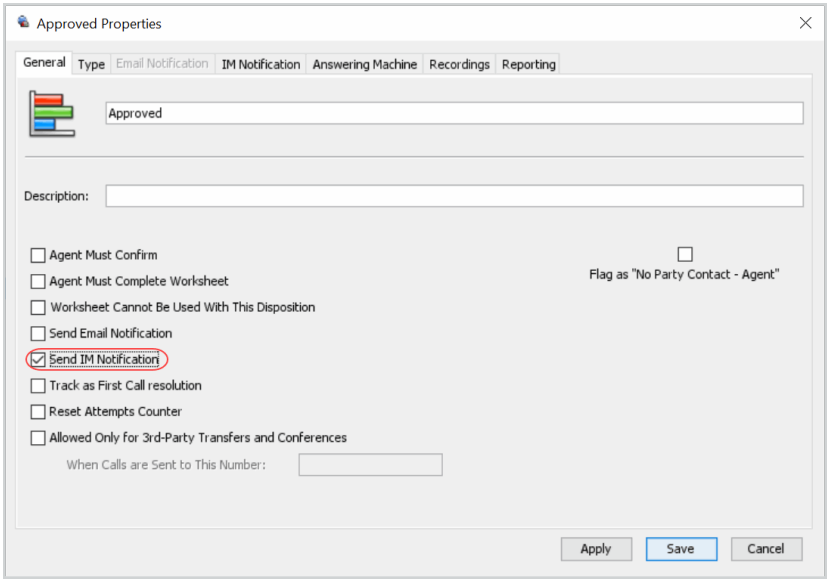
After enabling the email notification feature in the General tab of properties, configure the notifications in the Email Notification tab.

Important

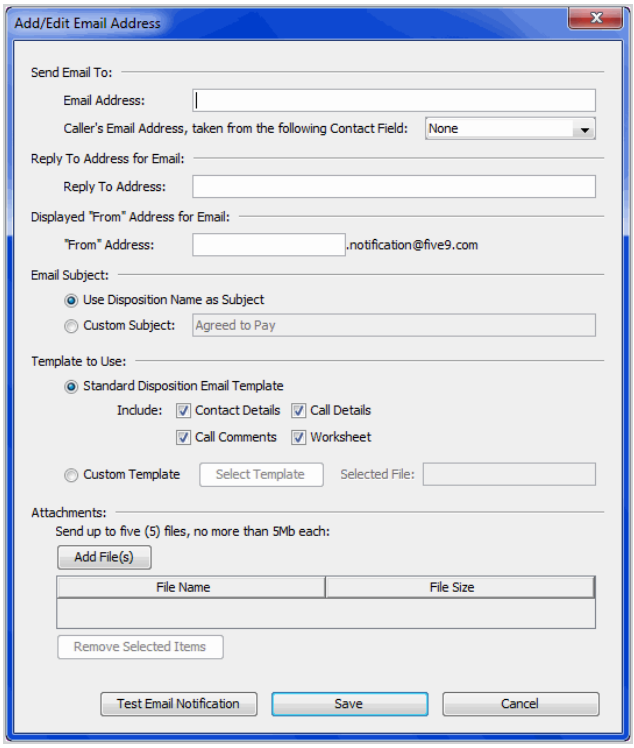
The combined maximum size for email templates and attachments is 100 Mb.

1 In the General tab, check **Send Email Notification**.

This option enables you to receive an email every time that this disposition is selected.



2 Select the **Email Notification** tab.



3 Click **Add**.

4 Define these settings.

- Send Email To
  - Email Address - address where the email notification is sent, which can be a specific address or to the contact for whose call the disposition is set. To send the notification to the same email address every time, type in a valid email address in the Email Address text field. To send the notification to the customer, select a contact field for the Caller's Email Address. If you select both options, two separate notifications are created. After initially saving the notification for both email addresses, edit each notifications.
  - Caller's Email Address Taken from the Following Contact Field - customer email address can be set as a contact field. The contact's email address is taken from a contact field. If sending an email to the caller or customer, select the contact field from which the email address is taken. If you leave the Email Address field empty,

the notification is sent to the customer's email address. If both of the Send Email To options are used, two email notifications is created.

- Reply To Address - to automatically send email messages, enter a Reply To address. This address is used when the recipient of the notification replies to this email. The Reply To address is not used as the From address for notification emails. All notifications is sent from `<custom_text>notification@five9.com`.
- Displayed From Address for Email - origin of the email address disposition notification email in this format: `<custom_text>.notification@five9.com`. The text entered in this field appears also as the name of the sender. If this field is empty, the default notification@five9.com address is used.
- Email Subject: name of the disposition used as the subject of the email or specified in the Custom Subject field.
  - Use Disposition Name as Subject - Contains the disposition name, such as 3rd Party Transfer, No Answer, or Do Not Call.
  - Custom Subject - Instead of using the disposition name as a subject, you can create a subject text suitable to your needs.
- Template to use:
  - Standard Disposition Email Template - the default template is used as the email body in the email notification.

    ```
    Disposition NAME has been received
    Customer Details (optionally)
    Call Details (optionally)
    Call Comments (optionally)
    Worksheet (optionally)
    ```

  - Custom Template - You can create a custom HTML template. For more information, see **Creating Custom HTML Templates for Email Notifications**.
- Attachments: optionally add up to five attachments to the notification email.

5 To test that the email notification can reach all email addresses in the list, click **Test Email Notification**.

If your template contains call or customer information, test values are used.

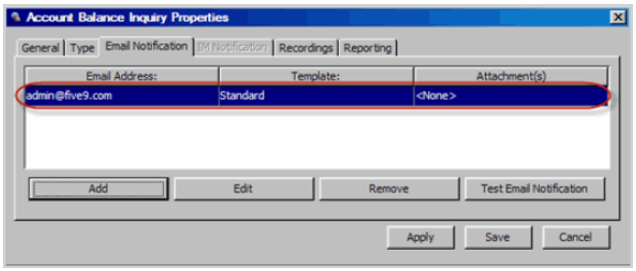
a Enter the destination email address.

b Confirm the email address, and click **OK**.

If the test is successful, you receive a confirmation message.

6 Click **Save**.

The new email notification appears in the Email Notification tab.



7 Click **Save** or **Apply** in the Disposition properties window.

Creating Custom HTML Templates for Email Notifications

You can use a file in HTML format in the body of your email notifications. The total file size of all uploaded email template files may not exceed 100 MB; individual HTML files may not exceed 1 MB. To populate call or customer information in the email, use these variables in the format `%Variable Name%`:

- `%DISPOSITION_NAME%` - name of the disposition.
- `%CUSTOMER_DETAILS%` - customer's contact data.
- `%CALL_DETAILS%` - call Information: caller's number, contact name and company, session ID, call duration, call type, agent name, and campaign name.
- `%COMMENTS%` - notes made by the agent during the call.
- `%WORKSHEET%` - answers entered by the agent during the call.
- `%contact field name%` - value of the caller's contact fields. Enclose the name of the contact field with % symbols: `%first_name%`.
  - %first_name%
  - %last_name%
  - %company%
  - %street%
  - %city%
  - %state%

- %zip%
- %custom_contact_field_name%

To use these variables, edit the HTML email template in a text editor and place the variables where the system should substitute the information. For example, Hello `%last_name%` is substituted with Hello Joseph in the email.

Example

Content of an email:

```
Disposition Application Complete has been received.

Customer Details:
number: 9252012000 first_name: Bill last_name: Jones company:
street: 123 main street city: Anytown
state: CA zip: 94123

Call details:
Number: 9252012000
Customer: Jones, Bill - Acme Parts
Session Id: 0706EFFDA74DD16ABDCA38438D05B2A2
Call Duration: 0:0:24
Session Duration: 0:15:38 Call Type: Agent
Agent: Annie Agent Campaign: Outbound Sales

Call Comments:
Interested in Refi

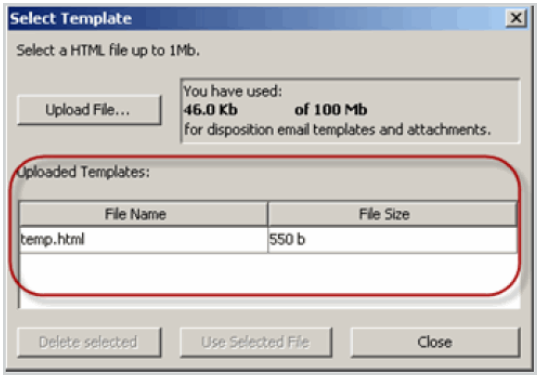
Worksheet:
1st Mortgage Balance: 250000
1st Mortgage Lender: Wells Fargo
Borrower Name: Bill Jones
Monthly Income?: n/a
Do you have a second mortgage?: No
Estimated Home Value?: $376k - $400k
How would you rate your credit?: Good
Interest Rate on first mortgage?: 5.6
Loan Purpose?: Lower Rate
Property Type: Single Family
Purchase year: 2005
Type of Mortgage?: Fixed Rate
```

Instead of using the standard disposition template, you can upload a custom HTML template, which would be used for the body of the email.

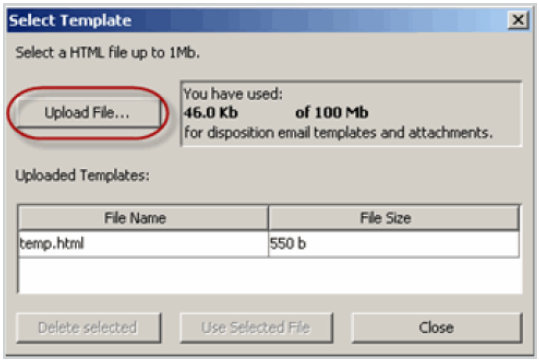
Selecting a Custom Template for Email Notifications

1 Select the **Custom Template** option, and click **Select Template**.

You can view all template files you have previously uploaded.



2 To add a file, click **Upload File**.

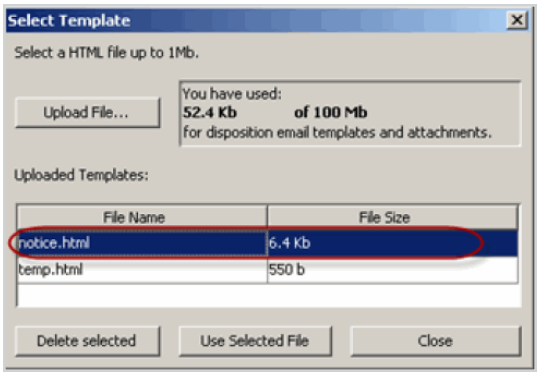


3 Select your template.

4 Confirm the file name.

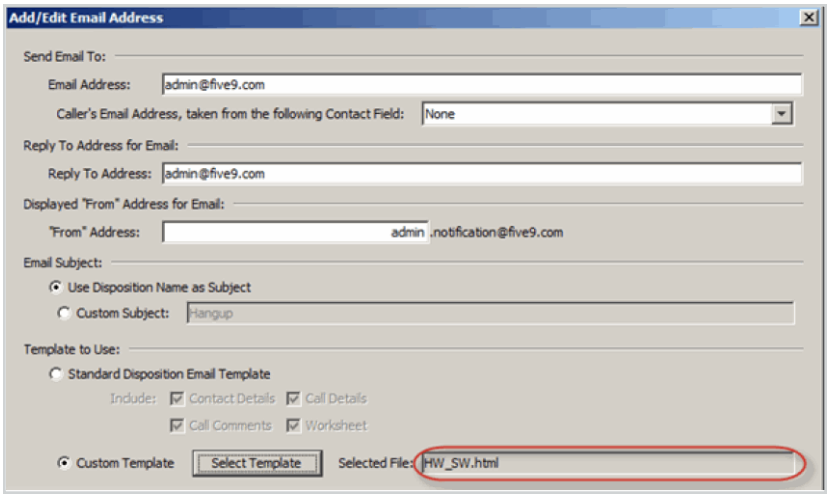
5 Click **OK**.

You can view the file and its size in the Select Template window.



6 At the bottom, click **Use Selected File**.

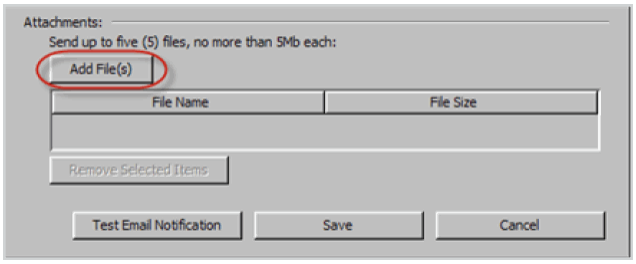
The custom template file appears in the Selected File field.



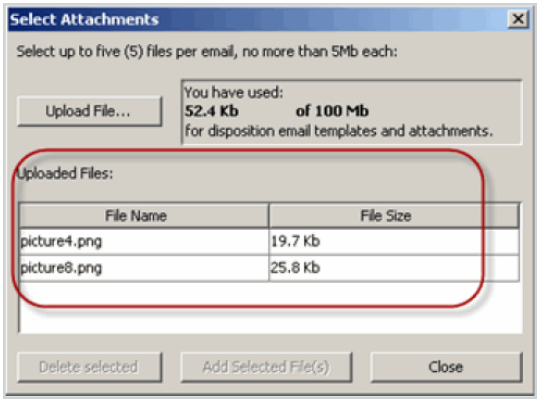
Adding Attachments to Email

You can add up to 5 attachments to an email.

1 In the Attachments section of the Add/Edit Email Address window, click **Add File (s)**.



In the window, you see all the attachments files previously uploaded.



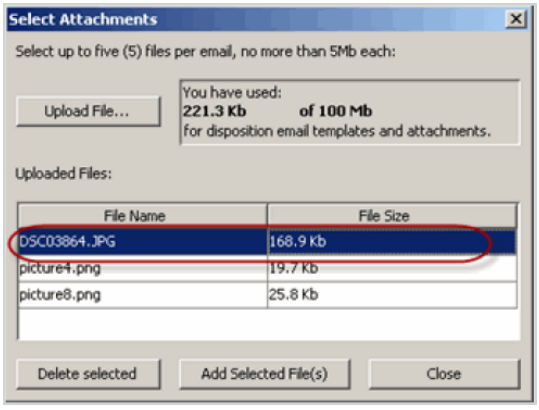
2 To add a file, click **Upload File**.

3 Select a file.

The file can have any extension, but the maximum file size is 5 MB.

4 Click **OK** twice.

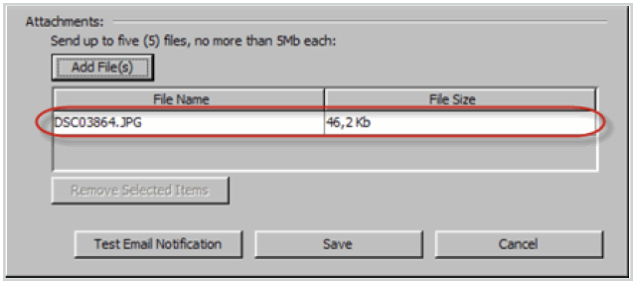
You can view the uploaded file in the Select Attachments window.



5 Select one or more files to attach to the notification email.

6 Click **Add Selected File(s)**.

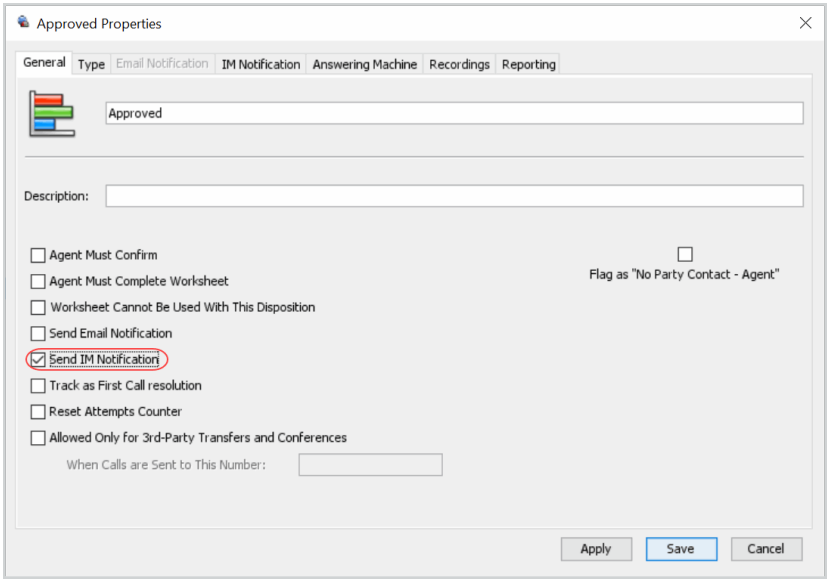
You return to the Add/Edit Email Address window. The files appear in the Attachments section.



Instant Message Notification for Dispositions

Instant message notification is similar to email notification except that the call details are sent as a message in the Five9 system. As soon as the agent selects a disposition for the call, the message is sent to one or more Users in your VCC.

1 In the General tab, select **Send IM Notification**.

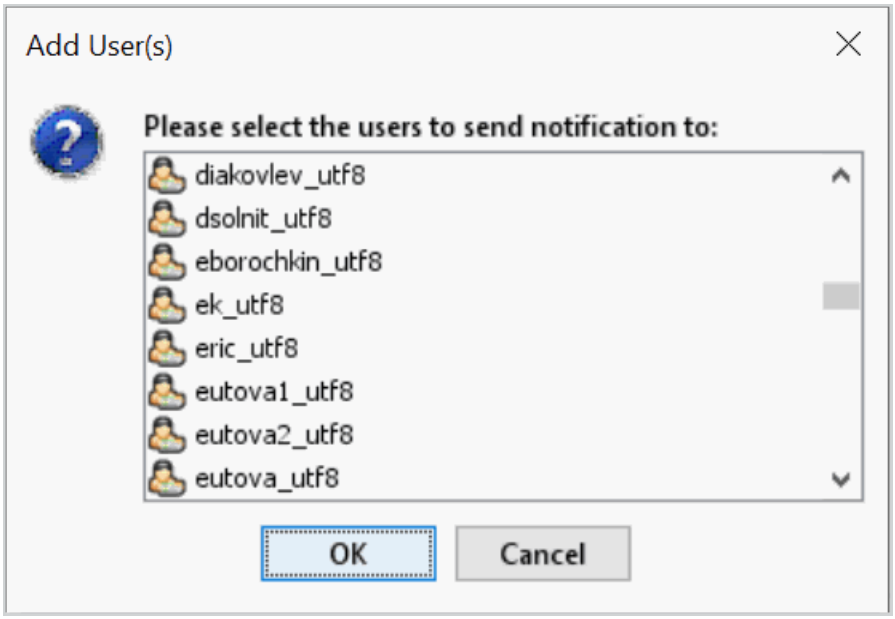


2 Click the **IM Notification** tab.

3 Add or remove users:

Adding users:

a To add one or more users, click **Add**.



b Click **OK**.

The users appear in the list.

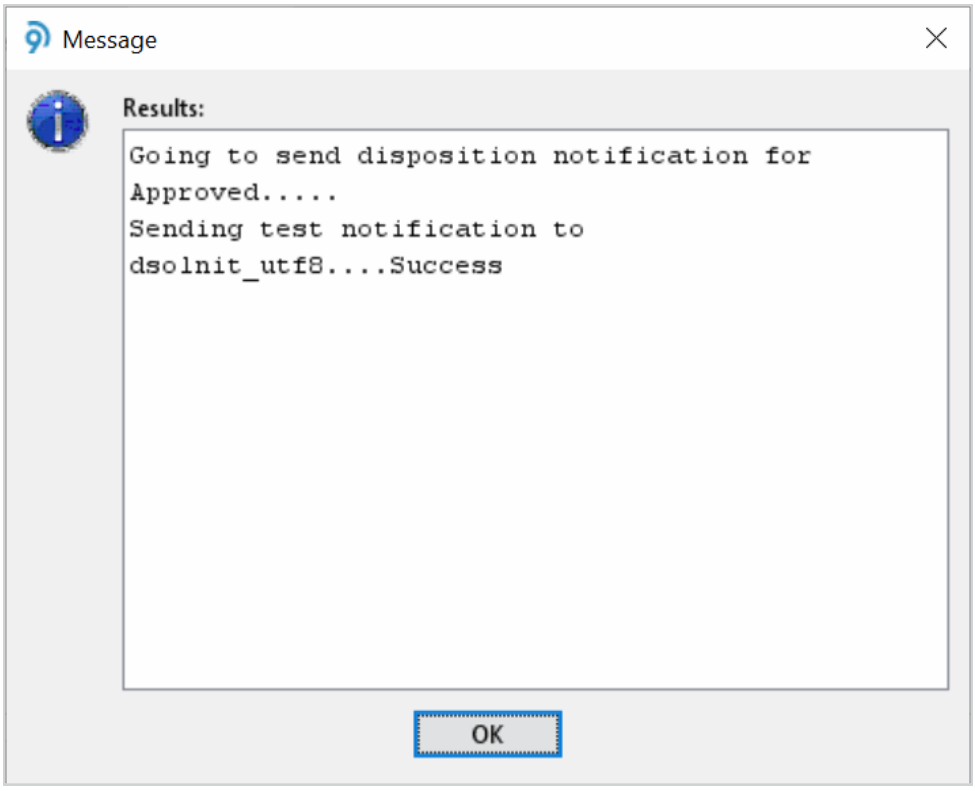
Removing users:

a To remove one or more users, select the users and click **Remove**.

b Click **Yes**.

4 To test an instant message, click **Test IM Notification**.

5 Click **Yes** to send a test instant message notification to the users in the list.



6 Click **Save** or **Apply**.

Campaign Profiles

Maximum Number of Characters
Creating Campaign Profiles
Renaming Campaign Profiles
Editing the Properties of Campaign Profiles
Assigning a Campaign Profile to a Campaign

You create campaign profiles for inbound, outbound, and autodial campaigns to define the behavior of campaign components and define the campaign characteristics. Campaign profiles enable you to override campaign defaults such as the default ANI.

You can assign a profile to a campaign when you start the campaign in Advanced mode. The campaign uses the properties you define in the profile. You can create as many profiles as you need, but you can only associate one Profile per campaign. A profile can be used simultaneously by more than one campaign. You can automatically change the profile for the campaign by using workflow rules.

With campaign profiles, you can filter and sort lists, control pop-up windows in the agent interface, and manage disposition counts. You can create, edit, and delete profiles.

Maximum Number of Characters

If you are operating text channels in your domain, or plan to in the future, you must adhere to character limitations when assigning names to campaign components or the text server will not communicate with the Virtual Contact Center (VCC) server.

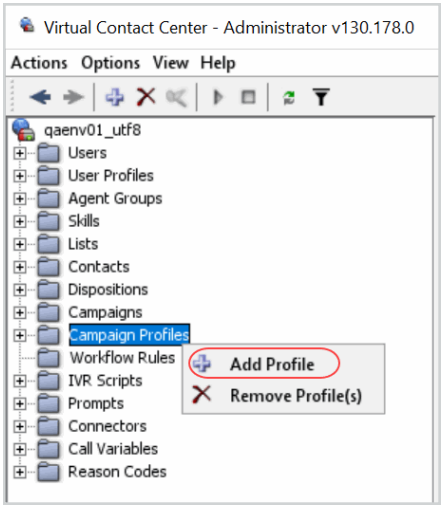
Text Profile and VCC Campaign	32 characters
Text Group and VCC Skill	255 characters
User (*also email address*)	50 characters
Password	64 characters
First Name	32 characters
Last Name	32 characters

Creating Campaign Profiles

You can create a profile or duplicate an existing one.

Creating Profiles

1 Right-click **Campaign Profiles**, and select **Add Profile**.



2 Enter a name for the campaign profile.

3 Click **OK**.

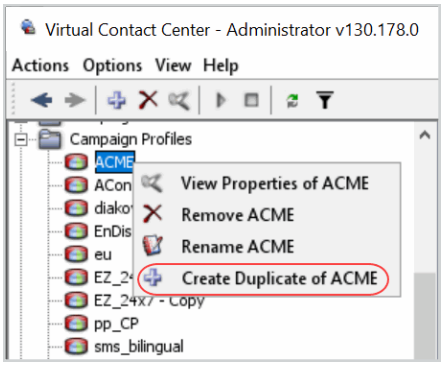
The new campaign profile with default properties is added to the list. To configure the Campaign Profile, see **Editing the Properties of Campaign Profiles**.

Duplicating Profiles

Follow these steps.

1 Open Campaign Profiles.

2 Right-click a profile, and select **Create Duplicate**.



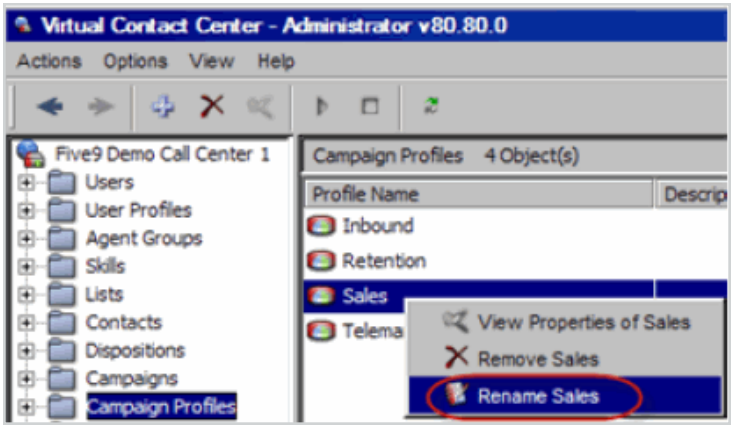
Properties are copied to a new object called <original object name> - Copy. The duplicate object's Property window opens.

Renaming Campaign Profiles

To rename a profile, follow these steps, or open the properties of the profile.

1 Click **Campaign Profiles**.

2 Right-click a profile, and select **Rename**.



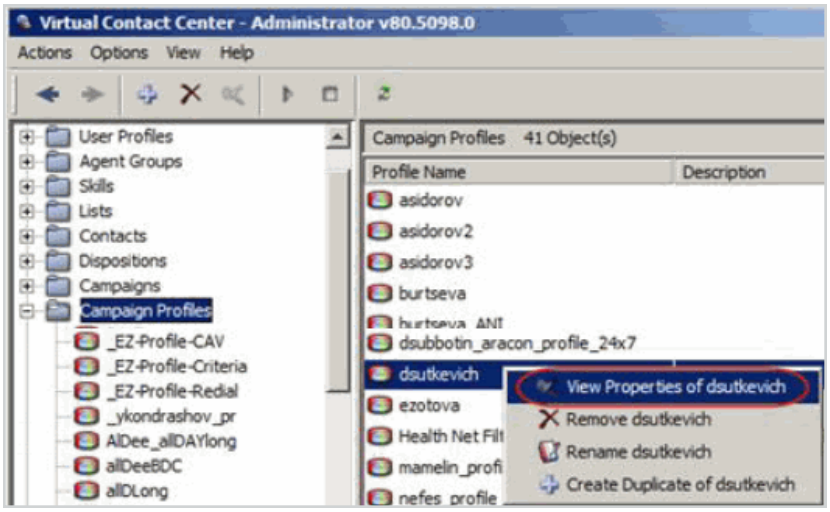
3 Replace the object name with a new one.

4 Click **OK**.

Editing the Properties of Campaign Profiles

If the profile is assigned to a running campaign, the changes are applied immediately.

1 Right-click a profile and select **View Properties**, or double-click the profile.



2 Make your changes in these sections:

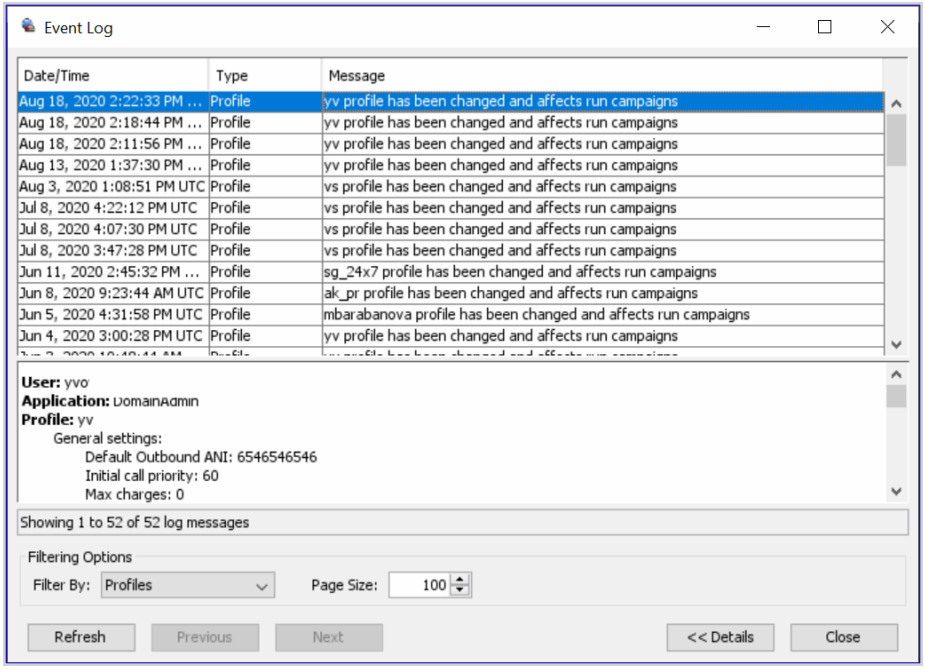
[Selecting General Settings for Campaign Profiles]
[Selecting ANI Settings]
[Filtering and Sorting Lists]
[Managing Disposition Counts]
[Configuring a Campaign Profile Layout]
[Configuring and Grouping Dispositions]

3 Click **Save**.

You can see information about changes to custom dispositions by viewing the Event Log.

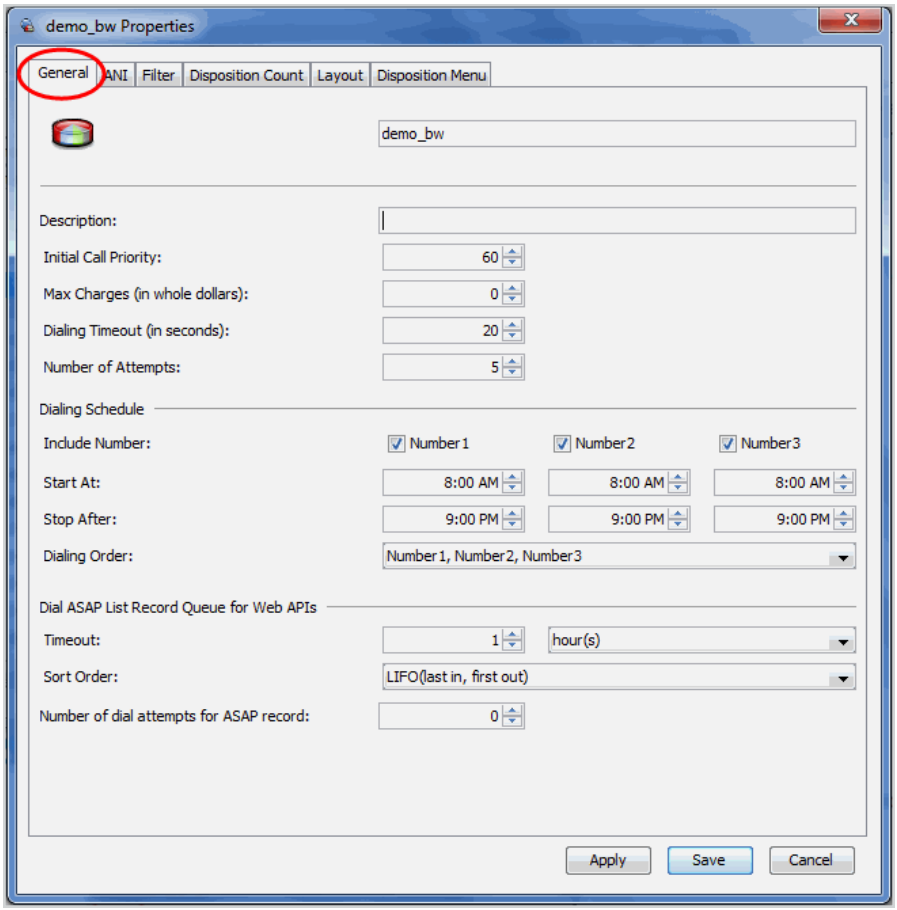
1 In the VCC Administrator application, click **Actions** and select **View Event Log**.
2 In the resulting Event Log window, in the **Filter By** menu, select **Profiles**.
3 Select a row in the table of events. To see details about the event, hover over it

or click **Details** at the bottom of the window.



Selecting General Settings for Campaign Profiles

Several options are initially set to the campaign defaults. If you do not use a profile, a campaign runs with the default settings shown on the General tab.



- Name and Description: Name and optional description of the profile.
- Initial Call Priority (inbound or outbound): Inbound calls have a default priority of 60 on a scale of 1 to 100. Calls with a higher priority (100) are answered first, regardless of their time in a queue. If a campaign uses a profile with a higher priority, calls belonging to that campaign are answered first. For calls from a campaign to be answered before calls from other campaigns, increase the priority by one.
- Max Queue Time (Outbound): Maximum time that the dialed party is held by the dialer if no agents are available to process the call. After the maximum queue time expires, the action selected as the Action on Max Queue Time Expiration under the Dialing Options tab is taken. The default value is one second. Counting from the end of the called party's greeting, the maximum value allowed by the FCC for dialed calls is two seconds before the call is considered dropped. The remaining second is used by call analysis, if enabled, and for routing the call across the network.

Important

Do not increase the default value, except in specific cases, such as when using a dialer to connect calls to remote employees.

- Max Charges (Inbound or Outbound): Dollar amount for Maximum Long Distance Charges. The campaign stops automatically when this amount of long distance charges is reached. A setting of zero means no limit.

- Dialing Timeout (Outbound): Enables the administrator to configure how long the system waits before an unanswered call is disconnected and logged as No Answer. In other words, this is how long the dialer rings a number. Sometimes this time period is equated to number of rings but it is actually measured in seconds. The default is 20 seconds.

  Dialing timeout allows the administrator to increase the ring time (not the number of rings) in an effort to reach more answering machines or give the called party more time to pick up the phone. For autodial campaigns it is sometimes beneficial to increase the dialing timeout in an attempt to capture more answering machines.

  Warning

  This setting has a direct effect on how answering machines and no answers are reported. If the timeout is increased, expect to receive more answering machines and fewer no answer dispositions. More importantly, if your list is producing a lot of unanswered calls, increasing this setting means it takes longer to process the list and potentially increase the agent idle time.

  Telemarketing regulations in the U.S. require that calls ring for a minimum of 15 seconds. If you are running telemarketing campaigns, do not reduce this setting to less than 15 seconds.

- Number of Attempts (outbound, autodial): This is an outbound dialer setting. The counter for the Number of Attempts counts all dial attempts for phone numbers in a list record, including redials due to disposition settings.

  The campaign profile option overrides disposition counters, rather than working with them, in cases where the Profile option is set lower than a disposition option. See also: Disposition Settings/Options (Type tab > Redial Number > Number of attempt.)

  The profile and disposition counters restrict dialing to individual numbers within a record, rather than to the entire record.

For campaign profiles with very low values for the Number of Attempts setting, Five9 recommends increasing the values.

Campaigns running in Basic Mode (without an assigned Profile) use a default of five attempts.

- Dialing Schedule:
  - Include Number: Using the check boxes, you can define which contact number the dialer should consider.
  - Start At (outbound): Sets the dialing hours for an outbound campaign. The default dialing hours are 8:00 AM to 9:00 PM based on the time zone of the phone number being dialed, not your local time zone. To change the default starting time when the dialer begins dialing numbers based on local time for an outbound campaign, change the Start At setting. The time when the dialer dials to the states can be also defined by State Dialing Rules.
  - Stop After (outbound): To change the default stopping time (when the dialer stops dialing numbers based on their local time) for an Outbound Campaign, change the Stop After setting. When changing this setting, keep in mind that the time is based on the time zone of the phone number being dialed. The time when the dialer dials to the states can be also defined by State Dialing Rules.
  - Dialing Order: This field specifies the dialing order for multiple phone numbers on contact records. If your lists contain multiple phone numbers for contact records, you can change the order in which the numbers are dialed.
- Dial ASAP List Record Queue for Web APIs: The options allow you to specify the sort order and timeout for the newly added ASAP records (Web2Campaign or APIs). For more information, see Five9 Web2Campaign Developer's and Administrator's guide: Five9Administrator Setup.
  - Timeout: The default value is one hour. The time-sensitive ASAP list records are removed from the ASAP queue after the timeout period. Following the time-out period, any leads not dialed are treated normal records in the list.
  - Sort Order: The dialer follows the selected list order for the new ASAP records.

- FIFO (first in, first out)
- LIFO (last in, first out): Select this order if your last lead has the best chance of closing business.
- Contact Record Field(s): Select this order if you want the campaign profile's sort order to be used. For example, sorting by contact first name applies a different sort order than using LIFO or FIFO sort order.

◦ Number of dial attempts for ASAP record: The default value is zero (0). This option indicates the number of dial attempts for the time-sensitive ASAP record, after which it loses the ASAP flag (priority) and becomes a normal (priority) record.

The default value of zero (0) indicates that the dial attempt number of the time-sensitive ASAP record should not be tracked. Only the timeout option value dictates when the ASAP records lose the ASAP flag (priority) and become normal (priority) records.

If the value assigned to the ASAP records is any other positive integer, the records lose their priority flag and become normal priority records after reaching the assigned number of dial attempts.

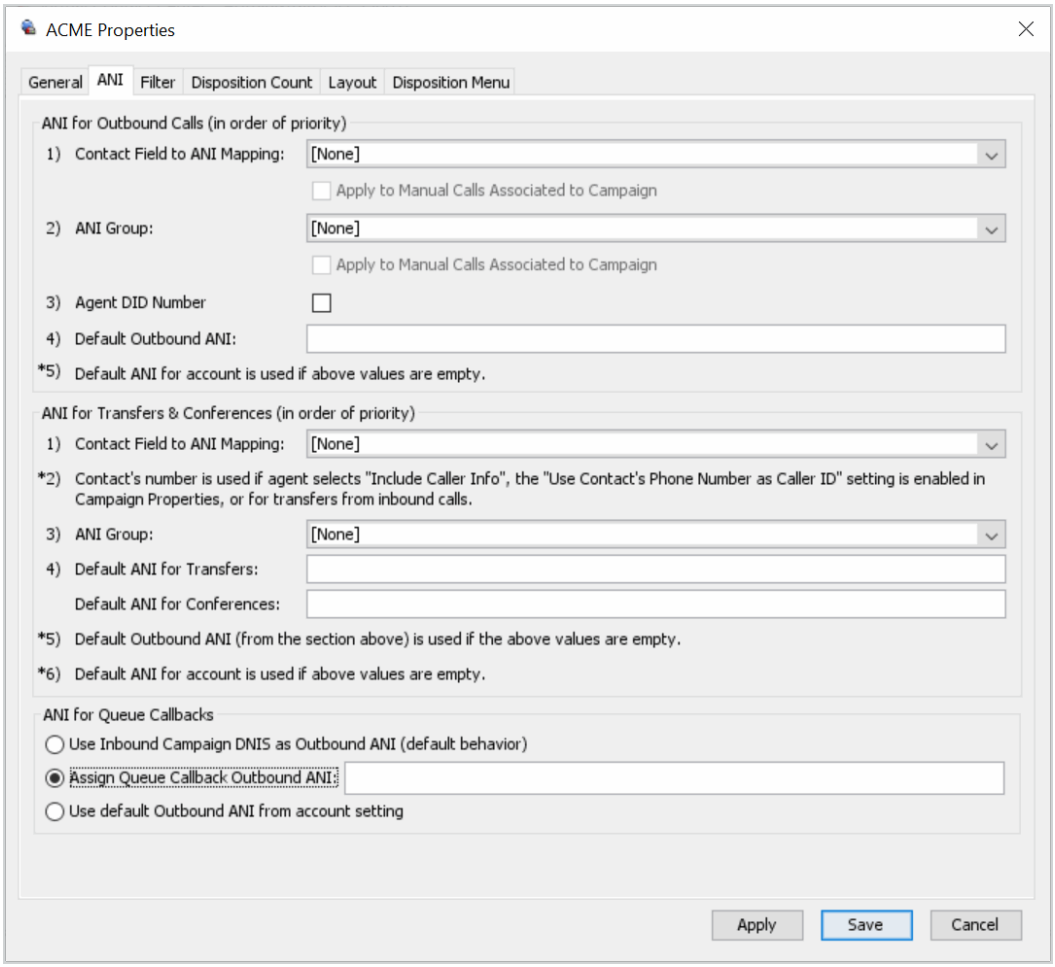
Note

Campaign profile rules may affect the number of records available to dial that is displayed in the Supervisor application. Because these dialing rules may apply to future calls, they may not match reports reflecting numbers immediately available to be dialed.

Selecting ANI Settings

ANI settings provide additional flexibility for dynamically selecting an appropriate phone number for displaying to clients and to business partners who may expect to see particular number formats during transfers and conferences. See also **Priorities of ANI Settings**.

ANI for Outbound Calls
ANI for Transfers and Conferences
ANI for Queue Callbacks
Priorities of ANI Settings



ANI for Outbound Calls

This section applies to most outbound calls associated with the campaign.

> **Note**
>
> These settings do not apply to queue callback calls. For more information, see the ANI for Queue Callbacks section below.

Contact Field to ANI Mapping. Contains the list of custom contact fields with the phone data type, excluding number1/2/3. [None] is chosen by default. If enabled, this option uses the value of a specified Phone-type contact field (excluding multi-pick-list Phone fields) as the ANI for a call to the record. Toll-free numbers may be used as ANIs only if a DID ANI is configured for the domain (see **Managing Automatic Number**

Identification (ANI)). If not, such numbers are not valid and the next-priority ANI settings apply.

Apply to Manual Calls - This option allows the custom contacts to be used for manual calls that are assigned to the campaign, including callbacks.

ANI Group. You can choose the ANI group from the drop-down list. The [None] option can be selected in the ANI Group menu if the campaign does not have requirements to show local presence by displaying a local prefix.

Apply to Manual Calls Associated to Campaign. This option allows the ANI Group settings to be used for manual calls that are assigned to the campaign, including Callbacks.

Agent DID Number. This number is used only if the call is a manual or campaign preview call.

Default Outbound ANI. When you run an outbound campaign without a profile, all outbound calls use the default ANI number set in the Actions menu (see Managing Automatic Number Identification (ANI)). To override the default ANI for a campaign, enter the number here. If you use a Profile for other purposes, you must still enter an ANI. If you do not want to change the default ANI, enter your default ANI in this field. The Default Outbound ANI would be used when a campaign dials a number without a prefix/area code that has an assigned ANI within the ANI Group. You can configure ANIs starting with a + sign. The maximum number length for international numbers is 17 digits, plus prefix. The prefix may be 011 (for a total of 20 digits) or + (for a total of 17 digits and a + sign). Default ANI for account is used if above values are empty.

ANI for Transfers and Conferences

This section applies only to transfers and conferences associated with the campaign.

Contact Field to ANI Mapping. Contains the list of all contact fields with the Phone data type, including number1/2/3. [None] is chosen by default. If enabled, this option uses the value of a specified Phone-type contact field (excluding multi-pick-list Phone fields) as the ANI for a conference/transfer that is initiated while an agent or IVR script is working with the record.

Toll-free numbers may be used as ANIs only if a DID ANI is configured for the domain (see Managing Automatic Number Identification (ANI)). If not, such numbers are not valid and the next-priority ANI settings would apply.

Contact's number is used if agent selects Include Caller Info, the Use Contact's Phone Number as Caller ID setting is enabled in Campaign Properties, or for transfers from inbound calls.

ANI Group. You can choose the ANI group from the drop-down list. The [None] option can be selected in the ANI Group menu if the campaign does not have requirements to show local presence by displaying a local prefix.

Default ANI for Transfers. The **Default ANI for Transfers** option is equivalent to **Default Outbound ANI** but applies only to transfers. A similar check is performed for transfer ANIs as for the Default Outbound ANI to see if there is a campaign using this ANI as the DNIS. If not, a warning message is displayed when you attempt to save the campaign profile:

the Transfer ANI you are attempting to use for this Campaign is not being used in any currently running inbound campaign for your domain. Please double-check your configuration to ensure calls can be received on this number, or *The Transfer ANI you are attempting to use for this Campaign does not match any assigned numbers for your domain. Please double-check the number you entered to ensure its accuracy*.

The Default Transfer ANI follows the same number restrictions (for example, no 9999999999 or Five9 ANIs) as the Default Outbound ANI.

Default ANI for Conferences. The **Default ANI for Conferences** option is equivalent to **Default Outbound ANI**, but applies only to Conference Calls. The same check is performed for conference ANIs as for the Default Outbound ANI. It shows if there is a campaign using this ANI as the DNIS; If not, a warning message appears when attempting to save the campaign profile:

"*The Conference ANI you are attempting to use for this Campaign is not being used in any currently running inbound campaign for your domain. Please double-check your configuration to ensure calls can be received on this number*" or "*The Conference ANI you are attempting to use for this Campaign does not match any assigned numbers for your domain. Please double-check the number you entered to ensure its accuracy*."

The **Default Conference ANI** follows the same number restrictions (for example, no 9999999999 or Five9 ANIs) as the **Default Outbound ANI**. **Default Outbound ANI** (from the section above) is used if the above values are empty. **Default ANI for Account** is used if both default values are empty.

ANI for Queue Callbacks

This Campaign Profile setting enables you to configure the outbound ANI to be displayed as the **Queue Callback for Outbound ANI** parameter for outbound calls. Enable these settings by assigning the configured campaign profile to an inbound campaign.

Outbound ANI for Queue Callback may also be configured dynamically using the Set Variable function in Engagement Workflow. An IVR Group variable for Queue Callback ANI may be set and overrides options configured using a Campaign Profile for the specific Inbound Campaign.

> **Note**
> The Queue Callback ANI variable may be used independently of Campaign Profiles.

The ANI for queue callback configuration settings (select one):

Use Inbound Campaign DNIS as Outbound ANI (default behavior). Select this option to use the inbound DNIS associated with the original inbound campaign as the outbound ANI for queue callback.

Assign Queue Callback Outbound ANI. Select this option to assign a specific outbound ANI for queue callback.

Use Default Outbound ANI From Account Settings. Select this option to use the outbound ANI configured for your domain as the queue callback outbound ANI.

> **Note**
> The Queue Callback Outbound ANI setting may be overridden at runtime using the Set Variable function in the associated IVR script. IVR scripts may be shared by multiple campaigns and may not be the originating inbound campaign that the customer dialed. The desired outbound ANI for queue callback may only be known/set at runtime.

Priorities of ANI Settings

Configure ANI settings in campaign profiles and in campaign properties. The behavior varies slightly by campaign type.

Priorities of ANI settings for outbound calls when no values are available for the highest-priority settings.

- **Contact field mapping**: If the specified contact field has a valid, non-null value for the contact, it is used as the ANI for the call.
- **ANI Group (using a local prefix)**: Valid prefix-to-ANI mapping that must be configured for the dialed phone number in the selected ANI Group.
- **Agent DID Number**: DID number that must be defined for the agent.
- **Default Outbound ANI**: Campaign Profile setting. See Editing the Properties of Campaign Profiles.
- **Default Domain ANI**: See Managing Automatic Number Identification (ANI).

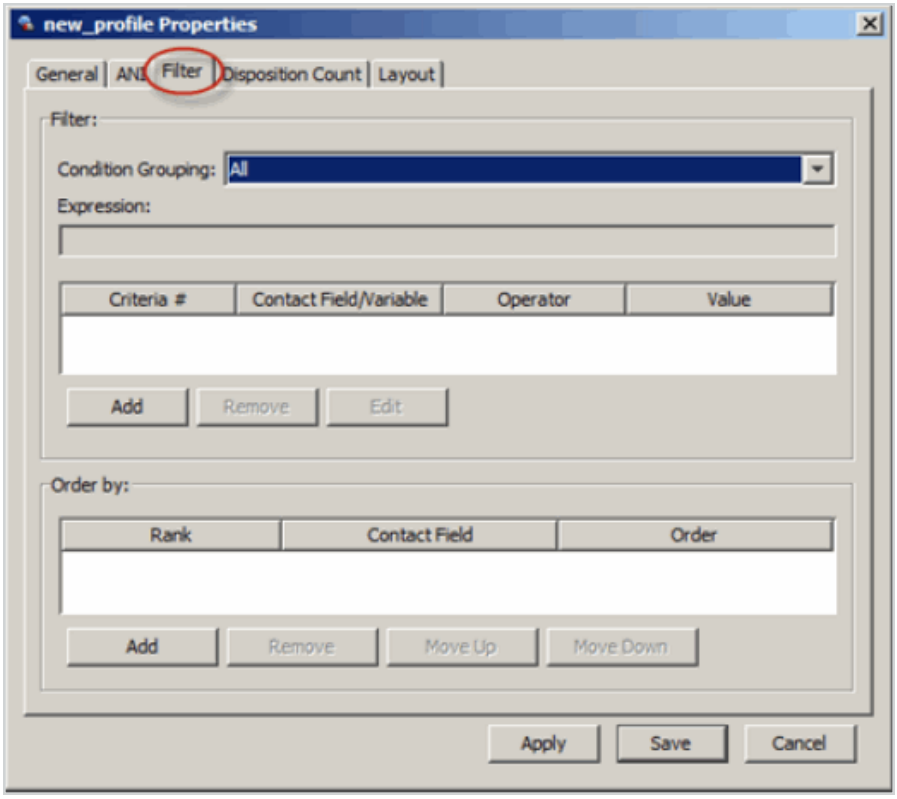
Priorities of ANI settings for transfers and conferences.

- **Contact field mapping**: If the specified contact field has a valid, non-null value for the contact, it is used as the ANI for the call.
- **Use Caller Info / DNIS-as-ANI**: If the Agent enables Use Caller Info, a campaign properties setting forces the contact's phone number to be used as the ANI, or a call transfer is initiated from an inbound call.
- **ANI Group (using a local prefix)**: Valid prefix-to-ANI mapping that must be configured for the phone number being dialed in the selected ANI Group. It only applies if an ANI Group is selected in the ANI for Transfers and Conferences section. An ANI Group configured in the outbound calls section does not apply. See Editing the Properties of Campaign Profiles.
- **Default ANI for Transfers / Default ANI for Conferences**: Can be configured from the ANI for Transfers and Conferences section. See Editing the Properties of Campaign Profiles.
- **Default Outbound ANI**: Campaign Profile setting. See Editing the Properties of Campaign Profiles.
- **Default Domain ANI**: See Managing Automatic Number Identification (ANI).

Filtering and Sorting Lists

Use campaign profile settings to organize the dialing order of a calling list based on the contact fields. For more information, see also Dialing Rules and Dial Order. This tab

applies to outbound campaigns. It allows you to filter a list based on information in the contact database. If the contact details for a phone number match the criteria you enter, the phone number is dialed. If not, the number is skipped. By default, all records are dialed.



Records can be filtered by created or last modified timestamps, time zones, last dispositions, last disposition times, last attempted numbers, the number of dial attempts, and so on Calling list operator filters include Starts with, Contains, and Ends with comparison types for dialing list filters. You can also define the contact data sorting, which allows you to specify the order by which the list records will be arranged.

Applying a Filter
Applying a Sorting Order
Removing Contact Filter Criteria
Removing Sorting

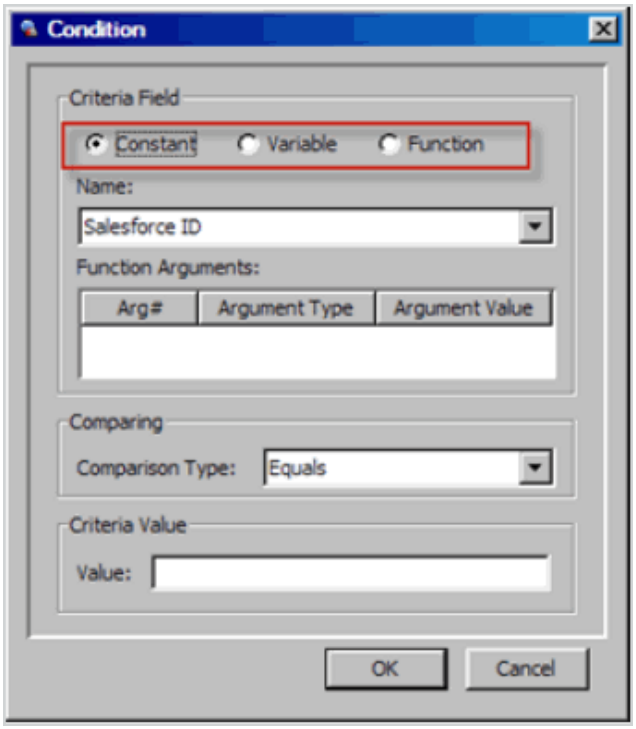
Applying a Filter

Follow these steps to filter a list for outbound dialing. Filters are not case sensitive.

1 In the Filter tab, click **Add**.

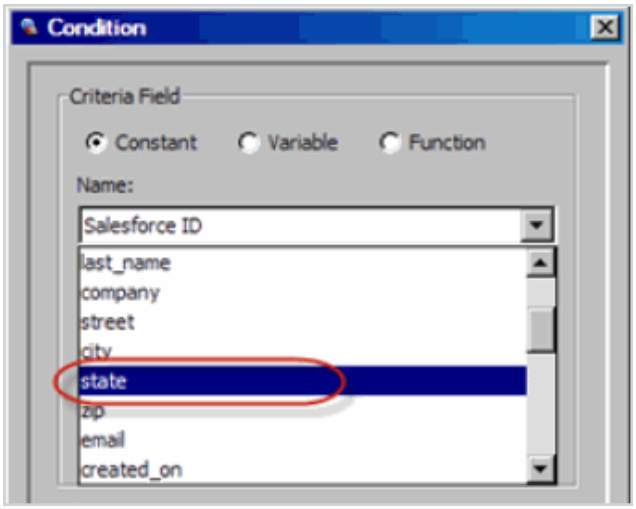
2 Select a criteria type: Contact, Variable, or Function.

In the following steps, an example is created with a constant: `state equals CA`.



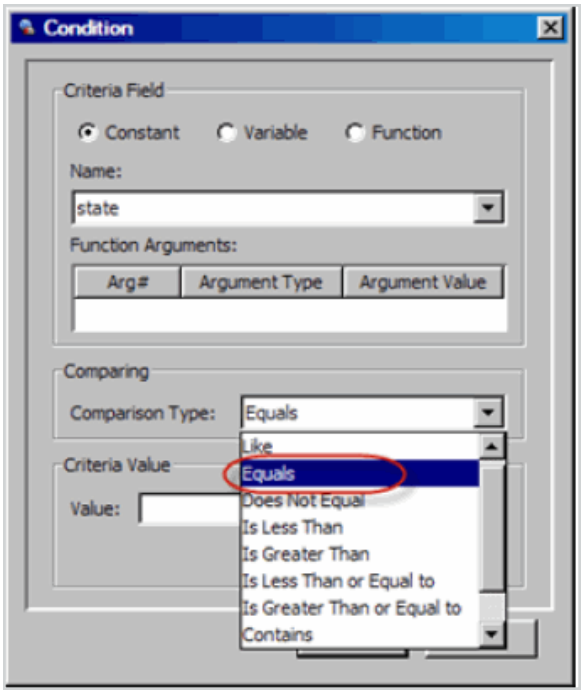
3 From the Name menu, select the field to use as filter.

You can filter your lists on the basis of mapped contact fields which can store information about the last system and agent dispositions, the last attempted phone number, last campaign, last list, and last agent to use the record, with the fields being updated at the time that a disposition is set. The mapped fields can contain time stamps for when the contact record was last modified or created.



4 Select the comparison type:
   - Like: Find a string fitting a certain description. A wild card character can be used.
   - Equals (=): Test the equivalence of two values. Cannot use wild cards.
   - Does Not Equal (!=): Test the negated equivalence of two values.
   - Is Less Than (<): Left expression is less than that of the right expression.
   - Is Greater Than (>): Left value is greater than that of the right value.
   - Is Less Than or Equal to (<=): Test if the value of the left expression is less than or equal to that of the right expression.
   - Is Greater Than or Equal to (>=): Test if the value of the left expression is greater than or equal to that of the right expression.
   - Contains: Cannot use wild cards.
   - Starts with: A wild card character can be used (an implied % at the end).
   - Ends with: A wild card character can be used (an implied % at the beginning).
   - Empty: The set contains the items. Available for predefined lists.
   - Is Not Empty: The set does not contain the items. Available for predefined lists.
   - Only Contains: The set only contains the items. For example, of four possible items, two are selected (and only those two - no other items, and not only one of those items). Available for multi-pick predefined lists.
   - Does Not Only Contain: The set may or may not contain the items, but it is not the only selection. For example, of four possible items, a particular combination of two of the items is not selected; all other combinations

are valid. Available for multi-pick predefined lists.



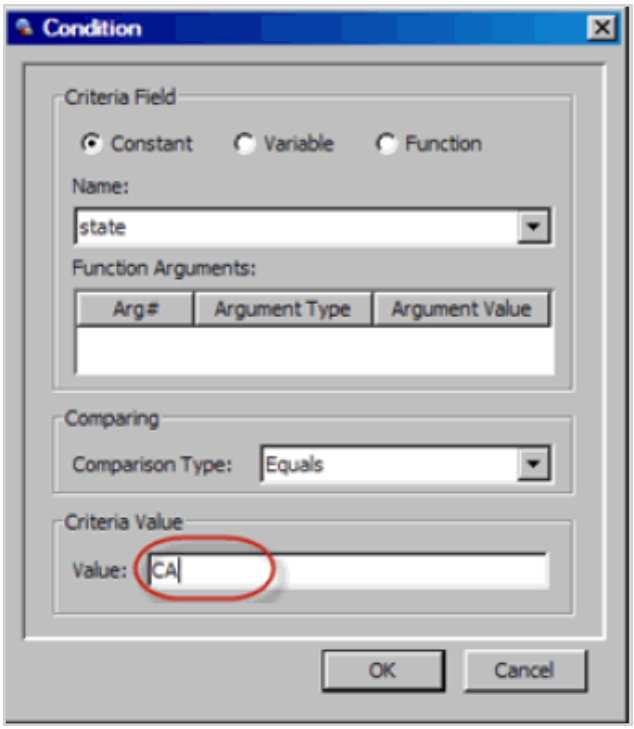
5 In the Value field, enter the text you want as your filter.

A wild card character can be used to substitute for any other character or characters in a string. You can use % and _ characters as a wild card in the criteria fields. The percent sign matches zero or more characters. For example, use “%555%” to find numbers like 92**555**72000 or 928923**555**2 or 9234**555**233. The underscore substitutes a single character. For example, search for ___555__ __ (3 underscores + 555 + 4 underscores) to find numbers like 123**555**1234.

Wild card characters can be used only in Like, Start with, End with expressions. Start with has an implied % at the end, and End with has an implied % at the beginning.

Example

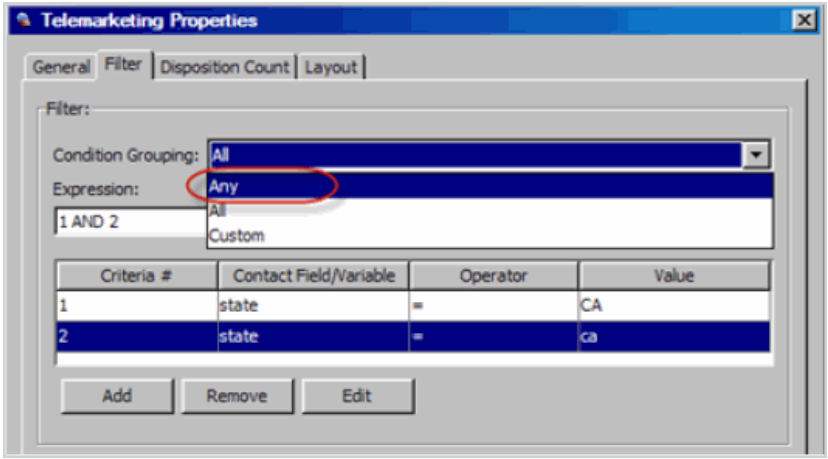
To find any string that begins with the letter “S” type “S%.”



6 Click **OK** to add a criterion to the list.

7 Repeat these steps to add more criteria.

8 Choose a value from the Condition Grouping.



The supported operators are: AND, OR, or NOT.

You can add up to 20 contact field conditions when defining contact filtering.

Example

(1 AND 2 AND 3) OR (4 AND 5 AND 6 AND 7) OR 8 OR (10 AND 11 AND 12 AND 13 AND 14 AND 15)

Example

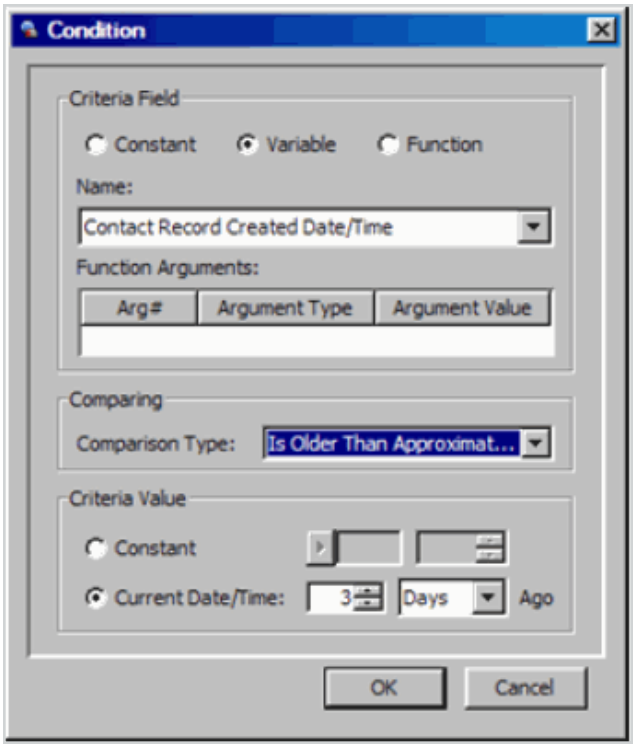
Use the an expression like the following to skip numbers with the specified area code: 1 AND 2 AND (NOT 3)

9 Click **Apply** or **Save**.

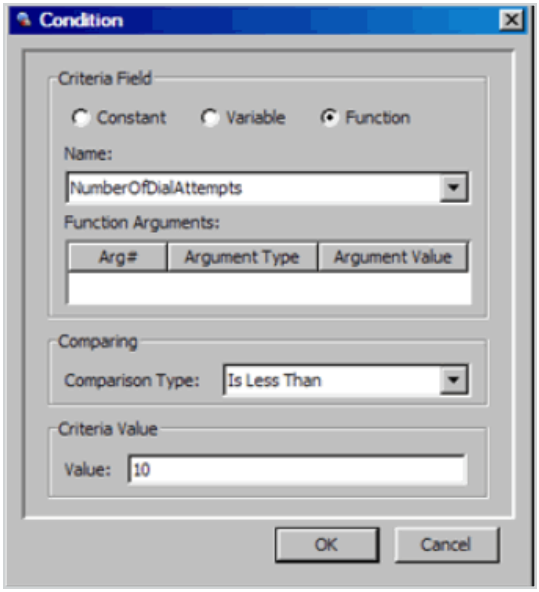
The previous examples indicate how to filter using a constant. You can filter by variables and functions as well:

- Constant: for example, if your list contains contacts from several states, but you want to dial California only, you can use a filter to dial only the numbers where the state field equals CA.
- Variable: you can choose from these variable options:
  - Contact Record Last Modified Date/Time
  - Contact Record Created Date/Time

  The filter would include list records that are more than 3 days old, compared to the current date:



- Function: In the example below, the records are selected if the number of dial attempts is less than 10. In some cases, you have an additional function argument like in the example below.



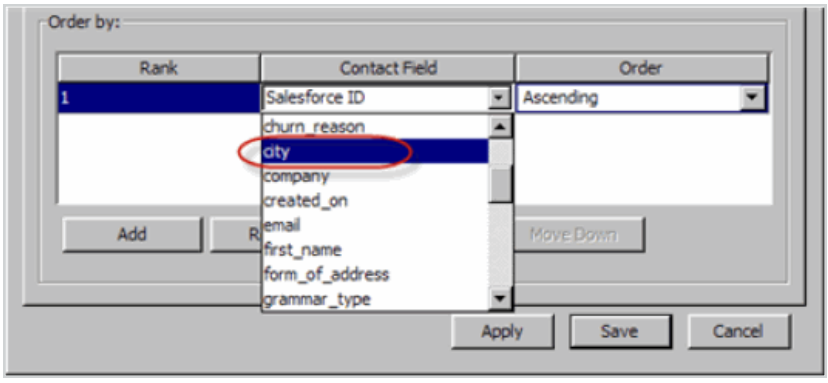
Applying a Sorting Order

Follow these steps to sort a list for outbound dialing. If you set two lists to the same priority, both lists are sorted together as one list. Five9 does not recommend that you sort lists larger than 50,000 records. Large list sorting results in longer campaign startup and list recycling, which may negatively affect agent productivity. You can select up to three Sort-by fields.

1. In the Filter tab, click **Add**.

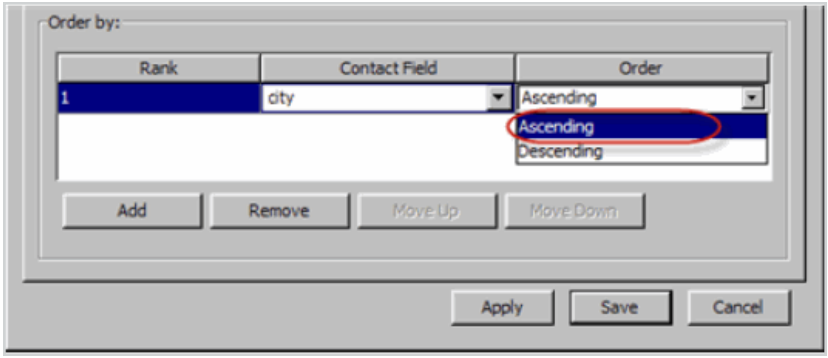
   The set (multi-pick) fields cannot be used for *order by* parameters in campaign profiles.

2. From the Contact Field menu, select the column to use for sorting.



   You can sort on the basis of custom mapped contact fields which can store information about the last system and agent dispositions, the last attempted phone number, last campaign, last list, and last agent to use the record, with the fields being updated at the time that a disposition is set. The mapped fields can contain time stamps for when the contact record was last modified or created.

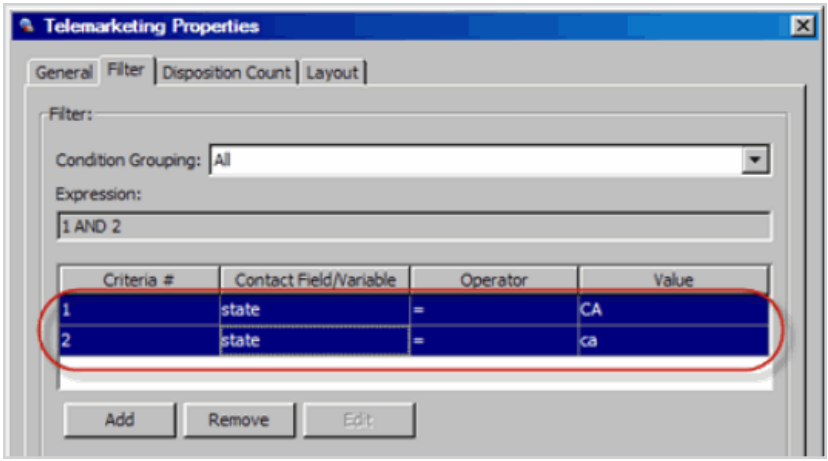
3. Select the order type: Ascending or Descending.



4. Change the order up or down as needed.

Removing Contact Filter Criteria

1 In the Filter tab, select **Criteria #**. To select multiple criteria, use <CTRL> or <SHIFT>.



2 Click **Remove**.

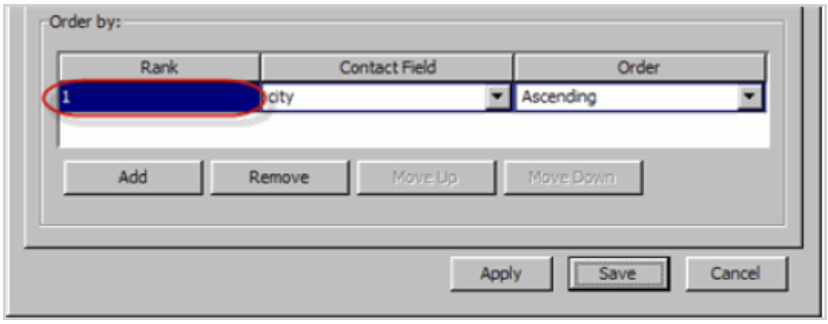
3 Click **Yes**.

4 Click **Apply** or **Save**.

Removing Sorting

When you remove the sort order, the list is reset to the default sort state.

1 In the Filter tab, click the line you want to remove at the bottom of the window. To select multiple lines, use <CTRL> or <SHIFT>.



2 Click **Remove**.

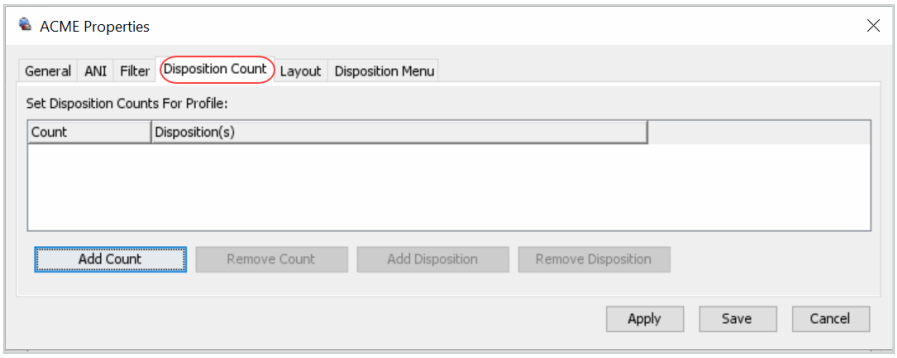
3 Click **Apply** or **Save**.

Managing Disposition Counts

This tab applies to inbound and outbound campaigns. The Disposition Counts tab is used to stop a campaign based on how many times a disposition is selected. See also the Campaign Administrator's Guide, Stopping a Campaign.

Disposition count allows you to automatically stop an Inbound or Outbound Campaign after the specified disposition has been selected a specified number of times. For example, if you have 100 items to sell, use Disposition Count to automatically stop dialing after the Sales disposition has been selected 100 times. To do this, set a Disposition Count equal to your product inventory.

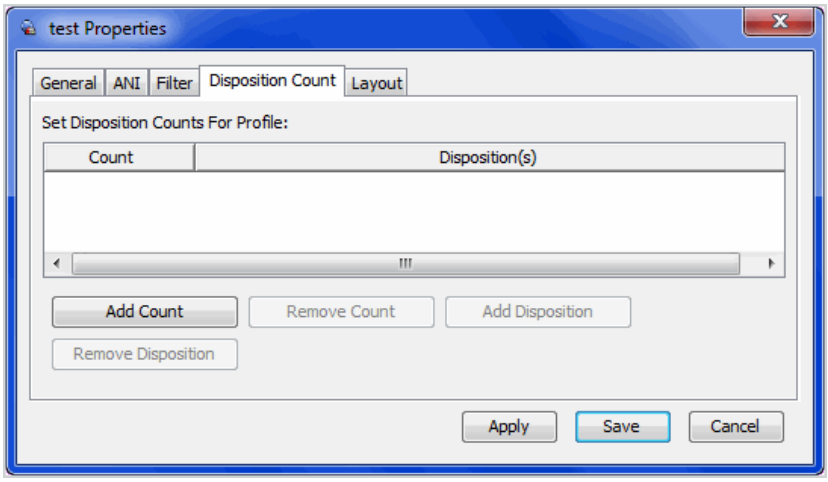
This feature can be used for things such as controlling inventory, mailing applications or fliers of which you have a limited amount printed, limiting appointments based on staffing, and so on. The Disposition count is an event.



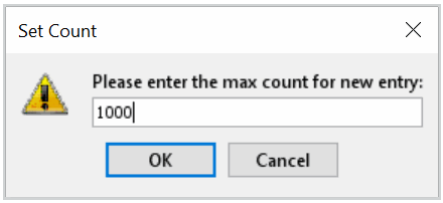
Creating a Disposition Count

To create a Disposition Count, follow these steps.

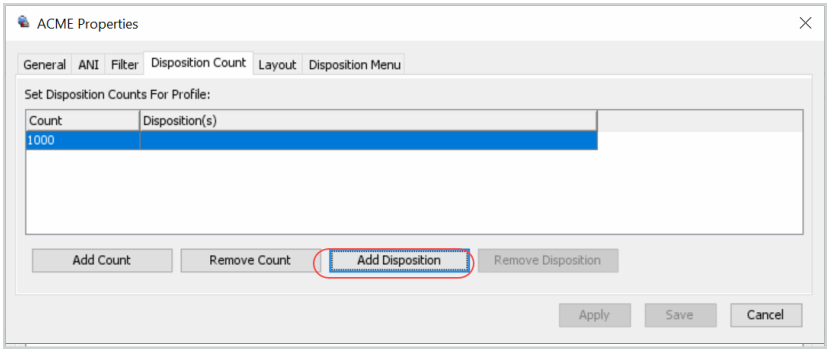
1 In the Disposition Count tab, click **Add Count**.



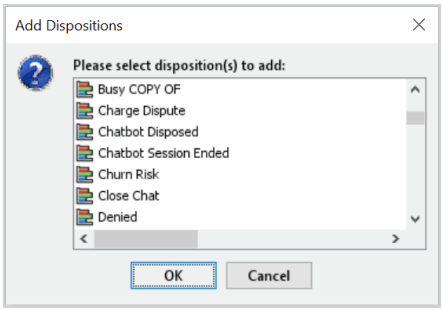
2 Enter the number at which to stop the campaign, and click **OK**.



3 Highlight the count that you entered, and click **Add Disposition**.



4 Select the dispositions you want to use.

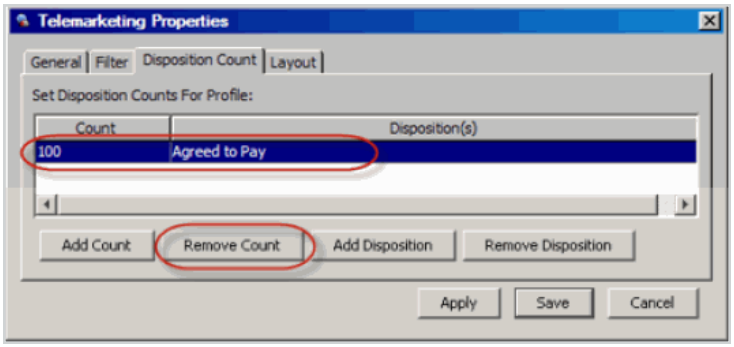


5 Click **OK**.

6 Click **Apply** or **Save**.

Removing a Disposition Count

1 In the Disposition Count tab, select one or several lines to remove. For multiple choices, hold down the <CTRL> or <SHIFT> keys.



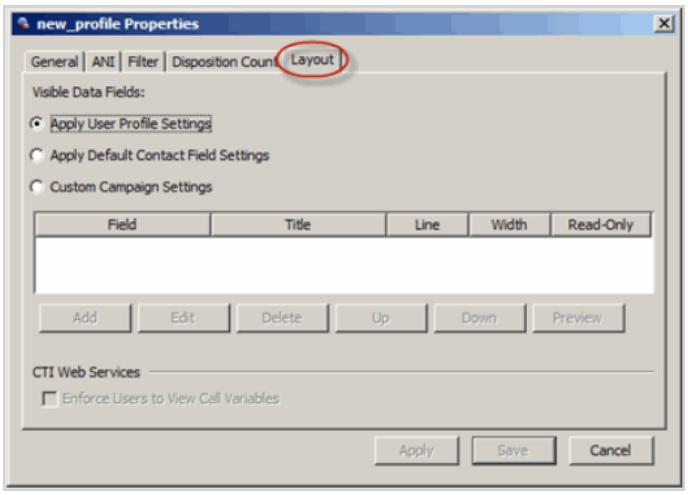
2 Click **Remove Count**.

3 When done, click **Apply** or **Save**.

Configuring a Campaign Profile Layout

You can control which contact fields and variables are shown to the agents and which fields can be edited by them. Additionally, you can control how the fields are displayed. You can configure the width of the fields. A variety of call variables are configured for the profile. Some of them are read only. For the editable fields, agents can add or change data. For example, you might have a sales campaign and a support campaign.

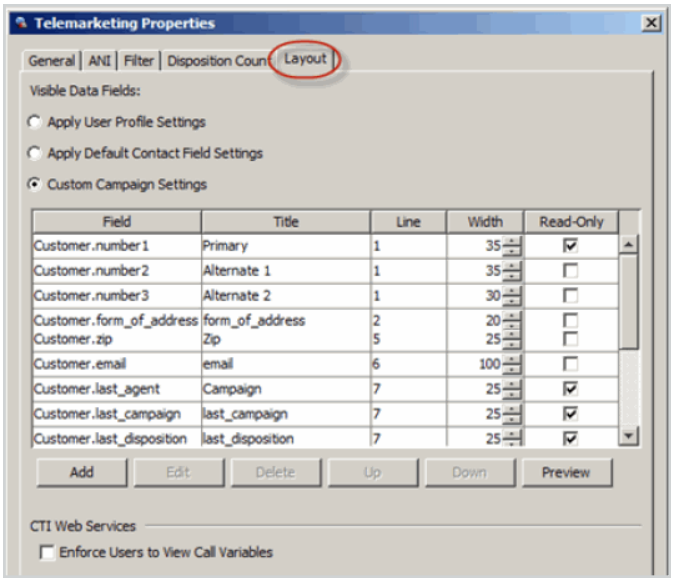
These probably are two different variable groups and two different sets of variables that you want to display, using the Campaign Profile Layout configuration.



1 In the Layout tab, select one of these options:

- Apply User Profile Settings - Select this option to use the layout settings for the user profiles associated with agents handling calls for this campaign. Note that the user profile layout settings do not include call variables; therefore, all call variables are displayed to agents for calls associated with campaigns using this profile.
- Apply Default Contact Field Settings - Select this option to use the default settings configured for all contact fields. Note that the contact field layout settings do not include call variables; therefore, all call variables are displayed to agents for calls associated with campaigns using the Campaign Profile.
- Custom Campaign Settings - Select this option to apply the Campaign Profile layout configured in the Data Fields table described below. This option activates for integrations only Enforce Users to View Call Variables under CTI Web Services:
  - Enabled: call variables are always displayed to agents.
  - Disabled: call variables are displayed to agents only if they have enabled Show Call Attached Variables in their softphone settings.

Custom campaign settings take priority over those configured in user profiles. Both configurations also take priority over the default contact field settings configured in **Contacts > Fields**.



Data Fields - This table shows the contact fields and call variables that will be displayed to agents when handling calls for campaigns associated to the Campaign Profile.

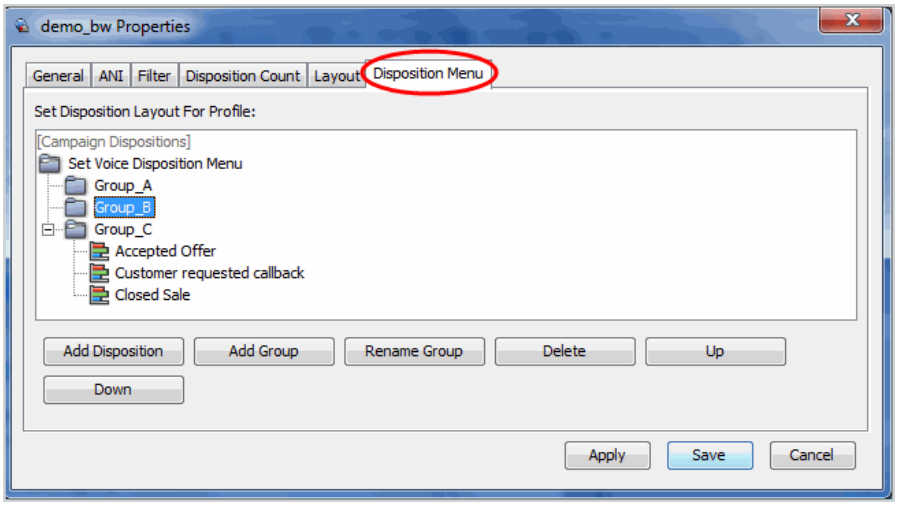
- Add - opens the New Data Field window where you can define a contact field or call variable. If all fields are added, New Data Field is not available.
- Edit - change the contact field or call variable properties.
- Delete - remove the field from the allowed fields list.
- Up - move up the field in the form for contact filed lookup.
- Down - move down the field in the form for contact filed lookup.
- Preview - preview the form.
- Line - indicates the vertical position of each field in the layout, with line 1 at the top. Lines are calculated based on the width of each field, described below.
- Width - relative width of each field displayed in the layout. Values can be set in increments of 5%, ranging from 5 to 100.

- Read-Only - property of each field that indicates whether agents can change the value while handling calls.

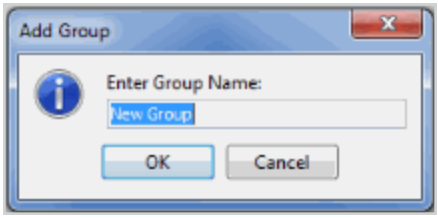
2 When done, click **Apply** or **Save**.

Configuring and Grouping Dispositions

You can assign, group dispositions, and sort the order in which dispositions and disposition groups are displayed.

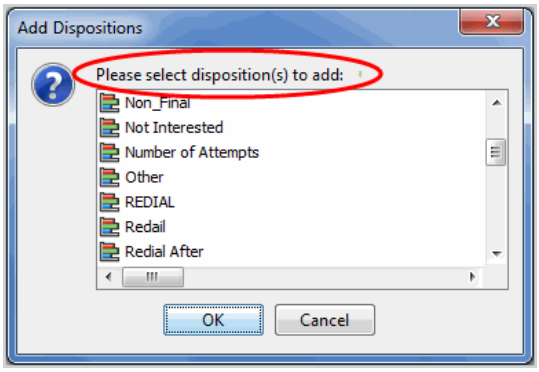


- To create a disposition group, click **Add Group** and assign a name that best identifies the group. The names of disposition groups must not exceed 255 characters.



- To rename a disposition group, select the group and click **Rename**.
- To add dispositions to a disposition group, select group, click **Add Disposition**, and select dispositions.
- To remove a disposition or disposition group, select that object and click **Remove**. To reorder the groups or the dispositions within a group, select that

object and click **Up** or **Down** until your desired display order is defined.

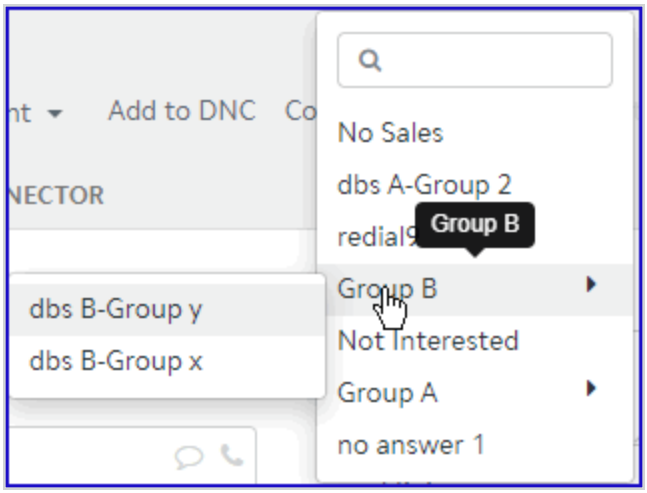


You can also assign dispositions in campaigns. For consistency, Five9 recommends that you assign a disposition in a campaign profile or in a campaign, but not both.

In the agent application, dispositions are ordered as follows:

1. All dispositions assigned in the campaign, ordered alphabetically but with all uppercase letters preceding all lowercase letters.
2. All dispositions and groups assigned in the campaign profile, in the order specified in the profile. Dispositions contained in a group are displayed in the expanded menu of the group.

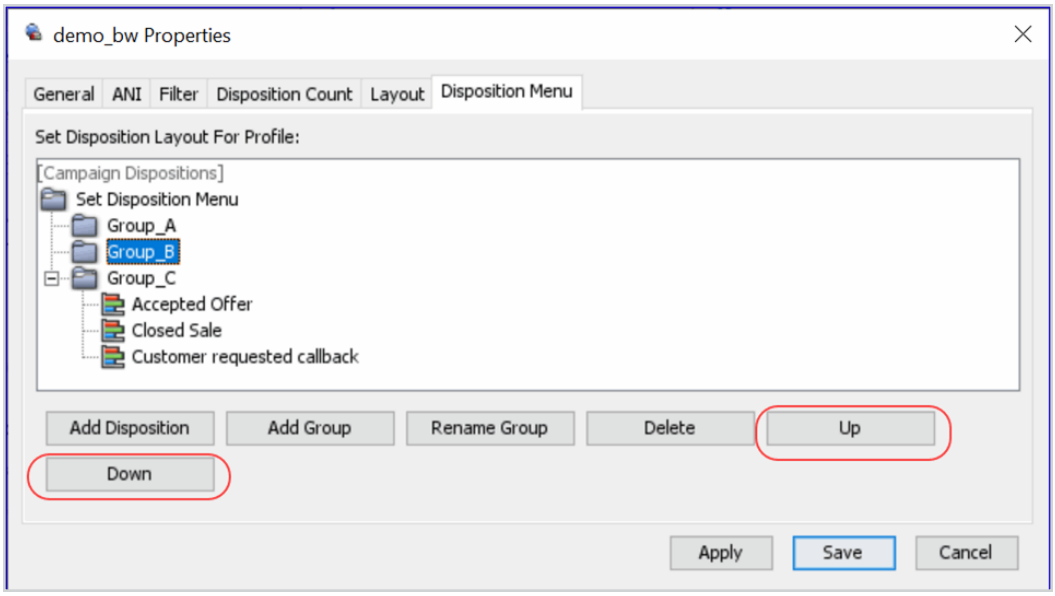
In the following example, No Sales, dbs A-Group 2, and redial9 are assigned in the campaign, and Group B, Not Interested, Group A, and no answer1 are assigned in the campaign profile. Notice that Group b would follow Group A alphabetically, but here it precedes because it is identified that way in the profile:



You can reorder or remove any dispositions or disposition groups to best display a list from which your agents can rapidly select the appropriate disposition.

Example

You have defined GroupA, GroupB, and GroupC and discover that your agents are using GroupC most often. Use the Up button to move GroupC to the top of the agent display.



To reorder the groups or dispositions within a group, select an object and click Up or Down until your desired display order is defined.

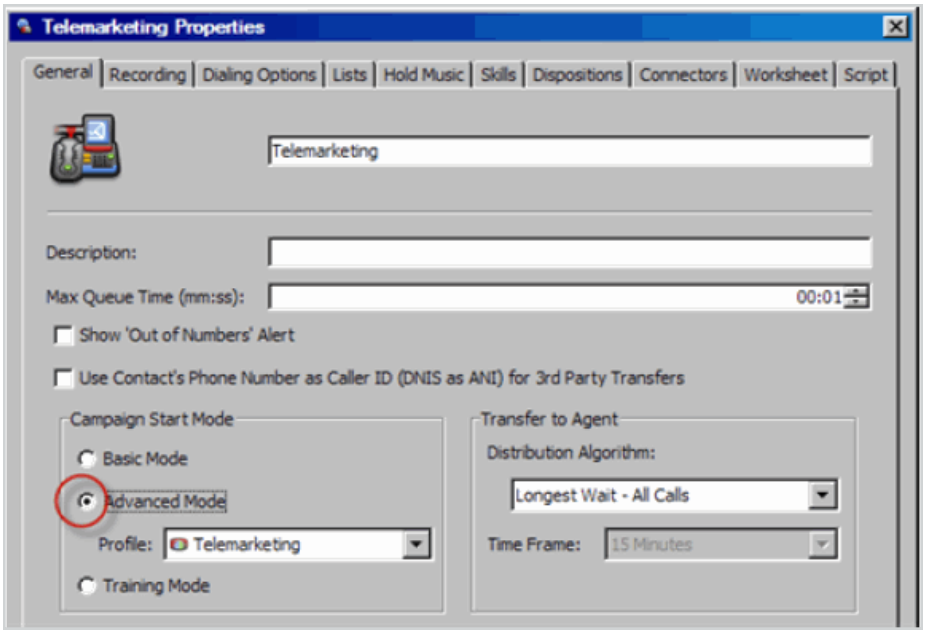
Assigning a Campaign Profile to a Campaign

You can use workflow rules to change the active profile when certain events take place. To use a campaign profile, you must associate it with a campaign.

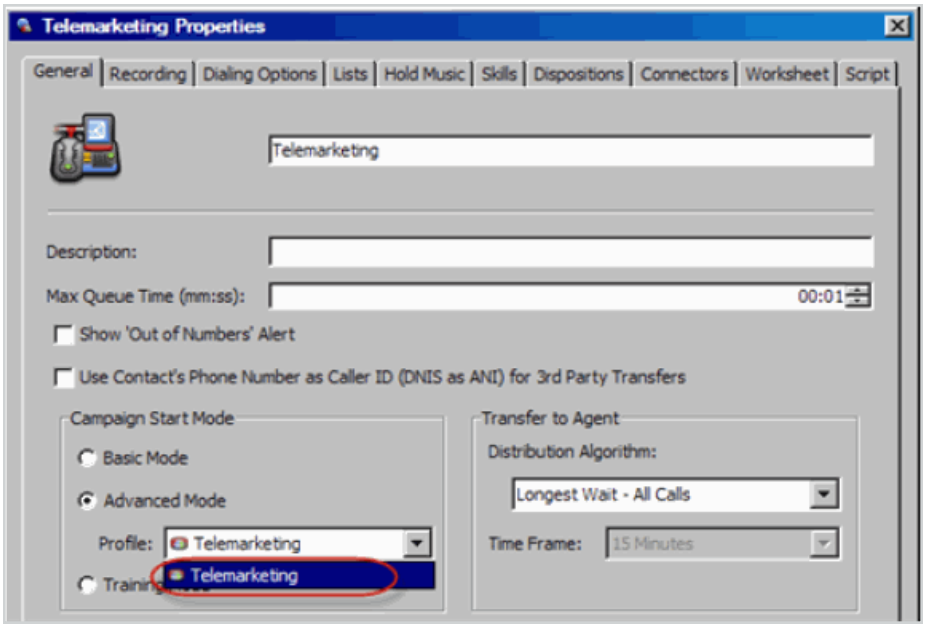
1 Open properties window of a campaign.

See the Campaign Administrator's Guide, Configuring An Outbound Campaign.

2 In the General tab, select **Advanced Mode**.



3 Select a campaign profile.



4 Click **Apply**, or click **Save** to apply the changes and close the window.

The campaign profile is applied the next time you start the campaign. If you do not want to use a campaign profile, start the campaign in Basic mode.

Prompts

Types of Prompts
Managing Voice Prompts

The Prompts folder in the Five9 Administrator is used to upload sound files to use in IVR prompts, custom hold music, and skill group audio files. Audio files are used also for voicemail greetings, but they are uploaded directly to the User or Skill Group properties window.

A voice prompt is an audio file used in IVR scripts to play a greeting or give callers instructions or information, for example: *Thank you for calling Acme Company. Please hold for the next available agent* or *Please press 1 for Technical Support or 2 for Sales*.

Audio files require this format: WAVE audio, ITU G.711 mu-law, mono 8000 Hz. In some applications, the format may be listed as CCITT u-Law, 8.000 kHz, 8 bit, Mono, 7 kb/sec.

Create a prompt by using one of these methods:

- Use a professional voice-over service. Five9 recommends this option for a caller friendly experience in your IVR.
- Record your own by using recording software such as Microsoft Sound Recorder.
- Use the built-in Text-to-Speech engine.

Import audio files into the Prompts folder in the Administrator's desktop. An imported prompt can be used in multiple inbound campaigns. Prompts can be played sequentially by linking multiple Play modules in the IVR. Prompts can be edited.

Types of Prompts

If you need to select a prompt, you can choose from default prompts, uploaded prompts (voice audio files), and TTS prompts.

Default Prompts
IVR Prompts
Text to Speech
    Modes

Elements

Default Prompts

Five9 provide a few default prompts but, for best results, recommends that you record and import custom prompts. The default prompts are displayed in the same list as any of your imported prompts in the Play module.

Several prompts can be saved sequentially to achieve the message that you need, for example: *Extension two three four five is not available*, and *Please leave a message after the tone*. This table contains the default prompts:

Zero	Nine
One	Extension
Two	Please hold while I transfer your call
Three	Is not available
Four	Please leave a message after the tone
Five	Or
Six	Please enter the extension of the party you would like to reach
Seven	Hold for the next available agent
Eight	

IVR Prompts

These modules can have prompts:

Play Module	Query Module
Get Digits Module	System Info Module
Input Module	Conference Module
Menu Module	Voice Input Module
Lookup Contact Record Module	Skill Transfer Module
	Agent/Voicemail Transfer Module

In the IVR properties, you can select the prompts that will be played to callers while the module is executed. The list of prompts includes the default prompts and the prompts you added to the Prompts folder. You may also use Text-to-Speech (TTS) for dynamic

prompts. However, Five9 recommends that you limit the use of TTS to short phrases, such as call variable values or contact field values. For example, you may want to provide the caller's checking account balance by using TTS to say the current balance.

You can also make the selected prompts interruptible: the prompt stops as soon as the background operation is completed.

Text to Speech

Text to Speech (TTS) functionality allows you to create a voice prompt from text using different voice characters available from the library. TTS is the only way to provide your customers with dynamic voice messaging being used in the IVR scripts. For example, you can provide the inbound customers with information about their account balance using the IVR script which asks the customer to enter their account number. The script queries the database to get the current balance and finally generates the voice message with the customer's balance amount which is played to the customer.

Five9 does not recommend that you use this functionality as the main way to create voice messages for your customers. Messages generated by TTS have a computer-sounding voice, which is not suitable for extended messages. Five9 recommends that you record real voice messages and combine the messages using the TTS only to say the values of variables. For example, record the phrase *Your balance is* in a sound recorder and upload it to the system. During the creation of the prompt, combine this message with a TTS message that plays the balance amount.

The TTS Script Builder is designed to prepare the rendered text for the TTS engine. The text may consist of predefined pieces of text and the content of variables.

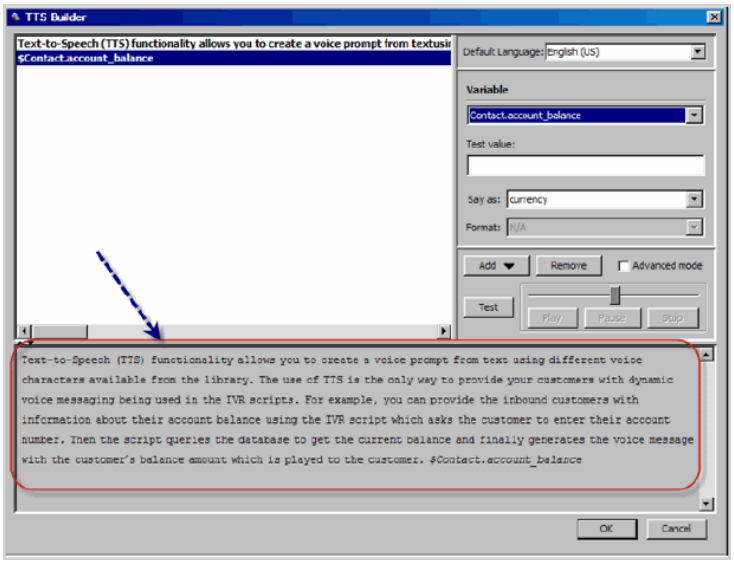
The Builder can be used in Advanced Mode or in Simplified Mode (Default). The only difference is allowing the SSML text to render with explicit use of the SSML tags. The Advanced Mode check box is used to switch between modes.

Modes

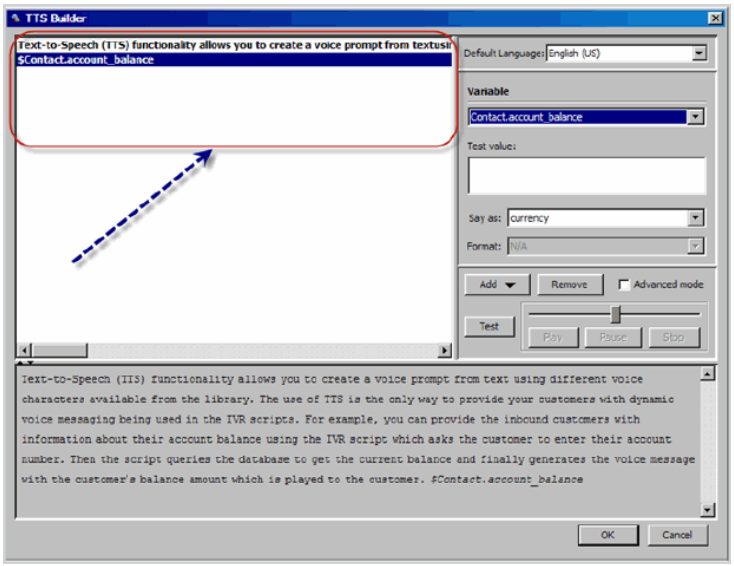
Simplified Mode. The TTS Script Builder dialog consists of the three main panels:

- Bottom Panel: Shows the complete text cleared from any structuring insertions (XML tags). This is a read-only text box intended for easy control and navigation purposes. Click a word in the panel selects the left panel's string, which contains

the word (which in turn selects a substring in the bottom panel).

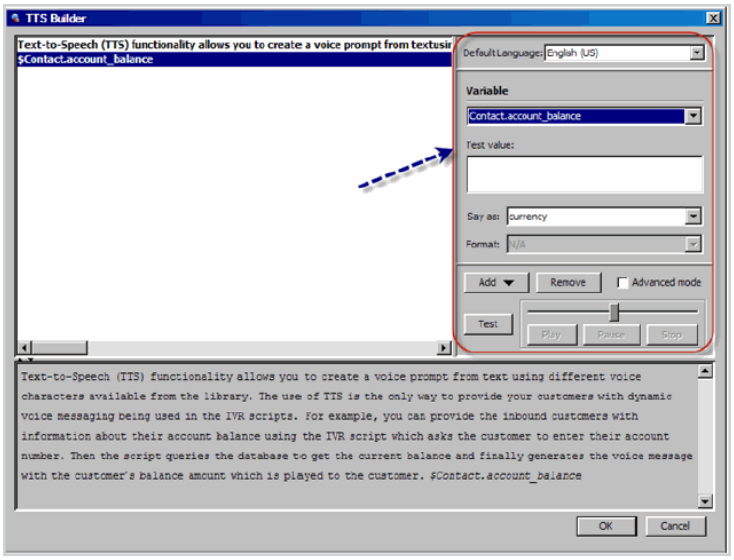


- Left Panel: Contains a table where each elementary piece of text (term) is on a separate row. Click a string to display the element settings in the right panel.

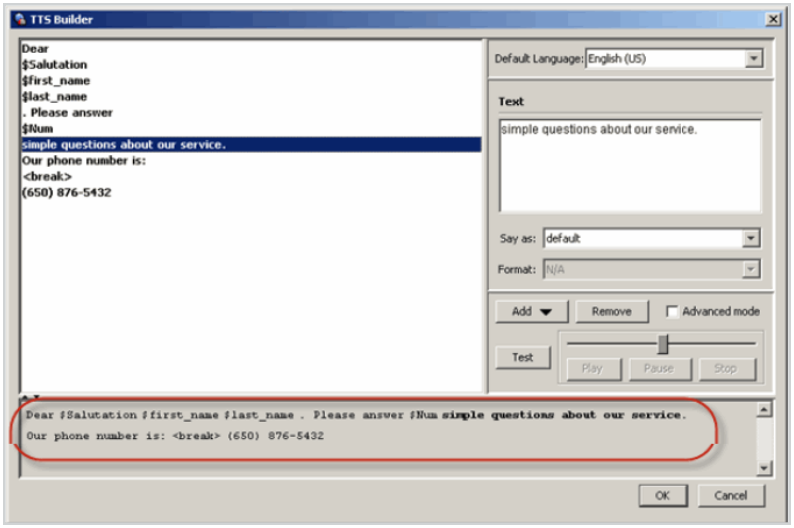


- Right Panel: Displays the selected term type and definition. After you add a new element, you can define the options for this element in the right panel. Select an

element from the left panel to display its settings in the right panel.



See the example of how it would look after clicking on some position between *simple* and *service* words in the bottom pane. The corresponding string is selected in the left panel and the settings for this text element are displayed in the right panel.



if the TTS Builder is started from an IVR Module Properties window, the Simplified Mode allows you to add only three main elements:

- Text Element
- Break Element
- Variable Element

If the TTS Builder is activated from the Add Prompt dialog in the Prompts folder, only substrings and pauses are available:

- Text Element
- Break Element

These elements can be added by using the Add button.

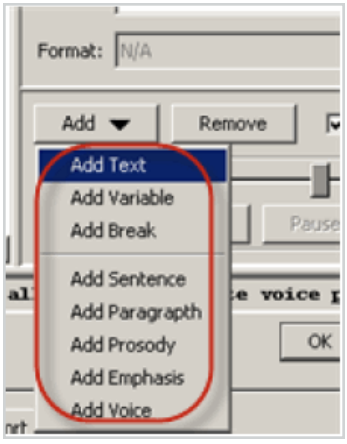
Advanced Mode. Checking the Advanced Mode box enables the TTS advanced mode. With this setting it is possible to improve the sound quality of the prompts by rendering the text with the SSML (Speech Synthesis Markup Language) tags.

In this mode, the left panel contains the SSML tags along with text, variable, and break elements. The tags should be visually distinguished from the term elements (in the figure the last ones are displayed in Bold).

The tags appear in pairs (opening tag has the symbol > attached to the end of its name, closing tag is marked by leading <). Click a string with the opening or closing tag to select whole strings between them (shown red in the figure), so selecting the tag means selecting all enclosed elements.

An additional column with check boxes serves to select elements that need to be included inside a new tag pair. The customer can switch on several subsequent elements (for example Dear, $Salutation, $first_name, $last_name) and press the Add button. After selecting the Add sentence command from the menu, the newly created pair s>/<s appears around the selected terms (see the figure). Use the <CTRL> or <SHIFT> keys to select more than one term. The Advanced mode allows you to add these elements:

- Text Element
- Break Element
- Variable Element
- Additional elements shown in the figure

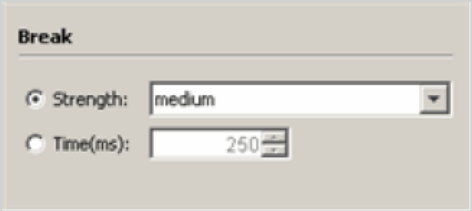


The set of tags available for adding depends on the *including* and *included* tags. Each of the tags can include the text, variable, and break elements. Each of the tags can be applied to the root level elements.

Command	Element	Description	Parent Elements	Child Elements
Add Paragraph	p	Enclosed text as a paragraph	voice, prosody	voice, prosody, emphasis, s
Add Sentence	s	Enclosed text as a sentence	p, voice, prosody	voice, prosody, emphasis
Add Prosody	prosody	Prosodic information for the enclosed text	p, s, voice, prosody, emphasis	emphasis, prosody, voice, p, s
Add Emphasis	emphasis	Enclosed text should be spoken with emphasis	p, s, voice, prosody, emphasis	voice, prosody, emphasis
Add Voice	voice	Voice characteristics for the spoken text	p, s, voice, prosody, emphasis	p, s, voice, prosody, emphasis

Elements

Break Element. The Break element applies to the simplified and advanced modes.



The Break element is an empty element that controls the pausing or other stress and intonation patterns between words. The use of the Break element between any pair of words is optional. If the element is not present between words, the synthesis processor is expected to automatically determine a break based on the linguistic context.

The alternative attributes in this element are Strength and Time. The corresponding panel contains the options for the attributes selection, the Strength menu, and the Time entry field. The last two controls are enabled with the corresponding selections.

The Strength menu has the following possible values. Duration in ms of the pause.

- x-weak: 100
- weak: 200
- medium: 400
- strong: 700
- x-strong: 1200

The Time field explicitly specifies the duration of a pause to be inserted in the output in milliseconds (ms). It can contain a non-negative integer. The spin button has a 250 ms step.

Emphasis Element. The Emphasis element specifies that the enclosed text should be spoken with emphasis. This element can be added in the Advanced Mode of TTS Builder.

- Element tag: emphasis
- Parent elements: p, s, voice, stress and intonation, emphasis
- Child elements: voice, stress and intonation, emphasis

This element requests that the contained text be spoken with emphasis (also referred to as prominence or stress). The synthesis processor determines how to render emphasis since the nature of emphasis differs between languages, dialects, or even voices.

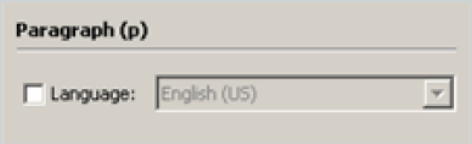
The optional level attribute indicates the strength of emphasis to be applied. Defined values are as follows strong, moderate, and reduced. The default level is moderate.



Paragraph Element. The Paragraph element identifies the enclosed text as a paragraph. It can be added in the Advanced Mode of TTS Builder.

- Element tag: p
- Parent elements: voice, stress and intonation
- Child elements: voice, stress and intonation, emphasis, s

The sentence (s) and paragraph (p) tags have just one optional parameter, language. The right panel contains the Language check box which enables or disables the menu with the supported set of languages.

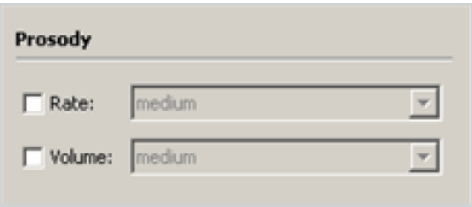


Prosody Element. Prosody refers to the rhythm, pattern, and flow of sounds in language. The Prosody element specifies stress and intonation information for the enclosed text. This element can be added in the Advanced Mode of TTS Builder.

- Element tag: prosody
- Parent elements: p, s, voice, prosody, emphasis
- Child elements: emphasis, prosody, voice, p, s

This element permits the control of the speaking rate and volume of the speech output. The attributes, all optional, are as follows:

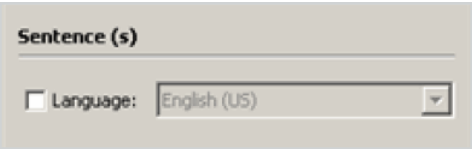
- Rate - speaking rate for the contained text: x-slow, slow, medium, fast, x-fast, or default.
- Volume - values: silent, x-soft, soft, medium, loud, x-loud, or default.



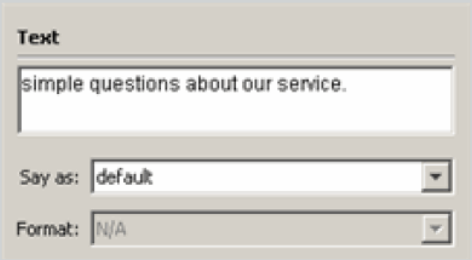
Sentence Element. The Sentence element identifies the enclosed text as a sentence. This element can be added in Advanced Mode of TTS Builder.

- Element tag: s
- Parent elements: p, voice, prosody
- Child elements: voice, prosody, emphasis

The sentence (s) and paragraph (p) tags have one optional parameter, language. The right panel contains the Language check box which enables the menu of supported languages.



Text Element. The Text element can be added in the simplified and advanced modes. For the text term, the panel contains the text box (allowing the text editing), the **Say as** and **Format** menus. The Variables, Say as, and Format menus are related to the selected variable.



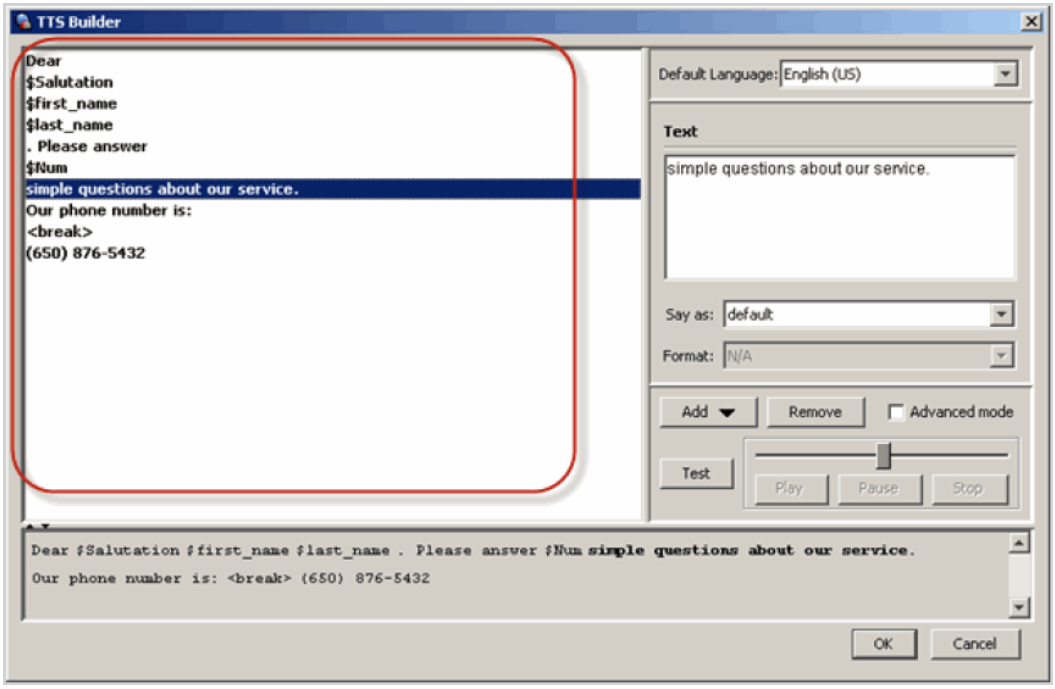
The following table describes the relations between the variable's type, say-as interpretation, and formats supported by TTS engine. A warning appears if the improper formatting is selected for the entered text.

Say as	Format	Description	Data Type
acronym	N/A	Sequences of letters and digits are spoken as words when this is considered natural in the target language. For example, NATO, UNESCO for English. Otherwise, letters and digits are pronounced individually. For example, API for English. Use detail *strict* to force spelling mode. In that case punctuation is also spoken (such as, speaking a comma as *comma*). Acronym with detail *strict* is equivalent to letters with detail *strict*.	STRING
address	N/A	Used for postal addresses.	STRING
cardinal	N/A	Supported if relevant in the target language. Roman cardinals are often supported.	INTEGER STRING
currency	N/A	Contained text is a currency amount (the currency symbol may be present in the enclosed text). Supports currencies as commonly specified in the country corresponding to the target language, such as $ and ¢ for US English.	CURRENCY NUMBER INTEGER STRING
date	d, dm, dmy,		DATE

Say as	Format	Description	Data Type
	m, md, mdy, my, y, ym, ymd		STRING
decimal	N/A	Same as number with format decimal. Use of the separator for the integral part is optional. For example, 123456.123 and 123,456.123 are pronounced in the same way for US English.	NUMBER INTEGER
digits	N/A	Numbers must be read digit by digit. Decimal periods or commas should be pronounced as well. Same as number with format digits.	NUMBER INTEGER
duration	h, hm, hms, m, ms, s	**Example**: duration with format hms is read out as <h> hour(s), <m> minute(s), and <s> seconds.	TIME STRING INTEGER
fraction	N/A	Same as number; with format fraction. For example, to pronounce 1/3 as *one third*.	STRING
letters	N/A	Pronounce alphanumerical strings as a sequence of individual letters and digits. With detail *strict* punctuation is also spoken (such as, speaking a comma as *comma*). Letters with detail *strict* is equivalent to acronym with detail *strict*. For true spelling of all readable characters, use the interpret-as value spell.	STRING
measure	N/A	Variety of units (for example, km, hr, dB, lb, MHz) is supported; the units may appear immediately next to a number (for example, 1cm) or be separated by a space (for example, 15 ms). For some units, the singular and plural distinction may not always be made correctly.	STRING
name	N/A	Interpret a string as a proper name if possible.	STRING
net	email, uri	email can be used for email	STRING

Say as	Format	Description	Data Type
		addresses.	
number	cardinal, decimal, digits, fraction, ordinal, telephone	Only formats relevant in the target language are supported. All the format values are supported as interpret-as values as well, behaving the same for either syntax. See the table entries for those aliases for more details.	INTEGER NUMBER STRING
ordinal	N/A	If relevant, see the language-specific User Guide for a list of the supported formats. Same as number with format ordinal.	INTEGER
spell	N/A	Characters in the contained text string are pronounced as individual characters.	STRING
telephone	N/A	Supports telephone numbers as commonly specified in the country corresponding to the target language. See the language-specific User Guide for a list of the supported formats. Use detail="punctuation” to speak punctuation (such as, speaking a dash as *dash*).	STRING INTEGER
time	h, hm, hms	Hour should be less than 24, minutes and seconds less than 60; AM/PM is read out only if explicitly specified. See the language-specific User Guide for a list of the supported formats.	TIME STRING
words	N/A	This biases the rendering of word strings towards speaking them as words instead of pronouncing them as strings of individual letters and digits. However, the characters of a word may still be uttered individually for particularly difficult to pronounce character sequences. Meant for acronyms to be read as words.	

The text should be split up if some of the words require applying a special treatment. In our example, the phone number (650) 876-5432 is a separate text element because we want to apply *say as telephone* rule to it.



Variable Element. The Variable element can be added in the simplified (in IVR Modules properties only) and advanced modes. The Variables, Say as, and Format menus correspond to the selected variable.



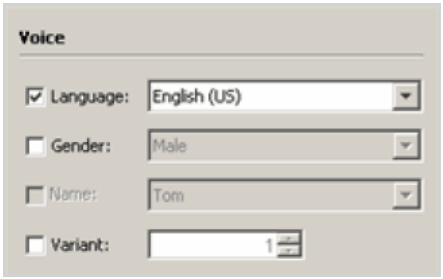
Voice Element. The Voice element specifies voice characteristics for the spoken text. This element can be added in Advanced Mode of TTS Builder.

- Element tag: voice
- Parent elements: p, s, voice, stress and intonation, emphasis

- Child elements: p, s, voice, stress and intonation, emphasis

All parameters are optional:

- Language: Set of available languages.
- Gender: Possible values are male and female.
- Name: A voice from the set of available voices.
- Variant: Changes the voice (without complete specification of other parameters, for example, male voice variant 1 and male voice variant 2).



Managing Voice Prompts

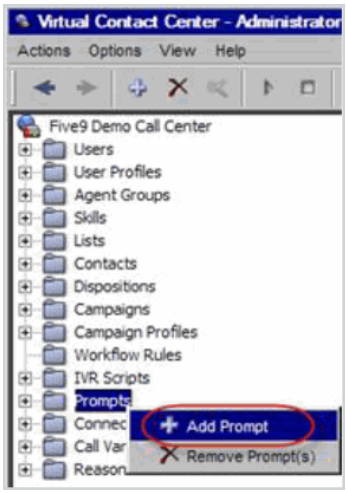
Selecting Recorded WAV Files

After saving your prompt, greeting, or custom hold music, upload it to the Prompts folder.

Important

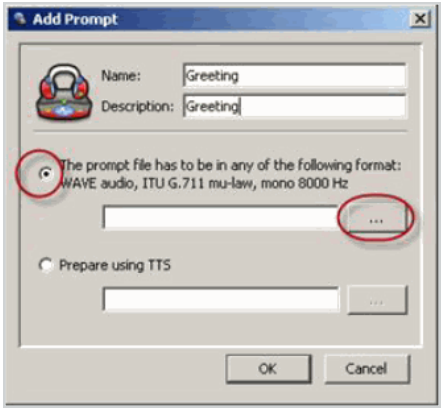
Before uploading audio files, you must save them in the supported format: WAV audio, ITU G.711 mu-law, mono 8000 Hz. In some applications, the format is also listed as CCITT u-Law, 8.000 kHz, 8 bit, Mono, 7 kb/sec.

1 Right-click the Prompts folder and select **Add Prompt**.



2 Enter a name and description.

3 Select the first option to select a previously recorded file on your computer, and locate the file on your computer.



4 Click **Select**.

5 Click **OK**.

After a few seconds, the prompt is available for modules that support prompts in your IVR script.

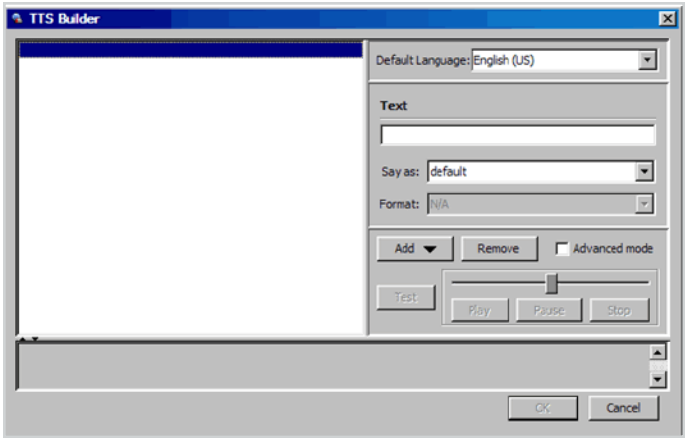
Preparing Text-to-Speech Prompts

To create voice prompts from text, follow the instructions below.

Accessing the TTS Builder to Create Prompts

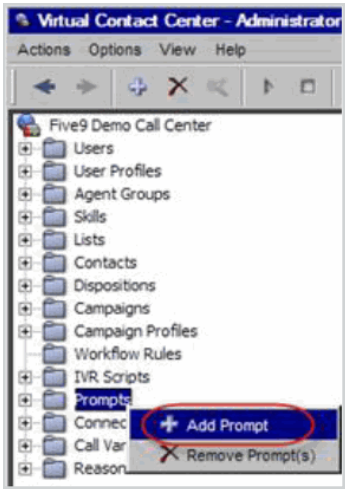
To create the voice prompts from text, use the TTS Builder that you can access from two locations: the Prompts menu and these IVR modules:

- Agent/Voicemail Transfer Module
- Conference Module
- Get Digits Module
- Input Module
- Lookup Contact Record Module
- Menu Module
- Play Module
- Query Module
- System Info Module
- Skill Transfer Module
- Voice Input Module



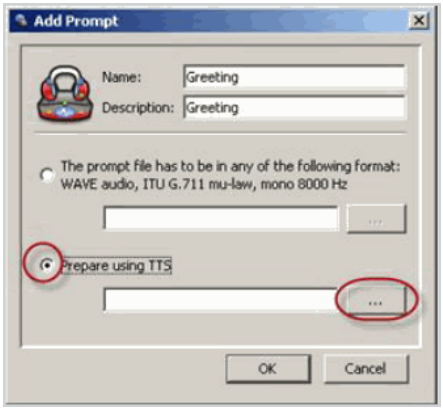
Prompts Menu

1 Right-click Prompts and select the **Add Prompt**.



2 Enter a name and description.

3 Select **Prepare using TTS** and locate an audio file on your computer.



4 Prepare your prompt.

5 When done, click **OK**.

After a few seconds, the prompt is available in the module of your IVR script.

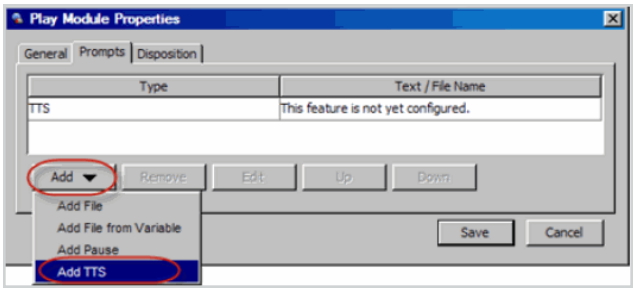
IVR Module

1 Right-click an IVR script name and choose **Edit**, or double-click the script.

2 Drag-and-drop a module to the workspace.

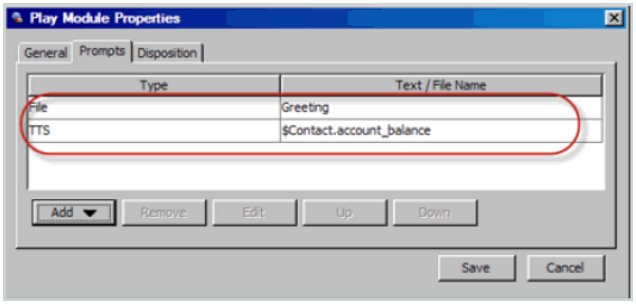
3 Right-click the module and select **Module Properties**, or double-click the module.

4 Select the **Prompts** tab.



5 To add a TTS prompt, click **Add**, and select **Add TTS**.

6 To edit the existing prompt, double-click a line in the Prompts tab.



You see these options:

- Default language
- Text
- Say as
- Format
- Advanced mode

The text terms which you have added to the prompt appear in the left side of the TTS Builder window. The controls for the prompt creation are placed in the right side of the TTS Builder. At the bottom of the TTS Builder you see the text of the voice message.

To ensure that TTS resources are more likely to be available for subsequent callers, Five9 recommends limiting the use of TTS to dynamic information within a prompt, rather than a long prompt message. Each time TTS is used, a system resource is occupied for the duration of the TTS message. When dynamic information is needed

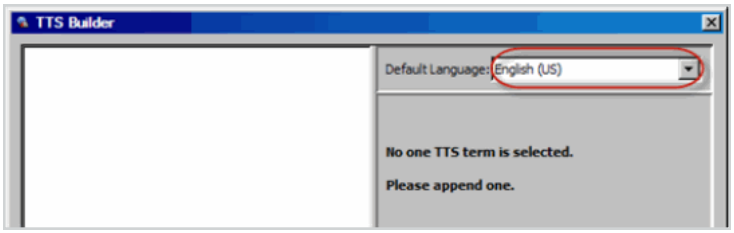
within a prompt, you can use prompt files before and after the dynamic information conveyed with TTS.

Creating Voice Messages

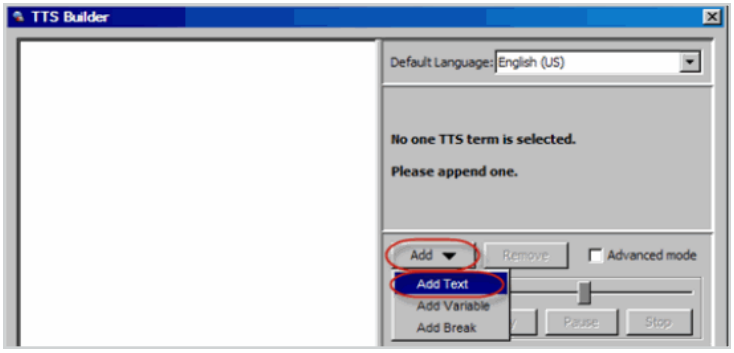
Follow these steps to create a voice message in the TTS Builder in simplified mode.

1 Select the language of the message.

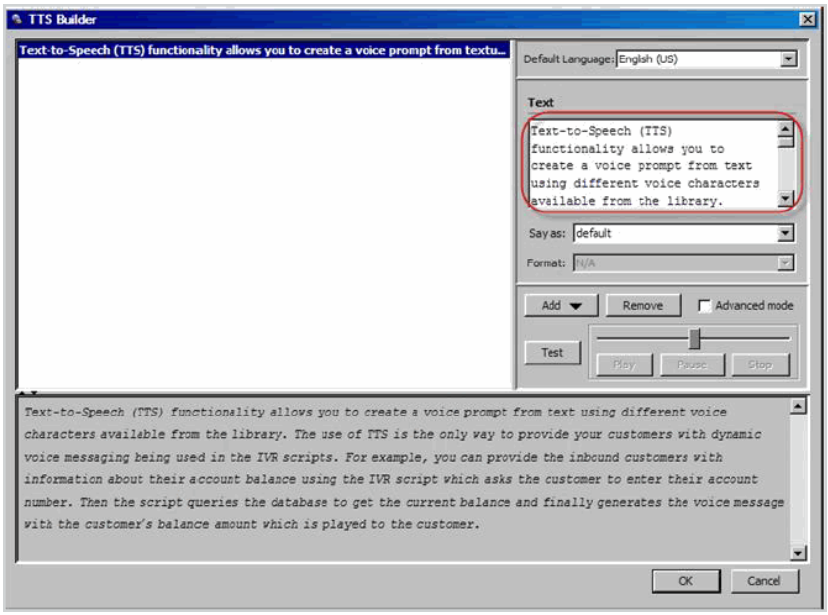
By default, the text term is already added to the prompt.



2 If the text term is not entered, click **Add** and selecting **Add Text**.

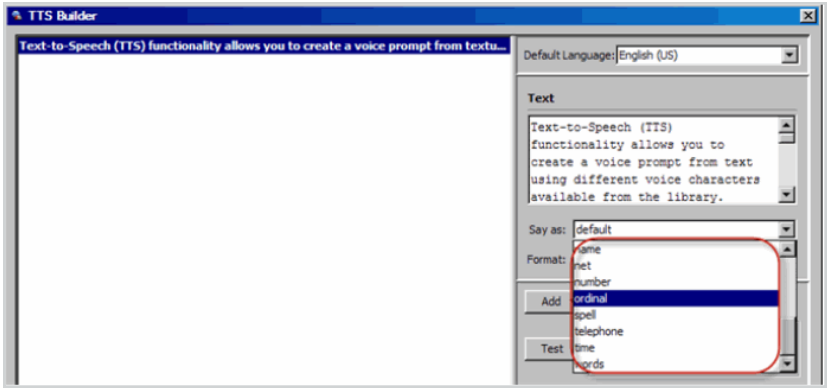


3 Enter or paste the text of the prompt into the Text area.

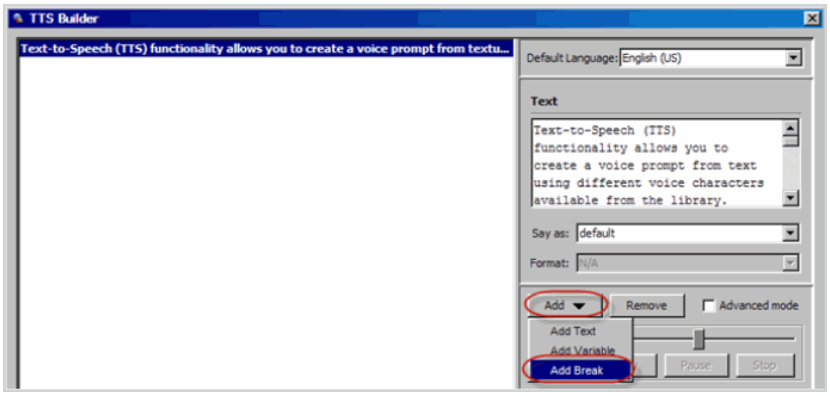


4 Select **Say as** to configure the characteristics of this text term.

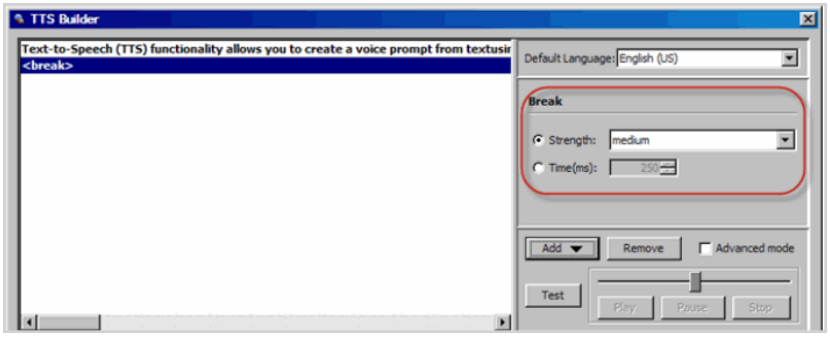
The pronunciation of the text term depends on your choice. Your message can contain more than one text term and each can be configured separately.



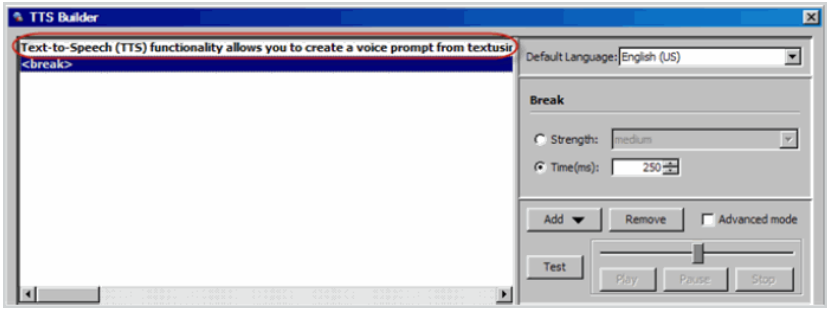
5 To create pauses between sentences, add **Break**.



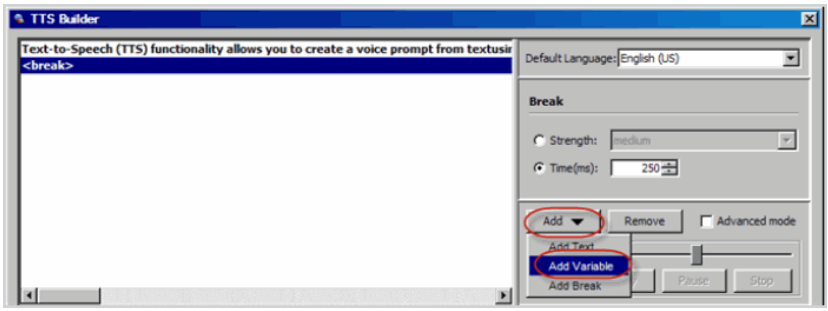
6 To set the duration of the break, use Strength in the drop-down menu or the Time control.



7 To return to the text, click the text in the left pane.

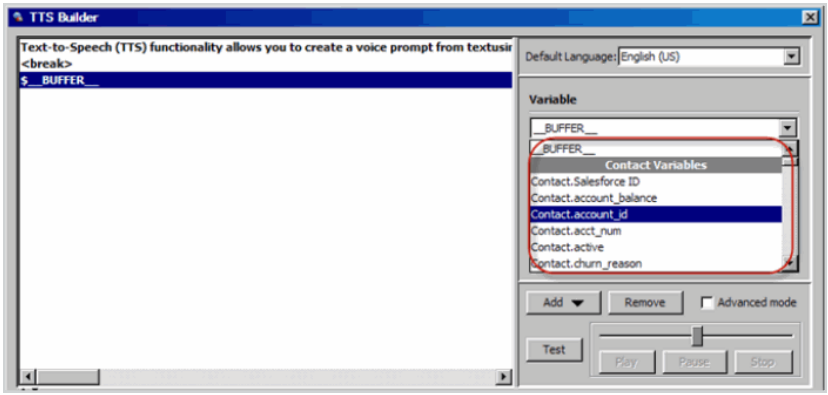


8 To add a variable, click **Add**, and select **Add Variable**.

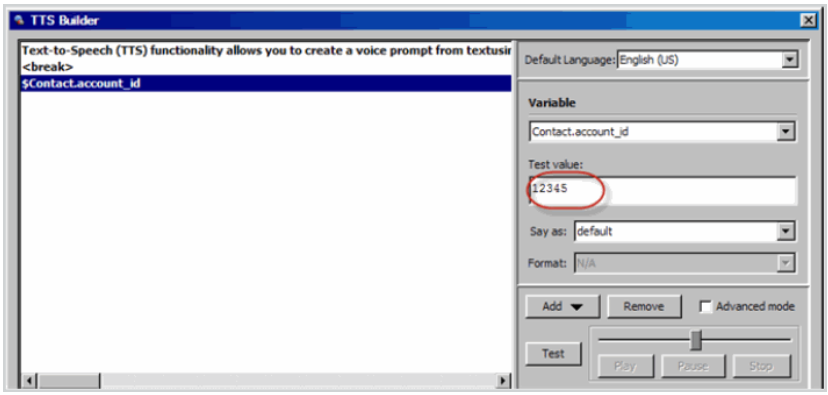


9 Choose a variable:

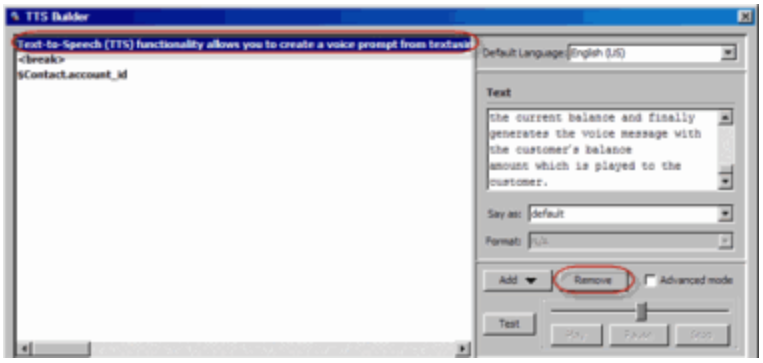
- User Variables (BUFFER)
- Contact Variables (same as Contact Fields)
- System Variables (CRM_ID, DATE, DAY, INPUT, LAST_AGENT_EXTENSION, LAST_AGENT_NAME, SWI_LITERAL, TIME_ZONE, TIME)
- Agent Variables (Agent.first_agent, Agent.full_name, Agent.id, Agent.user_name)
- Call Variables (Call.ANI, Call.DNIS, Call.bill_time, Call.campaign_id, Call.campaign_name, Call.comments, Call.disposition_id, Call.disposition_name, Call.end_timestamp, Call.handle_time, Call.hold_time, Call.length, Call.number, Call.park_time, Call.queue_time, Call.session_id, Call.skill_id, Call.skill_name, Call.start_timestamp, Call.type, Call.type_name, Call.wrapup_time)
- IVR Variables (IVR.error_code, IVR.error_desc, IVR.last_module, IVR.last_state)
- User CAVs (user-defined call-attached variables)



You can also define the text value.



10 To remove a text item, select the item in the left pane and click **Remove**.



11 When you finish entering the text of the message, click **Test** to listen to the message.

The file is generated.

12 Play the voice message.

13 If you change the message, retest it.

14 When done, click **OK**.

Editing TTS Prompts

You can upload WAV files to existing prompts. Prompt names cannot be changed. TTS prompts can be changed by editing the associated text. You can also replace an existing file.

1 Open the Prompts folder.
2 Double-click a prompt, or right-click a prompt and select **View Properties**.
3 Click the dots button.

4 When the changes are done, click **OK**.
5 Click **Save** or **Apply**.

Listening to Prompts

You can listen to a prompt after it has been imported. The prompt is played with your default audio player, usually Windows Media Player.

1 Open the Prompts folder.
2 Right-click a prompt in the list, and select **Play Prompt greeting**.
3 Click **Yes**.

Exporting Prompts

The current audio file can be saved to the computer.

1 Open the Prompts folder.
2 Double-click a prompt, or right-click a prompt and select **View Properties**.
3 Click the dots button.
4 Click **Save Prompt As**.
5 Select a destination folder and file name.
6 Click **Save**.

Connectors

Understanding Connectors
Creating a ClassicConnector
Managing Connectors

Connectors are URLs used to automate tasks such as looking up a customer record or completing a form. Connectors help agents find information or trigger an action in campaigns in which connectors are defined. You can search for call variables that contain customer data as well as call parameters, such as call length, handle time, wrap-up time, skill transfer, queue time, and hold time. Actions performed by connectors are typically to GET or POST information about a contact record. Connectors may also execute form submission or Cross-Origin Resource Sharing (CORS).

Important

If you plan to use parameters that contain sensitive data in your connectors, use secure URLs and the POST method. You cannot save a connector that contains sensitive data with a non-secure URL or with the GET method.

You can use connectors for a variety of purposes, such as these:

- Open an ordering system.
- Integrate with third-party tools or systems to send and reuse information, such as analytics.
- Post data to a web page or web form.
- Look up a contact record in a local or web application.
- Send information to or request information from an external database by using a web service.

Connectors, in most cases, are executed in the agent's computer and your domain can support up to 1000 queued requests. Up to 10 requests can be processed simultaneously. Agents do not require permission to use connectors. However, to use an embedded Web browser to open a URL, you must give permission to agents. For more information, see **Agent Permissions**.

Each call record contains data fields about who handled the call, the campaign in which it is used, the contact, and the disposition of the call. This information can be

substituted in the connector URL and executed when the agent is processing a call. See **System Call Variables Groups** for a list of all available parameters.

Understanding Connectors

Connectors comprise a URL, a script that defines the action taken by the connector (a GET or POST command), some delimiters, and one or more parameters that define the data to retrieve from the URL or post to the target URL, such as a database or third-party tool. The URL, script, and keywords come from your application, form, or tool, not from Five9 applications.

URL Strings
URL Parameters
Names of Parameters
Worksheet Fields
Connector Execution in the Agent's System
Connector Examples

URL Strings

The URL defines the host name, the script to execute, the parameters passed to this script, and the keywords that map to the VCC data.

Five9 Virtual Contact Center (VCC) supports standard HTTP and secure HTTPS protocols. HTTPS can be used for the system disposition connectors. For secure connections, you may use certificates in cases where the external Web server uses a root certificate (unsigned/self-signed public key certificate). You can import CRT files or enable **Accept All Certificates**. Configure certificates in **Actions > Configure > Certificates**. See **Installing a Certificate**.

Use this syntax:

```
http://www.domain.com/page.htm?keyWord_1=@parameter_1@&keyWord_2=@par-
rameter_2@
```

***domain*.com**	Domain where the URL exists. The URL standard contains a port specification, for example: `www.domain.com` means `http://www.domain.com:80`. The default port is generally omitted. Five9 URLs do not use a port other than 80.
page.htm	Name of the script being called to perform the GET or POST

	method.
?	Indicates that a sequence of keywords and parameters follows. The question mark is added automatically to the URL.
@	Must precede and end each parameter definition.
&	Indicates another keyword-parameter combination follows.
keyWord **=@parameter@**	Define the data to GET or POST.

URL Parameters

A connector parameter is a field or constant that is appended to the URL. URL strings are generated automatically when parameters are formatted properly.

- Parameter names are case sensitive.
- The string must be in URL format.
- Connectors usually include one or more VCC parameters and their associated keywords.
- Connectors often display a static Web page, knowledge base, or list.

Types of Parameters

The type of call data handled by the parameter is identified by its name.

Agent Data Parameters	Identifies the agent who handled the call in which the connector was executed. Format: Agent.*parameter* Example: Agent. username, Agent.id
Call Data Parameters	Information about the call record that is passed in the connector. Format: Call.*parameter* Example: Call.session_id, Call.disposition_id, Call.campaign_id
Customer Data Parameters	The CRM fields available in your domain, including the Five9 default fields and your custom fields. Format: Customer.*parameter* Example: Customer.number, Customer.company For example, if you create a CRM field called, email_address, the parameter would be listed as *Customer.email_address*.

To display a list of all possible parameters, navigate to **Connector > General Properties**.

Using International Phone Numbers in Connectors

If your domain is not enabled for the format for international phone numbers, your agents must enter 10 digits to conform to the North American Numbering Plan. If your domain is enabled for the format, your agents need to enter phone numbers for all calls according to your configuration: in your national format or up to 15 digits, starting with the plus (+) sign and the country code. If set accordingly in your VCC configuration, connectors may display the customers' phone numbers in the same localized format in pop-up windows.

GET and POST Methods in Connectors

For GET methods, the URL length is limited to 2048 characters after the Five9 contact parameters are populated. This is the length of the URL when executed on the agent's computer with all contact data populated. In some cases, depending on the contact fields you choose to use (such as first name); the URL length varies because a standard field length may not exist.

When executing POST connectors, a security setting in the browser must be enabled. See also **Connector Execution in the Agent's System**.

Configure connector parameters in the **Connector Properties** window.

Parameters that Contain Sensitive Data in Connectors

To use parameters that contain sensitive data in your connectors, use secure URLs and the POST method. You cannot save a connector that contains sensitive data with a non-secure URL or with the GET method.

Connectors Executed in Browsers

You can execute a connector in a new browser window or embedded in the browser.

> **Important**
>
> Because of their security policies, browsers do not accept mixed content unless they are configured to do so. For example, if you combine secure and non-secure URLs, such as in an integration, the connector may not open in the browser. This issue occurs with Firefox, Chrome, and Internet Explorer.

To prevent issues, when you create a connector, always use secure URLs and/or enable **Execute in Browser**. You must use HTTPS to embed connectors for Web agents. Otherwise these connectors are not displayed.

Note

Connectors that are triggered by a disposition are executed in a new browser window when the disposition completes the interaction (call).

Some web sites, such as google.com, use the **x-frame-options:SAMEORIGIN** header to prevent the web site from being embedded into an iframe in another site. If you plan to use the Embedded tab in the Agent Desktop Plus application, locate the special embedded URL to use in a connector in that web site.

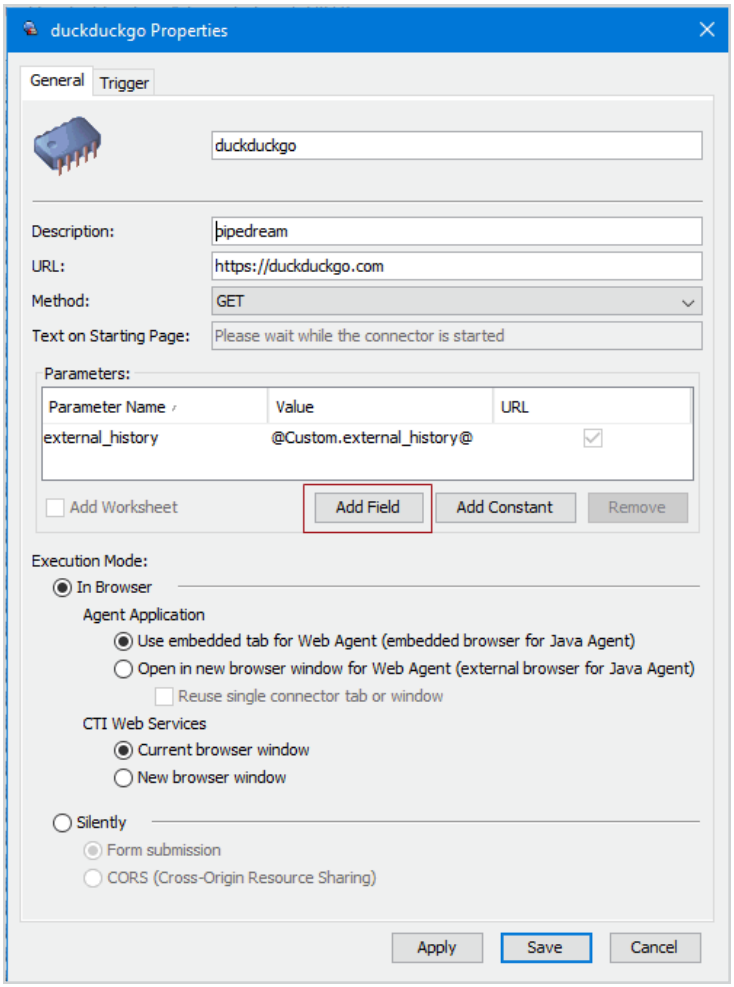
Names of Parameters

The Five9 VCC provides a set of standard parameter names for connectors. Connector parameters in the connector URL must begin and end with an at sign (@), such as in `@Customer.first_name@`.

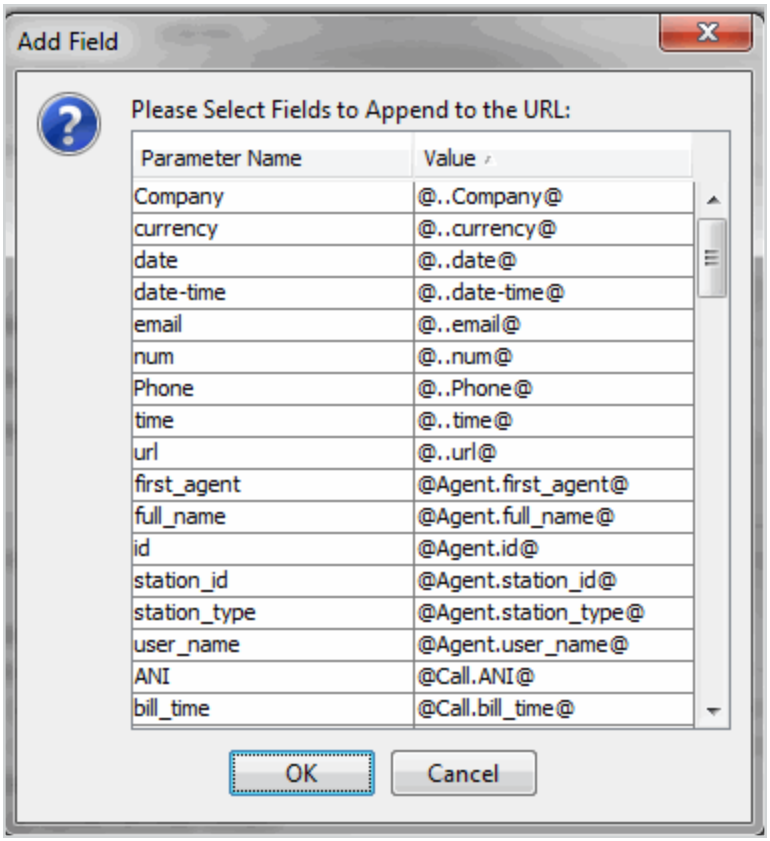
Separate additional keyword-parameter pairs with an ampersand (&). The type of call data handled by the parameter is identified by its name. Parameter names are case sensitive.

The customer data parameters are the contact fields available in your VCC, including the Five9 default fields and custom fields you create. For example, if you create a contact field called **email_address**, the parameter would be `Customer.email_address`.

1 Double-click a connector to open its Properties window.



2 Click **Add Field** to open the Add Field window.



`Customer.number` is the ANI for an inbound call when a contact record for the phone is not available. Use this parameter to include the caller's phone number in a connector for an inbound campaign.

The configured Display Format for a custom Date, Time, or Date/Time field does not affect the format used in Connector parameter values. Date values are sent in yyyyMMdd format; Time values are sent in HHmmssSSS format; Date/Time values are sent in yyyyMMddHHmmssSSS format.

Worksheet Fields

Five9 worksheet data can be sent with a connector. To enable worksheet data, select the POST method and the check box for Add Worksheet.

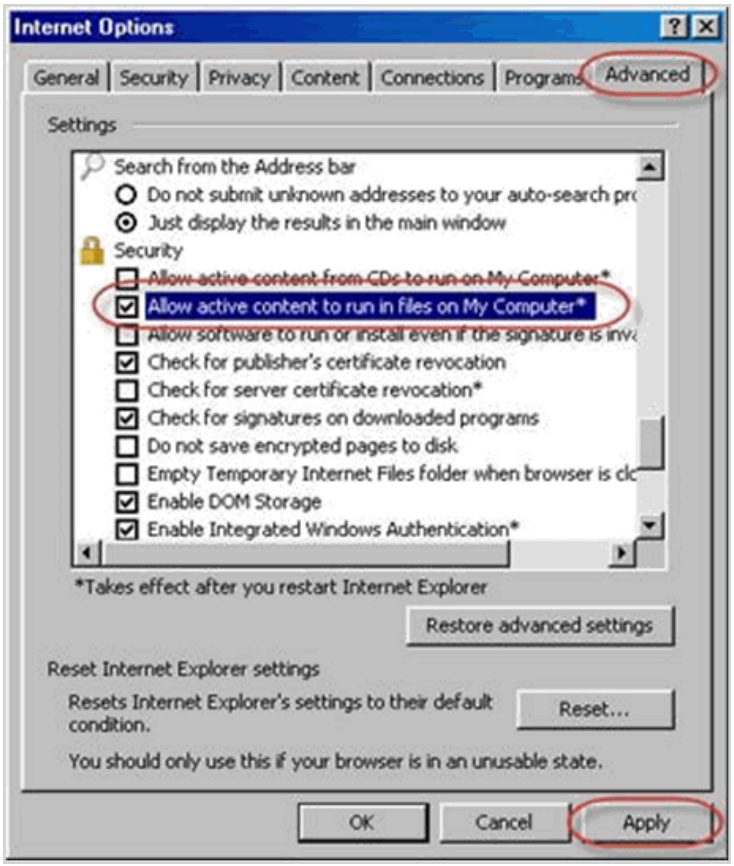
- Use the POST method to populate worksheet data in a Connector URL.
- Worksheet questions are automatically inserted into the URL string when the connector is executed on the agent workstation.
- Worksheet question names are the parameters and the answers are the values. Therefore, your worksheet question names must match the parameters used in the script called by the connector.

Connector Execution in the Agent's System

Most connectors are executed automatically. The trigger setting for the connector determines when it is activated such as when a call is accepted, a disposition is set, or upon a transfer. See **Selecting the Trigger** for a description of possible triggers. After the first execution, the connector is stored in memory on the agent's system. If you change a connector, agents must log out and log in again to reload the new connector settings.

When executing POST connectors with Internet Explorer, you must enable a security setting.

1. In Internet Explorer, select **Tools > Internet Options**.
2. Select the **Advanced** tab.
3. In the Security section, check the box next to **Allow active content to run in files on My Computer**.



4 Click **Apply** and **OK**.

5 Restart Internet Explorer.

Connector Examples

URL String Syntax

```
http://www.domain.com/page.htm?keyWord_1=@parameter_1@&keyWord_2=@par-
rameter_2@
```

domain.com	Domain where the URL exists.
page.htm	Name of the script for the GET or POST method.
@	Precedes and ends each parameter definition.

&	Precedes keyword-parameter combination.
keyWord_ =@parameter@	Keyword-parameter combination that defines data passed from or to the connector; Multiple keyword-parameter combinations can be included in any connector.

URL Example

```
http://www.five9.-
com/data.htm?agentId=@Agent.id@&Company=@Customer.company@
```

domain	=	five9.com
Web page	=	data.htm
keywords	=	agentId Company
data parameters	=	Agent.id Customer.company

The scripting language is ASP (Active Server Page). Additional keyword and parameter pairs can be appended to the string with the ampersand (&).

When executed, the URL string looks similar to this:

```
http://www.five9.com/data.htm?agentId=123456&Company=Acme%20Company
```

Note

GET method URL length is limited to 2048 characters after all parameters are populated with call and contact data.

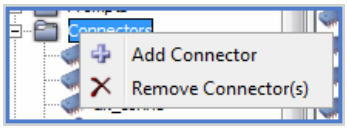
ASP Code Example

A section of the ASP code used to get the code from the page.

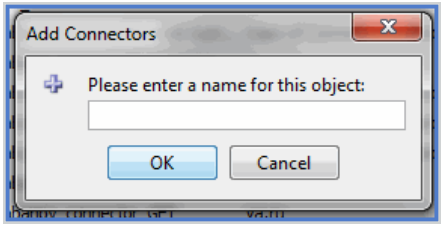
```
%=Request.Querystring("agentId")% // Gets Agent.id
%=Request.Querystring("Company")% // Gets Customer.company
```

Creating a ClassicConnector

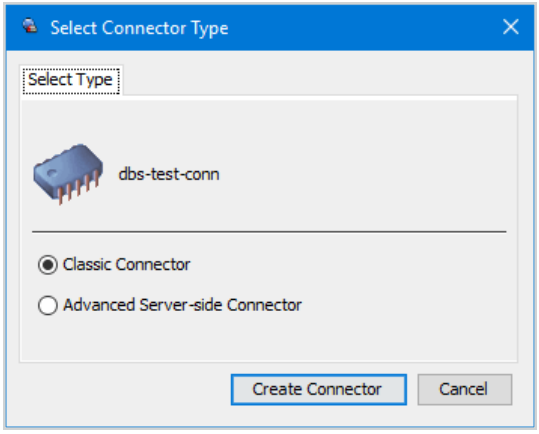
1 In the navigation pane, right-click **Connectors**, and select **Add Connector**.



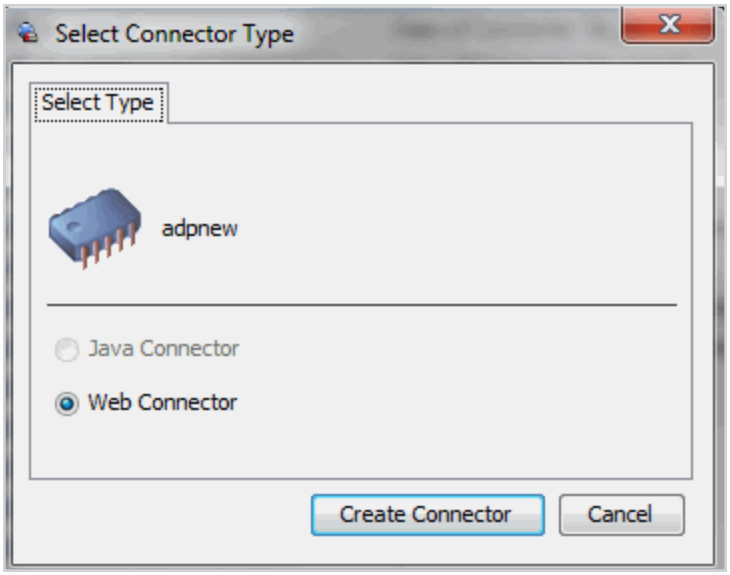
2 Name the connector and click **OK**.



3 Select the type of connector.



4 Select **Web Connector**.



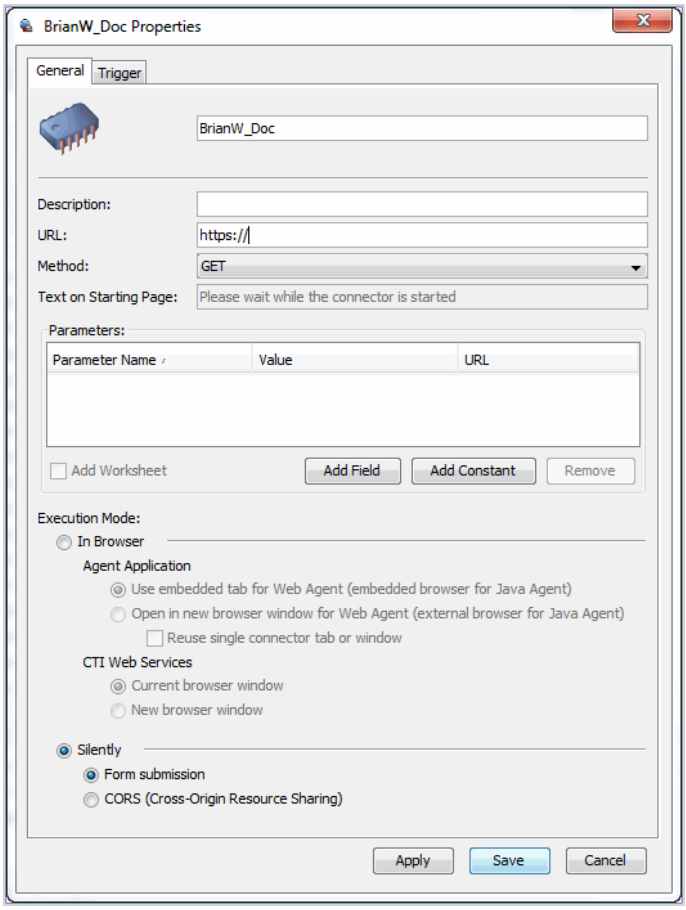
5 Click **Create Connector**.

Next you define the properties.

Defining the General Properties
Selecting the Trigger
Using Connectors with Text Interactions

Defining the General Properties

In the General Properties tab, describe the connector and construct the URL.



Selecting the Trigger

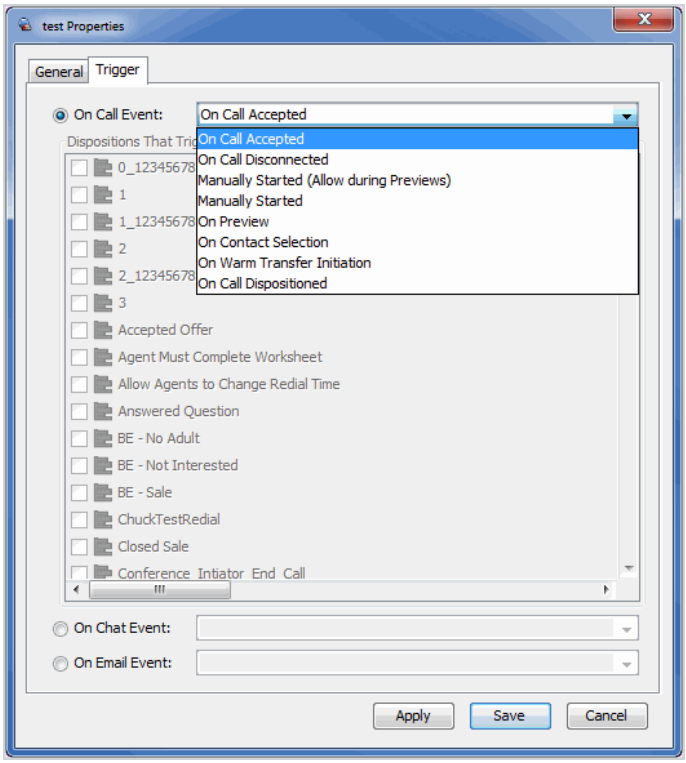
You can use connectors when these events occur:

- Agent accepts or disconnects a call.
- Agent selects a contact record.
- Agent receives a preview record.
- Agent initiates a warm transfer.
- Interaction is routed to a Skill Transfer module in an IVR script.
- Agent assigns a system disposition.
- Agent accepts a chat or email interaction.

Click the **Trigger** tab, and select one of the trigger options. When done, click **Save** or **Apply** twice.

Call Events

This section describes the triggers that apply to voice interactions.

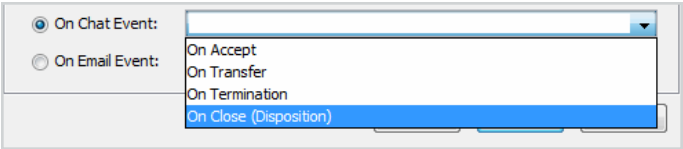


Trigger	Description
Manually Started	Agent clicks the **Connector** button during a call. (*Manual Connector button in Current Call tab of Java agent*)
Manually Started (Allow during Previews)	Agent receives a third-party URL while previewing a call.
On Call Accepted	Agent accepts a call routed from the ACD.
On Call Disconnected	Connector URL is executed when a call is disconnected or when the caller hangs up.
On Preview	Connector is executed when the agent takes a Preview contact record.

Trigger	Description
On Contact Selection	Connector URL is executed when agents select a contact to associate a call with by pressing the Select Contact Record.
On Warm Transfer Initiation	Connector is executed when agents start a Warm Transfer.
On Call Dispositioned	When the disposition is selected, the live call screen is cleared. If this option is enabled, **Dispositions that trigger this connector** is activated. Select all the dispositions that should trigger this connector. This option does not apply to Decline Preview Record Dispositions.

Chat Interaction Events

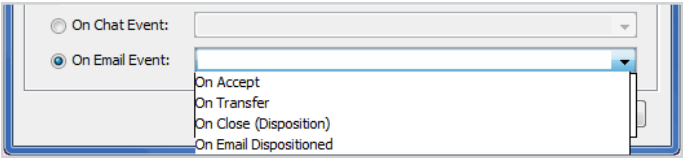
This section describes the triggers that apply to chat interactions.



Trigger	Description
On Accept	When agents accepts a chat routed to their station.
On Transfer	When agents transfer the chat.
On Termination	When agents end the chat.
On Close (Disposition)	When agents sets the disposition for the chat. If this option is enabled, **dispositions that trigger this connector** is activated. Select all the dispositions that should trigger this connector. This option does not apply to Decline Preview Record Dispositions.

Email Interaction Events

This section describes the triggers that apply to email interactions.



Trigger	Description
On Accept	When agents accepts an email routed to their station.
On Transfer	When agents transfer the email.
On Close (Disposition)	When agents sets the disposition for the email. If this option is enabled, **dispositions that trigger this connector** is activated. Select all the dispositions that should trigger this connector. This option does not apply to Decline Preview Record Dispositions.
On Email Dispositioned	When agent sets a unified disposition for the email. Unified dispositions must be enabled in the SCC Administrator application to use this control or connector will not trigger.

Using Connectors with Text Interactions

If you are using Five9 Digital Engagement, you can use connectors to pass custom parameters to third-party systems to augment interactions like chat and email. You can create custom console fields that map to call variables for system and custom call variable groups.

> **Note**
> If your agents use preview chat, the connector is activated once the customer has responded and engaged in the preview chat session.

The Five9 chat console custom fields support the following Five9 system call variables:

Key	Type and Format	Description
Call.campaign_id	string	Campaign object ID. Up to 20 digits.
Call.campaign_name	string	Campaign name.
Call.disposition_id	string	Disposition object ID. Up to 20 digits.
Call.disposition_name	string	Disposition name.
Call.end_timestamp	yyyy-mm-dd hh:mm:ss	Call completion date and time.
Call.handle_time	hh:mm:ss	Handle time duration. Starts with interaction

Key	Type and Format	Description
		assigned to an agent and ends with call disposition.
Call.length	hh:mm:ss	Call duration.
Call.mediatype	string	Can be used for Chat, Email, or SMS.
Call.queue_time	hh:mm:ss	Queue time.
Call.session_id	string	Call session ID that can contain 32 to 64 characters.
Call.skill_id	string	Skill object ID (up to 20 digits).
Call.skill_name	string	Skill associated with this interaction.
Call.start_timestamp	yyyy-mm-dd hh:mm:ss	Date and start time of the call.
Customer.city	string	Default contact field.
Customer.company	string	Default contact field.
Customer.first_name	string	Default contact field.
Customer.last_name	string	Default contact field.
Customer.number1 **Customer.number2** **Customer.number3**	phone	Default contact field. Primary, first alternate, and second alternate phone numbers. Editable. The phone data type guarantees that correct value is entered.
Customer.record_id	string	Default contact field. You cannot select this contact field in the VCC menus.
Customer.state	string	Default contact field.
Customer.zip	string	Default contact field.

These examples describe how to use system and custom call variables.

Example

About `Call.number`, `Customer.numberX`, and `Call.ANI`:

All fields contain a contact's phone number but differ as follows:

- `Call.number` is read only whereas `Customer.numberX` is editable.
- `Customer.numberX` and `Call.ANI` contain the same information. However, `Call.ANI` can be empty. In this case, the call may be manually associated with a number.

Example

Account ID in a chat request:

When a customer submits a chat request with an account ID, that account ID can be passed in a connector to a customer's third-party system to present the customer's account information to the agent.

1. Create a custom chat console field called account_id.
2. Create a call variable group. Assign to this call variable group an intuitive name, such as ChatVariables. See **Creating Call Variable Groups** for more information.
3. Create a call variable to store the new custom chat field. Name this variable account_id and assign the variable type String. See **Creating Call Variables** for more information.

Example

Route interactions based on text channel profiles.

You can use the Call.campaign_name, which contains the name of the profile to dynamically route text interactions based on subcategories, such as Sales chat inquiry and Support chat request.

Example

Route interactions based on customer sentiment.

If your domain is enabled for Natural Language Processing (NLP), you can route interactions to NLP:

1. Create a variable named Omni.Subject, type=string, to map to the title of an email request
2. Create a new variable named Omni.Content, type= string, that maps to the email body or chat text content.
3. You can send this information to the NLP real time engine to determine customer sentiment before routing to specialists or teams that handle happy customer comments or angry customer comments.

Managing Connectors

You can rename or duplicate connectors and add them to campaigns.

Renaming Connectors

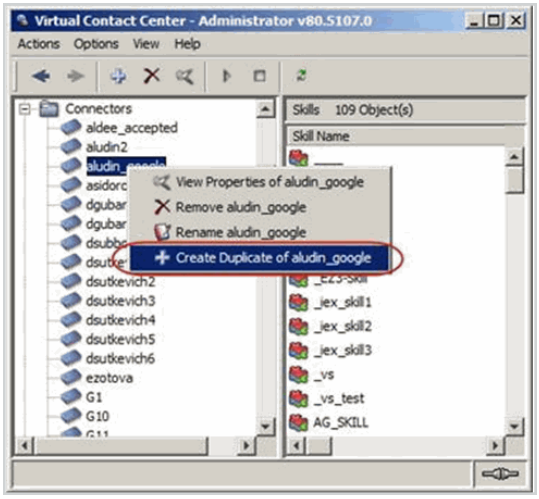
To rename a connector, follow these steps.

- Right-click a connector, and select **Rename**.
- Replace the name.
- Click **OK**.

Duplicating a Connector

Follow the instructions below to make a copy of the existing Connector.

1 Right-click a connector, and choose **Create Duplicate**.



Relationships and properties are copied to a new object called <original object name> - Copy. The duplicate object's Property window opens. The description is Copy of connector <name of original object>.

Adding Connectors to Campaigns

To activate a connector, add it to one or more campaigns. See Campaign Administrator's Guide, *Adding Connectors*.

Reason Codes

Enabling Reason Codes for Manual Calls
Using Reason Codes
Creating Reason Codes
Renaming Reason Codes
Accessing the Properties Window
Deleting Reason Codes
Creating Shortcuts for Reason Codes

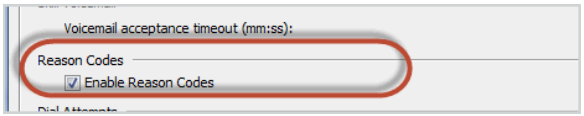
Reason Codes are selected by agents when going not ready or when logging out. The selected reason code provides more information about the cause of the agent unavailability. You can enable and configure reason codes to better keep track of agent states.

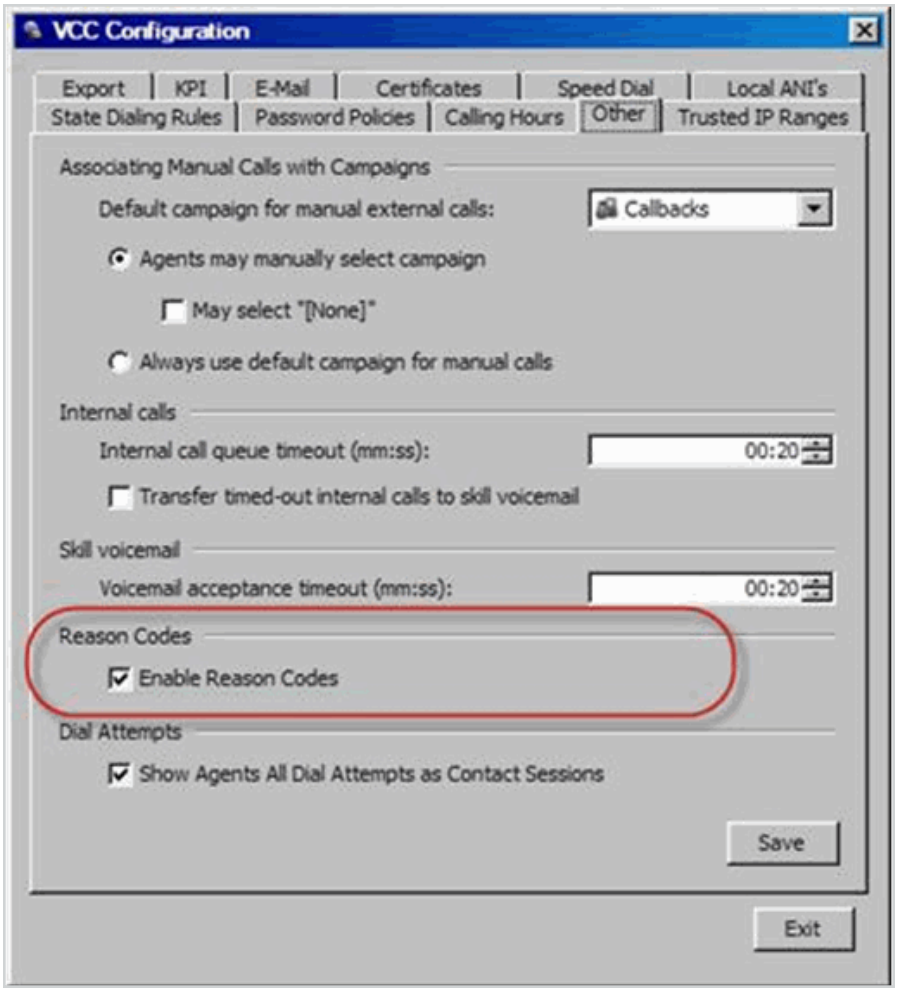
There are codes provided by default, but you can disable, rename (not recommended), delete, or create custom codes as needed. System codes cannot be modified or deleted. Short-cut keys can be defined for each code. See **Default Reason Codes** and **System Reason Codes**.

Reason Codes are subdivided into Not Ready Codes and Logout Codes. Not Ready codes are used when agents become unavailable for calls. Logout codes are used when agents log out of their stations.

Enabling Reason Codes for Manual Calls

Check to enable use of reason codes for manual calls in this campaign.





Using Reason Codes

Default Reason Codes

You can modify or delete custom reason codes. To disable default codes, right-click the code and disable the option. To rename default codes, right-click the code to view its properties.

> **Caution:** Five9 does not recommend renaming default reason codes. Instead, deleting or making them inactive and creating new ones is suggested.

Default Not Ready Codes

Break	When agents go on personal breaks
Email	When agents are not ready to send emails
Fax	When agents are not ready to send faxes
Follow-Up Work	When agents are not ready to do follow up work
Meal	When agents are on meal or lunch break
Meeting	When agents are not ready for a meeting
Team Meeting	When agents are not ready for team meeting
Training	When agents is on training

Default Logout Codes

Email	When agents log out to send an email.
End Shift	When agents logs out at the end of the shift.
Fax	When agents log out to send faxes.
Meal	When agents log out for lunch or meal break.
Split-Shift	When agents log out for the first part of the shift.

System Reason Codes

System reason codes are used for specific events. These codes cannot be modified or deleted.

System Not Ready Codes

Forced	When supervisors change the agents' state to not ready, regardless of the previous state.
System	When the system changes the agent's state to not ready, for example when an inbound call was offered to the agent, but the agent did not answer the call.

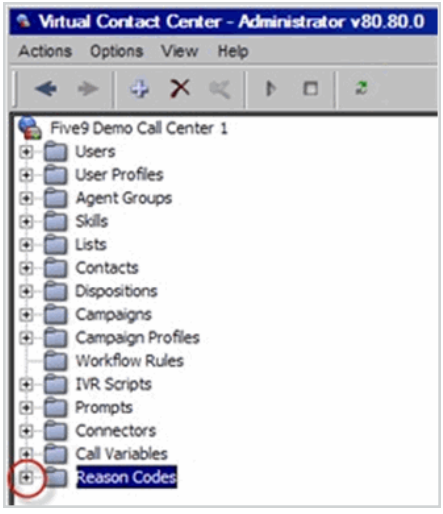
Task Completion	When agents have pending tasks that might be lost when status is changed. For example, while on call, the agent clicked **At End of Call Switch to** and selected Meeting. Then the agent clicked Park Call. The agent is placed automatically on Task Completion to give a way for the parked call to be processed before going to Meeting status. Another example is when the agent accepts a skill voicemail but has not completed processing it. The agent cannot switch to other not ready codes unless the skill voicemail is completed.
Text	When agents are available for text channels only.

System Logout Codes

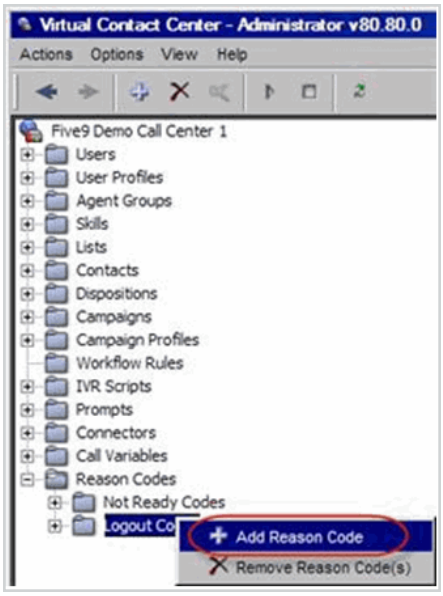
Forced	When agent are forced to log out from the system either by the supervisor or by the same user who logged in using a different computer.
System	When a system error or maintenance forces the agent to log out. For example, it is used when the agent loses Internet connection or the agent application abnormally loses connection with the server.

Creating Reason Codes

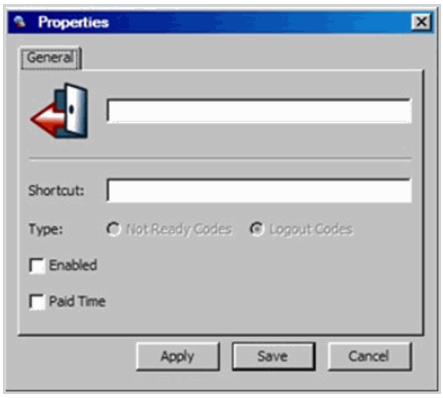
1 In the Navigation pane, open the Reason Codes folder.



2 Right-click one of the sub-folders, and select **Add Reason Code**.



3 Enter the following information in the properties window:



- Reason Code Name - name shown to agents.
- Shortcut (optional) - keys pressed by the agent to select a reason code. By default, <T> key is reserved for the Training default reason code.
- Enabled - required to be able to select this reason code.
- Paid Time - whether the reason code will be counted as paid time in reports.

4 Click **Apply** or **Save**.

Renaming Reason Codes

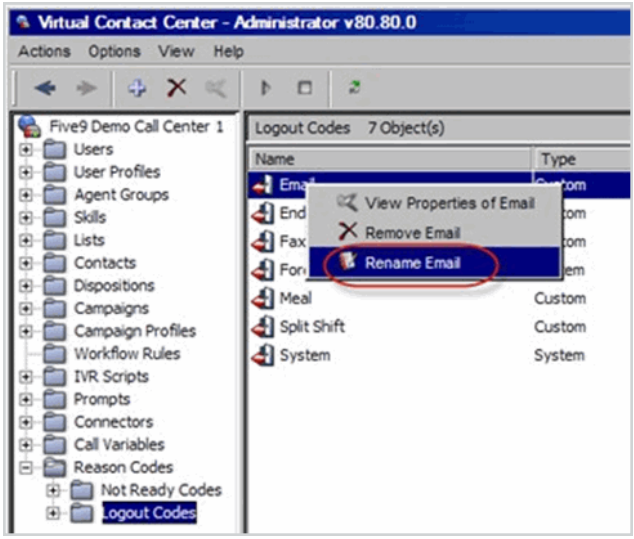
You can rename objects in their properties window.

> **Caution:** Five9 does not recommend renaming default reason codes. Instead, deleting or making them inactive and creating new ones is suggested.

1 In the navigation pane, open the Reason Codes folder.

2 Select one of the sub-folders.

3 Right-click a reason code, and select **Rename**.



4 Enter a new name.

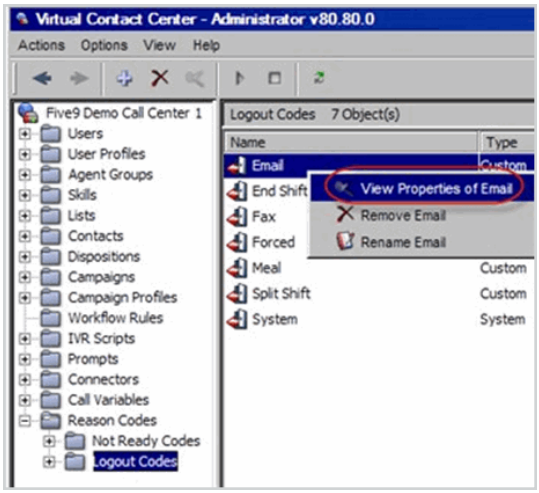
5 Click **OK**.

Accessing the Properties Window

1 In the navigation pane, open the Reason Codes folder.

2 Select one of the sub-folders.

3 Right-click a reason code, and select **View Properties**.



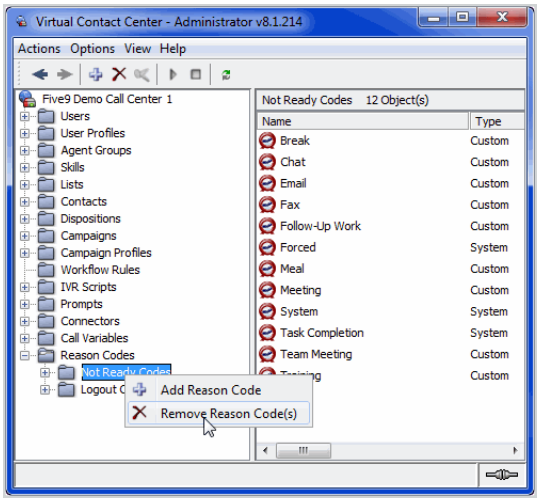
Deleting Reason Codes

Not all default reason codes can be deleted: Forced, System, and Task Completion cannot be deleted.

1 In the navigation pane, open the Reason Codes folder.

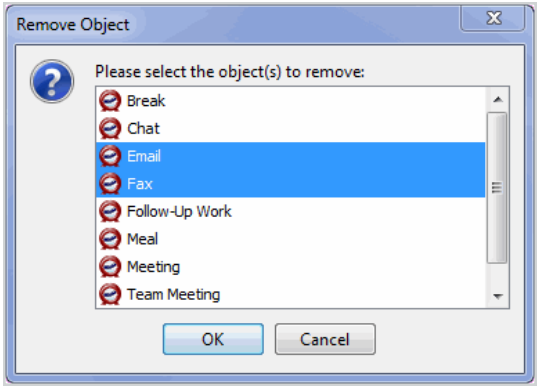
2 Select one of the sub-folders.

3 Right-click a sub-folders, and select **Remove Reason Code(s)**.



4 Select the reason codes to delete.

To select several objects, hold <SHIFT> or <CTRL> keys while selecting the items.



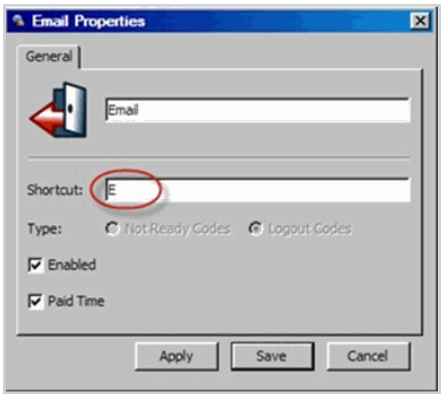
5 Click **OK**.

6 Click **Yes** for every item or **Yes To All**.

Creating Shortcuts for Reason Codes

1 Open the reason code properties window.

2 Type one alphanumeric character to be used in the Shortcut field.



3 Click **Apply** or **Save**.

Workflow Rules

Understanding Workflow Rules
Creating Workflow Rules
Deleting Workflow Rules

This feature enables you to automate campaign-related tasks. Workflow rules are conditional statements defined by events and the actions that take place when the events are triggered. Rules are used mostly in outbound campaigns. For example, you can create a rule to start another campaign when an outbound campaign stops because it is out of numbers.

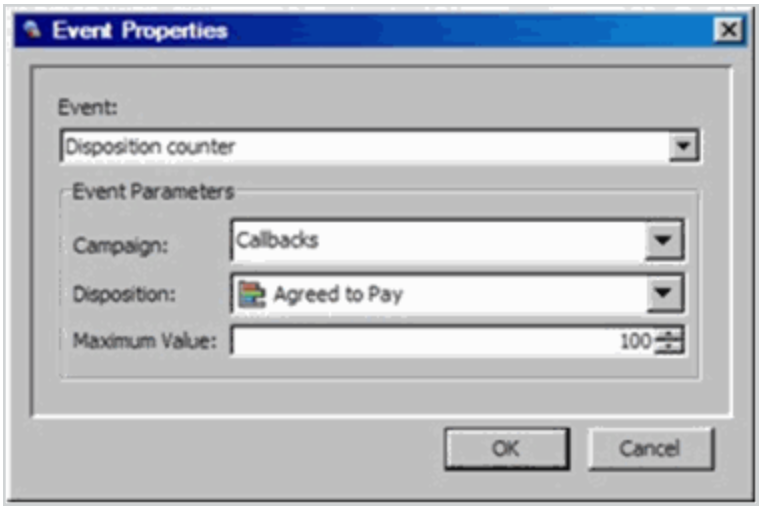
The information displayed in the columns can be accessed and updated in the Workflow Rule Properties window. You can add, update, enable, disable, and delete workflow rules. All system-wide actions are available through the View Event Log menu. See **Event Log of Workflow Rule Actions and Activities**.

Understanding Workflow Rules

Events for Workflow Rules
Actions for Workflow Rules
Ordering Actions for Workflow Rules
Event Log of Workflow Rule Actions and Activities

Events for Workflow Rules

An event is a condition that must be true for the action to take place. You can define a workflow rule to contain one or several events. You can add multiple events and join them with operators to form logical expressions. When the conditions defined by the expression are true, the event is triggered.



Event	Trigger	Parameters
Campaign out of numbers	Campaign has no more numbers in the lists to dial.	• Campaign
Campaign stopped	Campaign is stopped automatically or manually.	• Campaign
Date and time	Date and time. See Specifying Time Zones in Date and Time Events.	• Date • Time • Time Zone
Day and time	Every day at specified time.	• Time: 12:00am to 12:00am Time zone
Disposition counter	Number of specified dispositions for the campaign is reached. You can also find the disposition counter in Campaign Profile Properties.	• Campaign • Disposition • Maximum value
List completion	List is completed by the specified percentage for the campaign.	• Campaign • List • Completion Percentage
No records for immediate dialing	Campaign does not have records to dial within the time specified when agents are available for calls.	• Campaign • Time in seconds (default is 60 seconds)

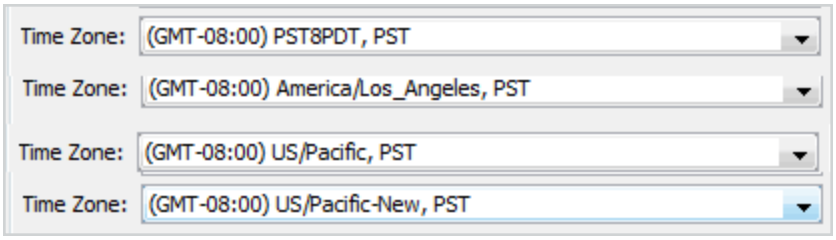
Specifying Time Zones in Date and Time Events

You can use Time Zone as an event parameter. The time zones are displayed using Time Zone Abbreviations (such as, MST, MDT, PST), or the format established in the IANA (Internet Assigned Numbers Authority) time Zone Database (such as, America/Phoenix, America/Los Angeles).

The Time Zone list items in Virtual Contact Center (VCC) Administrator's Application are provided by the JRE (Java Runtime Environment) dictionary. In addition to the time offset (such as, GMT-08:00) each entry includes a zone caption to indicate its purpose. Some of the time zone definitions are obsolete, but are kept by JRE for (non-Five9) backward compatibility.

How to Choose a Time Zone for Time Events

Some time zone options appear to be redundant, such as those for Pacific time. Here are examples of Pacific time zone that appear in the Time Zone list:

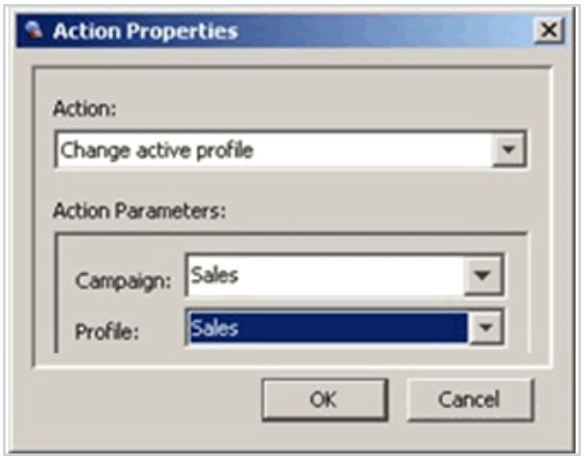


Each of the options could differ, indicating a history of changes such as dates for switching to daylight savings time and back.

In this case, the safest selection would be **America/Los Angeles, PST**; it covers both Pacific Standard Time (PST) and Pacific Daylight Time (PDT), and is based on the current IANA database definition. The **PST8PDT, PST** option will also work for the same purpose. the **US/Pacific, PST** and **US/Pacific-New, PST** options are obsolete and should be avoided.

Actions for Workflow Rules

Workflow rules are defined by events and the actions that take place when the events are triggered. You can define one or several actions for each rule.



Action	Description	Parameters
Change active profile	Changes the profile for the selected campaign.	• Campaign • Profile
Change outbound campaign prioritization mode	Changes the campaign priority mode setting for your domain. **Example:** You can change the dialer priority/ratio selection, and the individual campaign settings for priority and/or ratio. You may want to adjust priority depending on the time of the day or other event to better align with your business needs.	• Priority • Ratio
Change outbound campaign priority	Changes the priority setting for the selected campaign.	• Campaign • Priority
Change outbound campaign ratio	Changes the ratio setting for the selected campaign.	• Campaign • Ratio
Change list priority	Changes the priority setting for the selected list in the specified campaign.	• Campaign • List • Priority
Change list ratio	Changes the ratio setting for the selected list in the campaign.	• Campaign • List

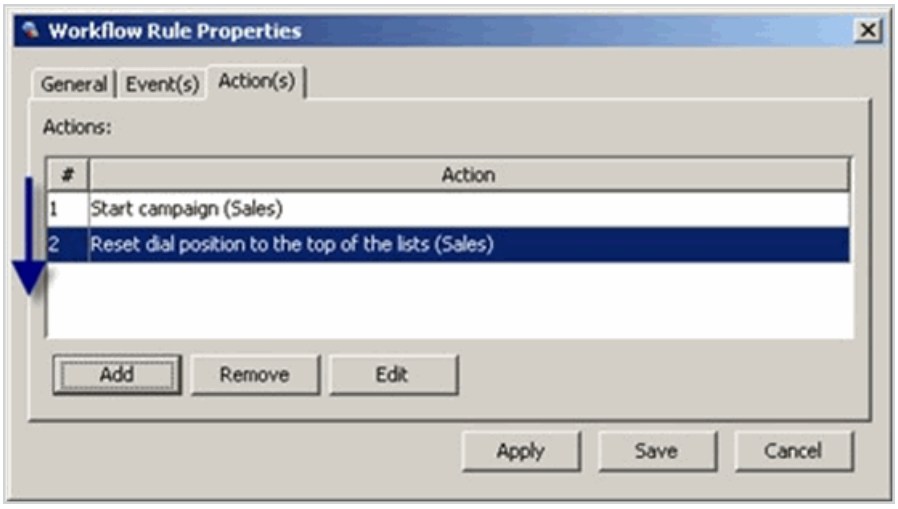
Action	Description	Parameters
	For example, you can change list ratio depending on the time of the day to dial fresh leads during the day and to dial older leads at the end of the day. You can change list ratio depending on day in case your list needs to be refreshed after a couple of weeks. In this case, you may want to dial the old list more frequently because you need to dial more numbers to get contact.	• Dialing Ratio
Popup dialog notification	Displays a pop-up window to users with administrator and supervisor roles.	• Text • Receivers
Reset dial position to the top of the lists	Starts dialing from the top of the lists in the selected campaign. To reset the list position manually, see the Campaign Administrator's Guide, *Resetting List Position in Outbound and Autodial Campaigns*.	• Campaign
Send email	Sends message to the specified email.	• To up to 5 addresses • Reply to • Subject • Text • Event description (automatically generated by the system)
Start campaign	Starts the campaign if it is not running. Generates error in event log if campaign cannot be started.	• Campaign
Stop Campaign	Stops the campaign if it is running.	• Campaign

Ordering Actions for Workflow Rules

Results of workflow rule actions are recorded in the Event Log.

The actions selected in the workflow rule are triggered when the expression configured on the events tab changes from a value of false to true.

Actions are executed in the order listed under the Actions tab, from top to bottom.



If an action cannot be executed (attempting to start a campaign that does not have a list for example), the action is skipped and the next action in the list is attempted.

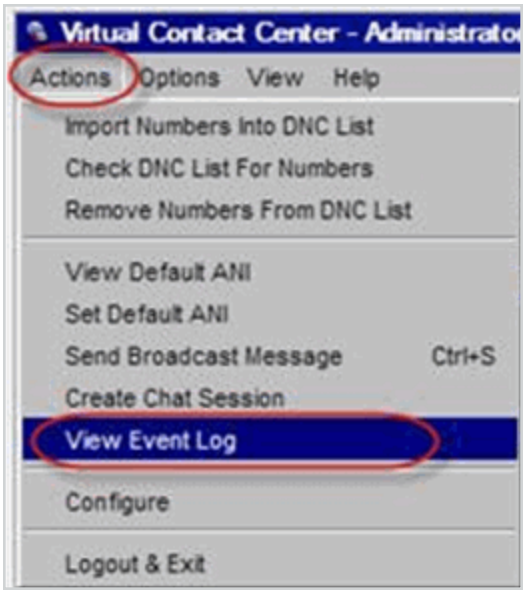
Errors and exceptions can cause a rule to be automatically disabled. These exceptions are recorded in the event log. for example:

- Recursion - Execution of an action causes triggering the action again. In this case, the rule is automatically disabled.
- Flooding - Triggering of the rule too frequently. If the rule is triggered again in less than one minute three times in a row, the rule is automatically disabled.

Event Log of Workflow Rule Actions and Activities

The event log enables you to view the results of workflow rule actions, campaign-related activities, and to track workflow rule actions and other administrative changes. The number of records in the log is limited by 10,000 per domain. When the limit is reached, the old records are cleaned automatically. The event log shows the date and time of the event, the event type, and a description of the event. Selecting an event from the list shows the event details in the lower panel of the screen.

To view the log, select **Actions > View Event Log**. Click **Details** to show or hide the details.



This table shows the events logged to the Event Log. WR = Workflow Rule.

System Event	Event Source	Log Message	Details
Start campaign	Campaign	Campaign name has been started manually	Information about the agent and application type that started the campaign. Information about campaign and profile parameters is placed here.
		Campaign name has been started automatically	Information about the cause of the start (dialing rule for now). Information about campaign and profile parameters is placed here.
Stop campaign	Campaign	Campaign name has been [forcedly] stopped manually	Information about the agent and application type the stop was run from.
		Campaign name has been stopped automatically	Information about the cause of the stop: • Campaign out of numbers • Workflow rule

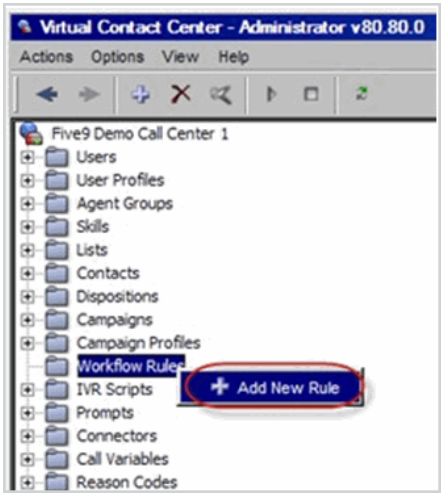
System Event	Event Source	Log Message	Details
			• Disposition criteria reached • Max charges reached
Change profile	Campaign	Message appears for running campaigns only: Profile has been assigned to campaign name manually	New profile settings, campaign parameters, agent and application type placed here.
		Message appears for run campaigns only: Profile has been assigned to Campaign name automatically	New profile settings, campaign parameters, and cause of the profile assignment (dialing rule parameters)
Reset campaign disposition	Campaign	Dispositions for Campaign name have been reset manually	Contains list of reset dispositions, time intervals for the reset procedure
Reset list position	Campaign	Message appears only for campaigns being run: List position has to be reset to top for Campaign name	List of campaign lists
Profile has been changed	Profile	Message appears if the changed profile affects campaigns being run: Profile has been changed and affects **campaigns being run**	New profile settings, list of affected campaigns, agent and application type has to be placed here.

System Event	Event Source	Log Message	Details
Workflow rule triggered	Workflow Rule	Message appears when an action is triggered: Event happens in rule #	• Basic event follows for triggering of the event. • Event expression • List of actions to run

Creating Workflow Rules

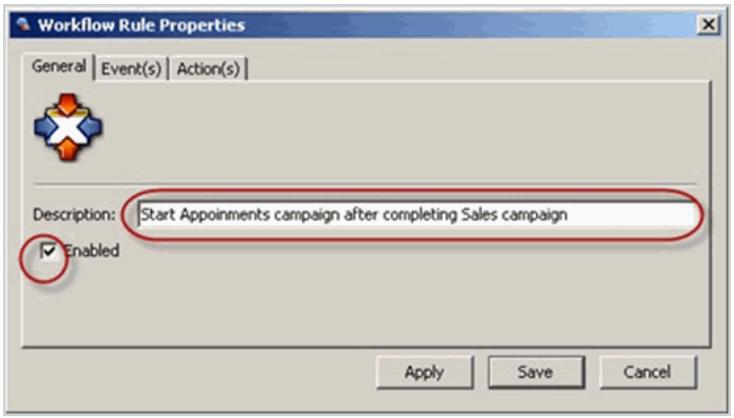
Add a New Rule

1 Right-click the Workflow Rules folder, and select **Add New Rule**.



2 In the General tab, enter a description of the rule.

> **Important**
>
> The rule is enabled by default. If you disable it now, be sure to enable it later to use it in production.



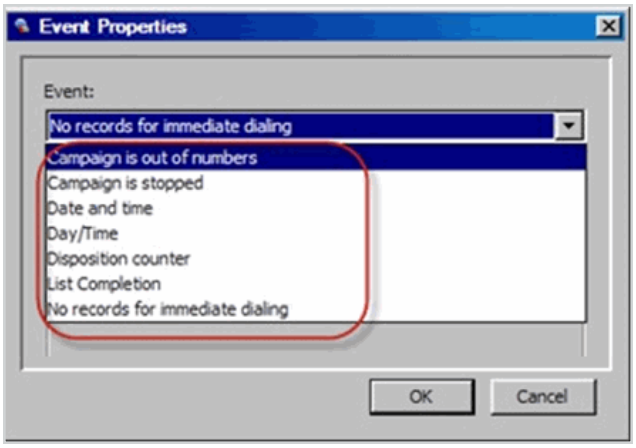
3 Optionally, disable the check box.

Define Events to Trigger Actions in the Rule

1 Select the **Event(s)** tab.

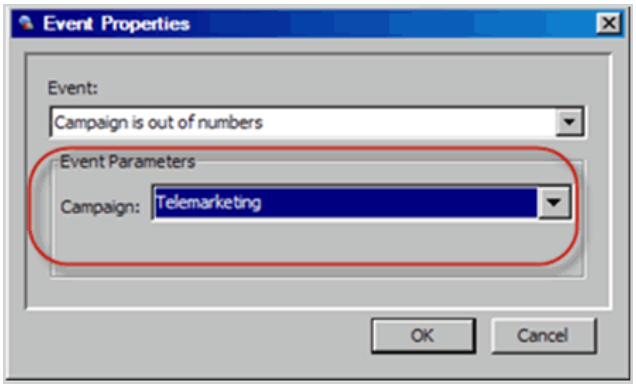
2 Click **Add**.

3 Select an event from the list.



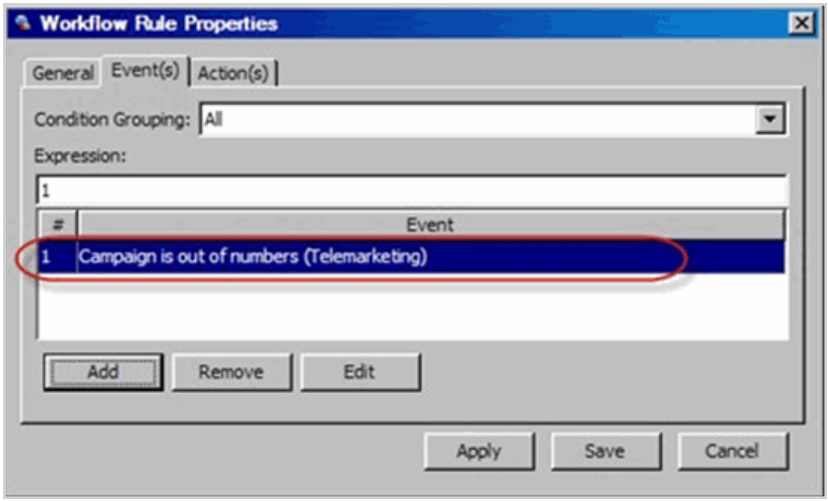
Define the Event Options

1 See Events for Workflow Rules for a list of all available events and the configuration options for each event.



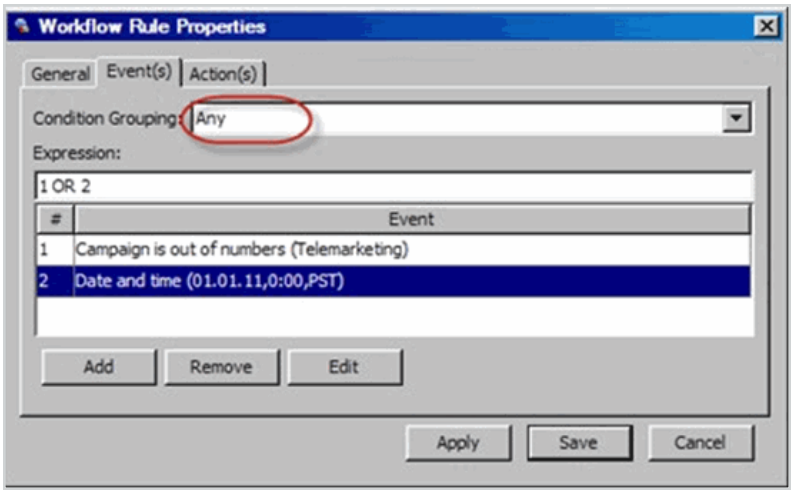
2 Click **OK** to save the event options.

The event appears in the Event(s) tab.



Choose an Operator to Form an Expression (Optional)

You can add multiple events and join them with these operators: and, or, not. When the expression is true, the event is triggered. In this example, the event is triggered if the Telemarketing campaign stops running due to the lack of numbers ***or*** the date is 1/1/2011 at 00:00 PST.

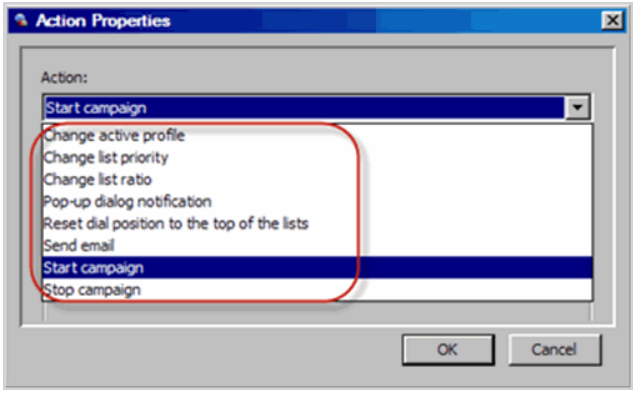


Define Actions and Action Options for the Event

1 Open the Actions tab.

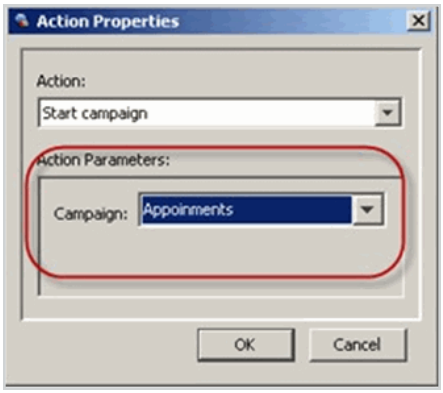
2 Click **Add**.

3 Select the task to complete when the event is triggered.



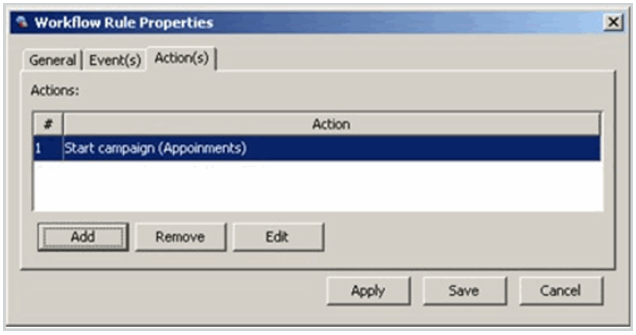
4 Define the action options.

See **Actions for Workflow Rules** for a list of all available actions and the configuration options for each action.

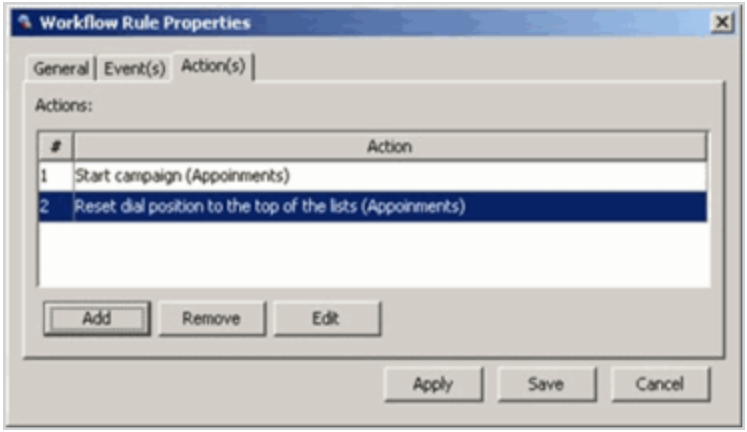


5 Click **OK** to save the action and options.

The item appears in the list in the Action(s) tab.



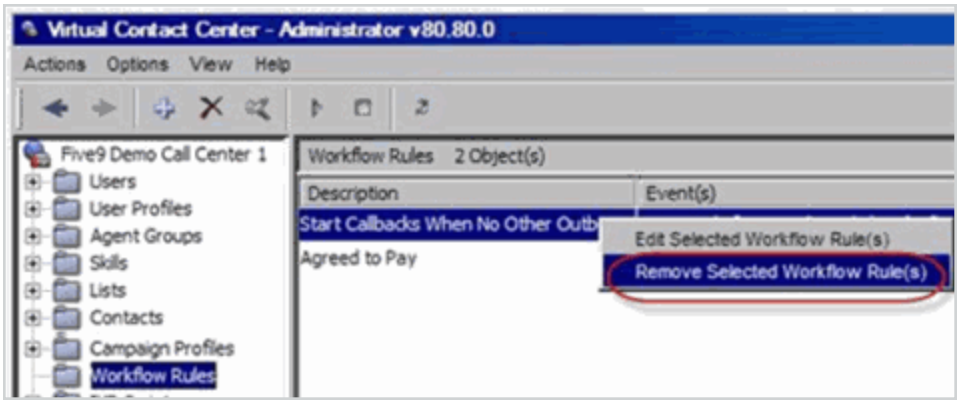
You can specify multiple actions. In this example, the system automatically starts the Appointments campaign and sets the dial position to the top of the list when the event is triggered.



6 To activate the rule, click **Apply** or **Save**.

Deleting Workflow Rules

To delete workflow rules, right-click one or more rules, and choose **Remove Selected Workflow Rule(s)**.



Call Variables

Creating Call Variable Groups
Creating Call Variables
Adding Call Variables to Campaign Profiles
Linking Call Variables to Dispositions
Transferring User-to-User Information with Call Variables
System Call Variables Groups

Call variables are custom fields that store call data instead of contact records. During a call, they can be used and updated in the IVR and by agents. When configuring dispositions, you can also set the value for call variables that should be stored for reporting purposes when that disposition is used, or when any disposition is used. With call variables, you can gather more information about each call. For example, you can collect error codes generated by IVR and find out how many times a speech input was provided, an account balance retrieved, and customer satisfaction survey results.

In addition to U.S currency, all currency variables support the British Pound and Euro currencies.

You can use call variables in connectors and IVR scripts to send information, for example, to third-party systems. Optionally, call variables can be stored to use in reports. The variables are organized in groups, similar to classes used in many programming languages. When using a variable, follow this syntax:

```
[Call Variable Group Name].[Call Variable Name]
```

Example

Call.mediatype

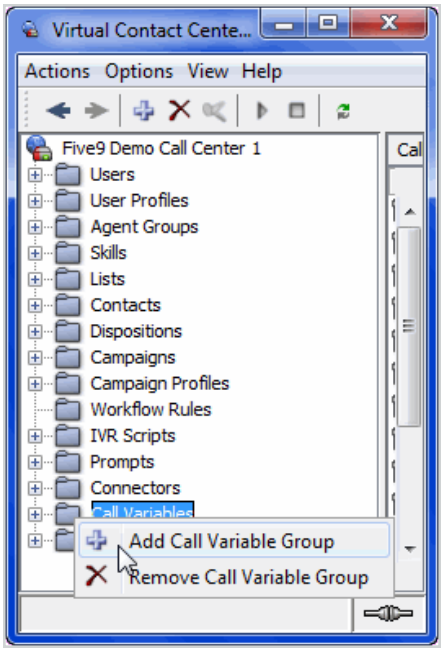
In reports, you can summarize call variable values across calls to provide the total sale amount per agent or per campaign based on individual sale amounts from each call.

In the Call Variables folder, you can create items variables in predefined variable groups or add custom groups. For example, you can create skill-based groups or groups for surveys, sales, error handling to store more information about error codes generated by IVR, and speech recognition events.

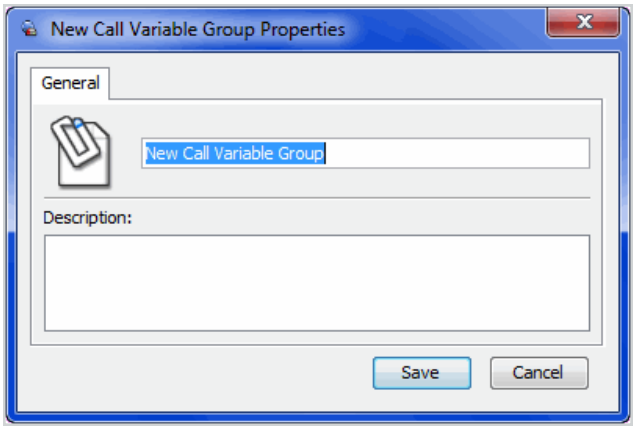
Creating Call Variable Groups

These steps explain how to create a call variable group.

1 In the navigation pane, right-click **Call Variables > Add Call Variable Group**.



The New Call Variable Group Properties window is displayed.



2 Complete the fields, and click **Save**.

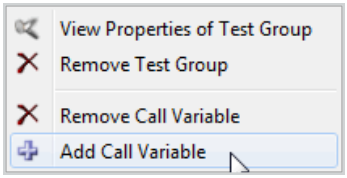
The new group appears in the Call Variables folder.

Creating Call Variables

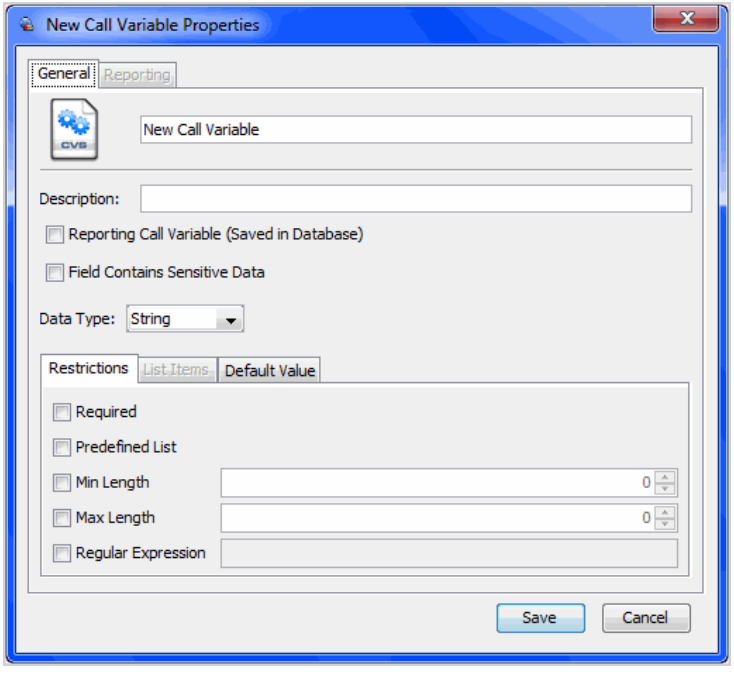
These steps explain how to create and configure a call variable.

1 In the navigation pane, open the Call Variables folder.

2 Right-click a group, and select **Add Call Variable**.



The properties window opens.



3 In the General tab, follow these steps:

a Enter a name and description.

b If the call variable will contain personal or private information, check **Field Contains Sensitive Data**.

Sensitive data is personal, financial, and legal information specific to the customer that is protected by law. Revealing this information could harm the customer. When you enable this option, the **Reporting Call Variable** option is deactivated because you may not store private information in the database or include it in reports. You may use variables that contain sensitive data in IVR scripts. In logs, private information is masked with pound signs: `###`.

c To include the call variable information in reports, check **Reporting Call Variable**, which activates the Reporting tab.

d Select a data type.

The data type that you choose determines the fields that appear. This table describes each data type, except for predefined lists.

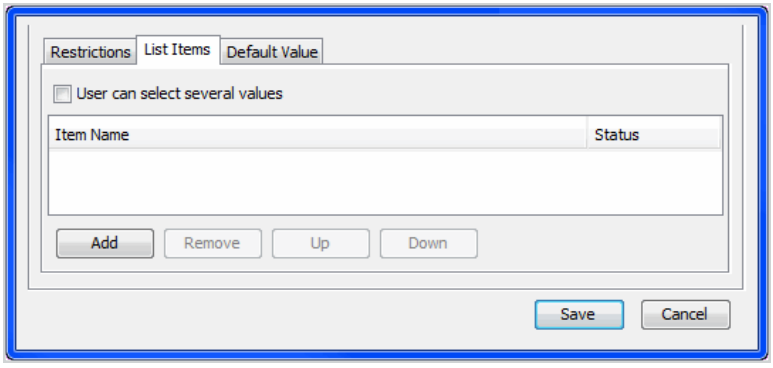
Data Type	View Type	Values/Units/Format
String	One or more lines	Text
Number	Single Line	Maximum number of characters = 16 ◦ Digits before decimal point (1–16) ◦ Digits after decimal point (0–15)
Date	One or more lines	◦ yyyy-MM-dd ◦ MM/dd/yyyy ◦ MM-dd-yyyy ◦ MM-dd-yy ◦ MMM dd ◦ yyyy ◦ dd MMM ◦ dd-MM ◦ MM-dd

Time	One or more lines	◦ HH:mm:ss.SSS ◦ HH:mm:ss ◦ HH:mm ◦ hh:mm a ◦ HH ◦ hh a ◦ H:mm ◦ h:mm a
Date/Time	Single Line	Combination of Date and Time data types
Currency	Single Line	Maximum number of characters = 16. ◦ Digits before decimal point (1–16) ◦ Digits after decimal point (0–15) ◦ Currency Type ($, €, £)
Boolean	Single Line	◦ True, TRUE, or true ◦ False, FALSE, false, or any other value
Percent	Single Line	Maximum number of characters = 16. ◦ Digits before decimal point (1–16) ◦ Digits after decimal point (0–15)
Email	Single Line	`<emailAddress>@<domain>`

URL	Single Line	HTTP, HTTPS, file
Phone	Single Line	
Duration	Single Line	◦ hh:mm:ss.SSS ◦ hh:mm:ss ◦ hh:mm ◦ hh ◦ mm:ss.SSS ◦ mm:ss ◦ mm ◦ ss.SSS ◦ ss ◦ SSS

e In the Restrictions tab, define the options that are specific to each data type.

- Required: Whether the variable is required.
- Predefined List: Not Available for Date, Time, Date/Time, Boolean, Duration data types. With this option, the agent does not need to enter the answer but must select one or several answers. This option activates the List Items tab where you can define the possible answers.



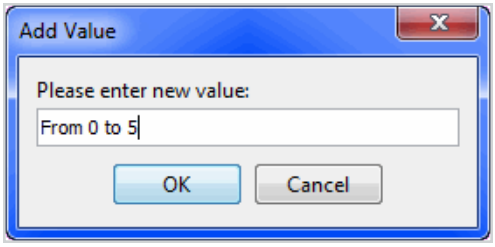
- For each data type, you may select these menu options:
  - Combo Box: Agents may select values from a drop-down menu.
  - List: All values are displayed at the same time.
  - Buttons: Check boxes are displayed in front of each value.

- Min Length/Min Value: Limits for values entered by agents. Available for predefined list, except for the Phone and Boolean data types.
- Max Length/Max Value: Limits for values entered by agents, except for predefined list, except for the Phone and Boolean data types.
- Regular Expression: Not Available for predefined list and for predefined lists for Date, Time, Date/Time, Boolean, and Duration data types.

f In the List Items tab, define the options.

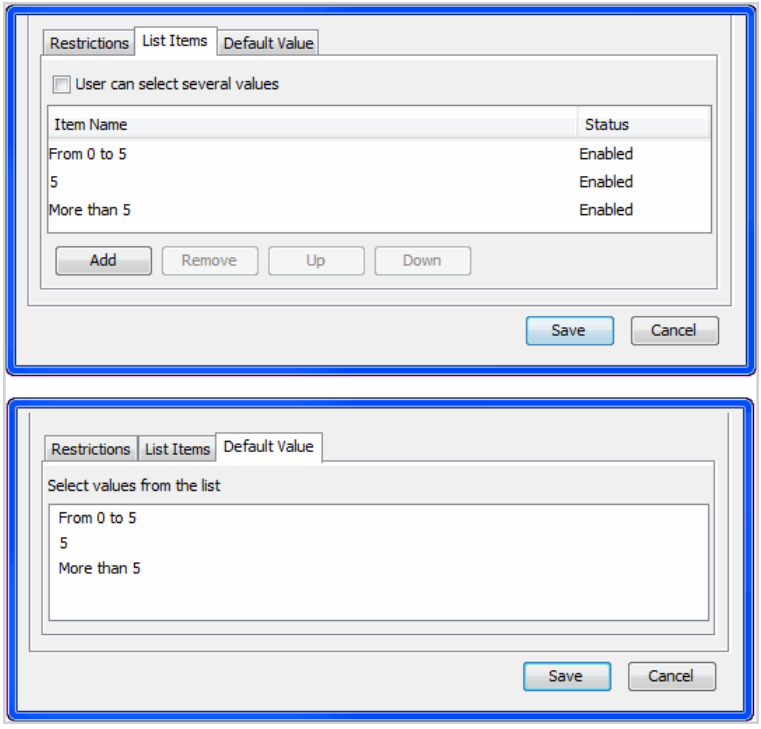
g To create the answer that appears to agents, click **Add**.

h Enter the value to the displayed, and click **OK**.



i Configure possible answers and answer criteria.

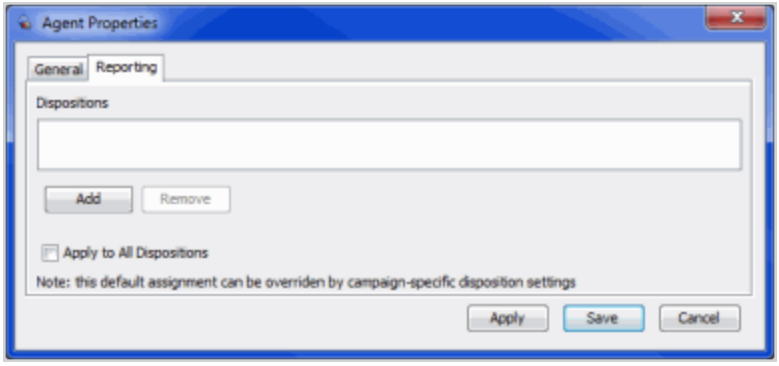
Optionally, check **User can select several values**. Use the Up and Down buttons to arrange the answers.



j Optionally, configure the default value on the Default Value tab.

If you use a predefined list, the Default Value tab displays all predefined values and you can select one in the list. If you do not use the Predefined List, the Default Value tab enables you to select an undefined option or define a value depending on data type.

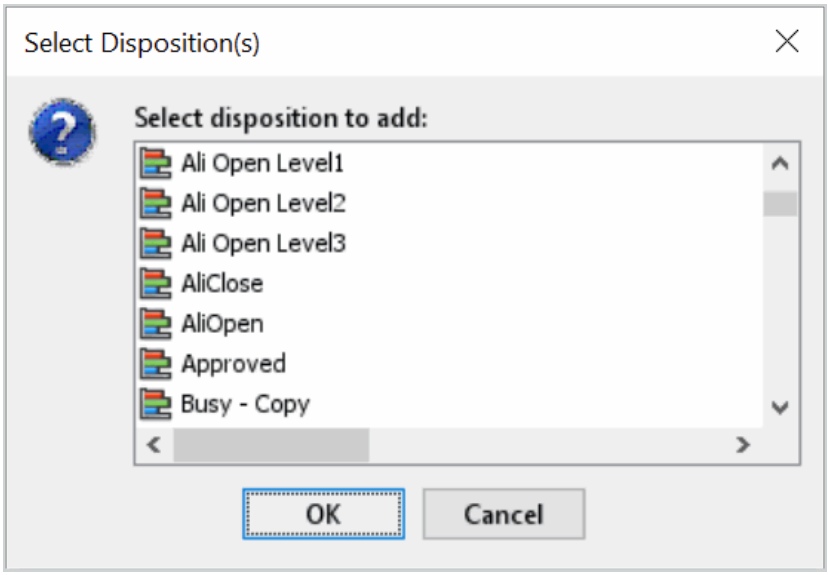
4 Click the **Reporting** tab.



5 To add dispositions that can be assigned in the IVR script, click **Add**.

6 To apply to all call dispositions, check **Apply to All Dispositions**.

7 Select the dispositions and click **OK**.



8 Click **Save**.

After you save a call variable, you can no longer modify its content. Your only option is to create a new call variable.

Example

Describes how to create a call variable for queue callbacks. By adding the variable to reports, you can find out the number of callers who select queue callback each day for each queues.

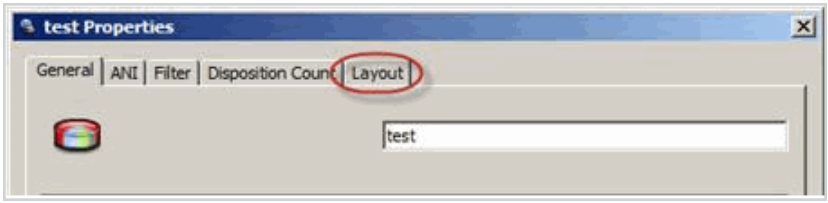
1. Select or create a call variable group.
2. Create and name a variable Queue Callback.
3. To include the variable in reports, check **Reporting Call Variable**.
4. In the Queue Callback example, keep the **String** default data type.
5. Under Restrictions, select **Required**.
6. Under Default Value, enter a value, such as 1.
7. In the Reporting tab, add the Queue Callback Assigned disposition.
8. Save the variable.

Adding Call Variables to Campaign Profiles

The Campaign layout configured in the Campaign Profiles enables you to define which call variables are visible for the campaign. See also Managing Campaigns in the Five9 Campaign Administrator guide.

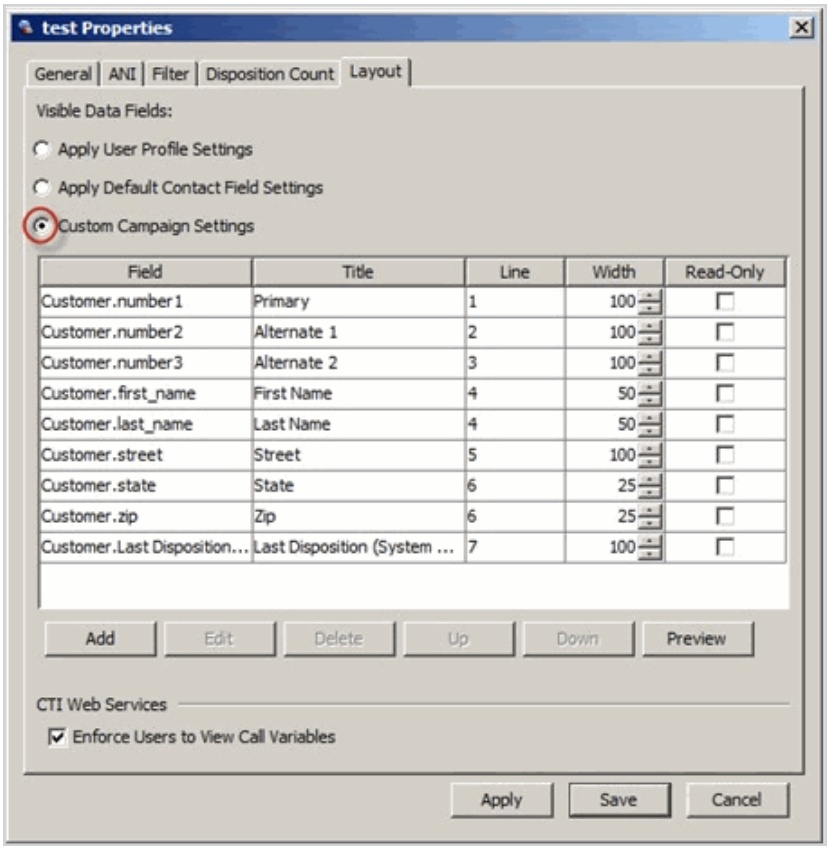
The User Profile settings allow you to control which contact fields are available to the Users which belong to the profile. The profile does not provide access to call fields, user profiles are not call related.

1. Access the Campaign profile properties window.
2. Select the Layout tab.



3. Select **Custom Campaign Settings**.

   If you are creating custom campaign layouts with the CTI Web Services API, you can display call variables to agents.



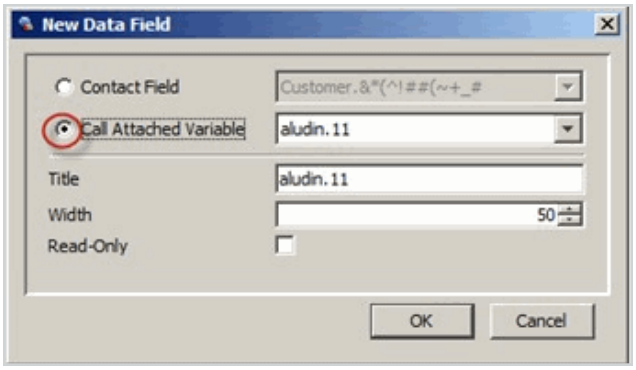
4 If appropriate, enable **Enforce Users to View Call Variables** at the bottom.

With this feature, any component that uses the CTI Web Services displays call variables as follows:

- Enabled: Call variables are always shown to agents.
- Disabled: Call variables are shown to agents only if they enable Show Call Attached Variables in their softphone settings.

5 Click **Add**.

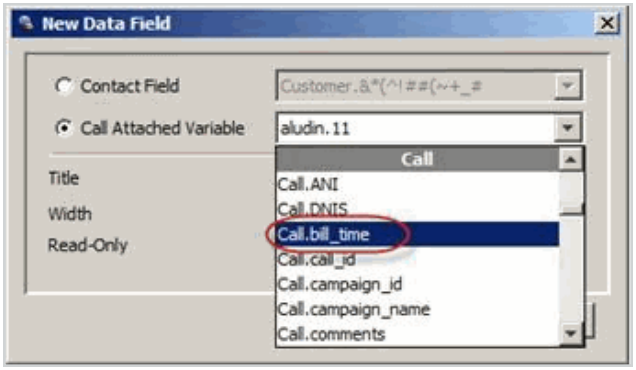
6 Select **Call Attached Variable**.



In the drop-down menu, all existing call variables are listed.

7 Select a variable.

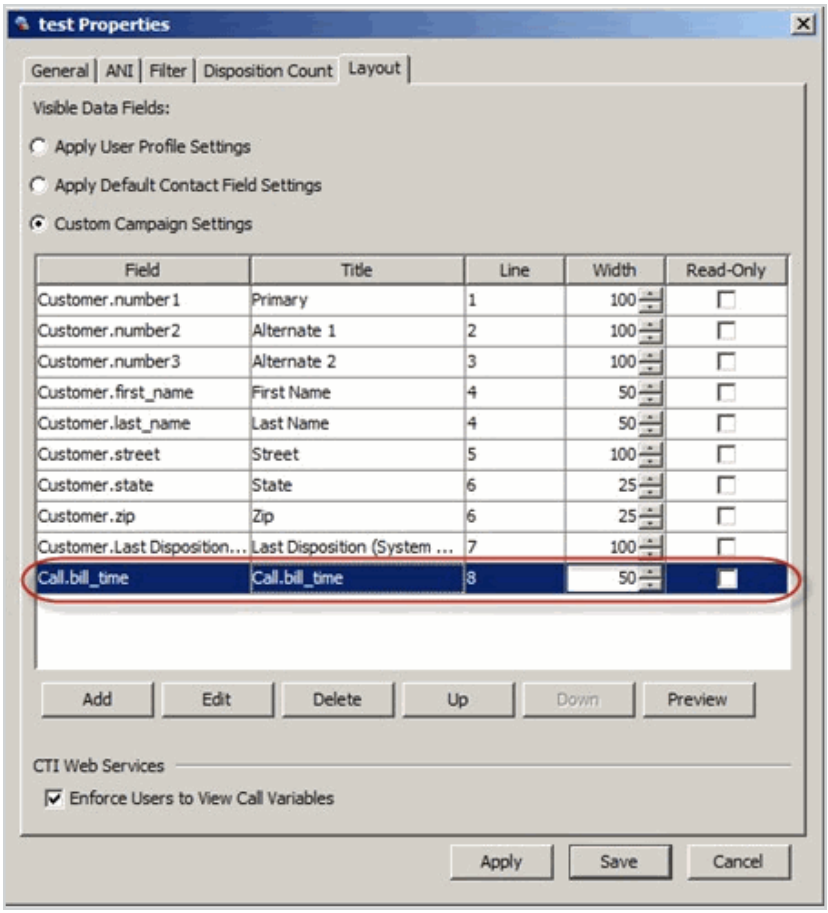
For example, if you select `Call.skill_name`, assign the profile to a campaign, and instruct your agents to enable Show Call Attached Variables in their softphone settings, your agents will see the skill name of all inbound calls of that campaign.



8 Define the following options for the selected field:

- Title - Field name displayed in interface.
- Width - width of the field.
- Read-Only - For example, you can deselect this option for such fields as Sale Amount as the agent will put the value there.

9 Click **OK**.The field appears in the layout.



10 Click **Apply** or **Save**.

Linking Call Variables to Dispositions

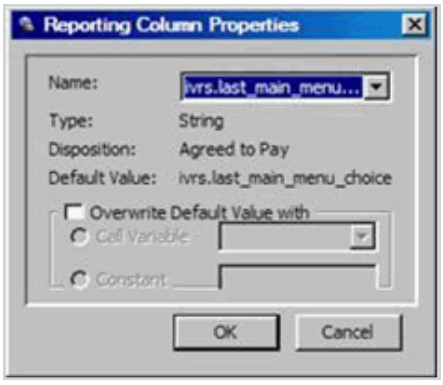
Call variables can be linked to dispositions by their properties or by the disposition properties. In both cases, use the Reporting tab to associate call variables to dispositions. Once enabled for reporting, call variable values can be displayed using a custom Call Log report. Alternately, you can assign a call variable with the enabled Reporting option to the disposition as described below.

1 Open the Dispositions section, and open the properties of a disposition.

2 Select the Reporting tab.



3 To choose a call variable with enabled Reporting option, click **Add**.



4 Select a call variable name from the menu.

5 Optionally, check **Overwrite Default Value With**.

6 Choose a call variable or define a constant.

7 Click **OK**, and **Apply** or **Save**.

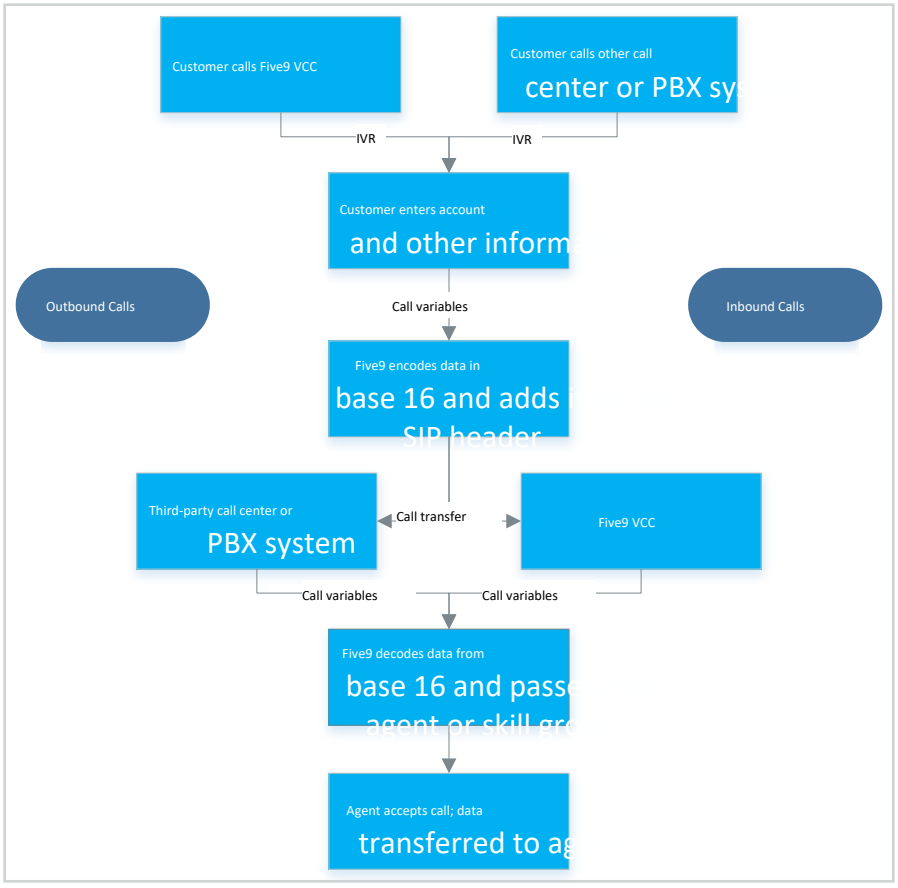
Transferring User-to-User Information with Call Variables

You can use call variables to transfer User-to-User Information (UUI) data between the VCC and other telephony systems, such as other call centers or PBX systems, by using the SIP protocol. UUI data is information not pertaining to the call, such as an account number. The call variables values are transferred without modification.

> **Note:** UUI.XHeaders, UUI.XHeadersOut, and UUI.AllHeaders CAVs are set by the system.

This table and the figure that follows describe outbound and inbound calls with a UUI example.

Outbound Calls	Inbound Calls
The call is transferred from the agent to the external application that supports UUI. **The UUI data is sent from the Five9 VCC to a third-party call center or PBX system in outgoing SIP calls.**	The call is transferred from the caller to the agent. The UUI data is received by the Five9 VCC in incoming SIP calls.
A customer calls an 800 number assigned to the Five9 VCC. **In the VCC IVR menus, the customer enters information, such as account number and personal identity, that corresponds to call variables. The information captured by the IVR is attached to the call in UUI or other SIP headers.** **The VCC IVR transfers the call to a third-party call center or PBX system, which extracts the data to route the call to the appropriate skill group or agent.** **Once the agent accepts the call, all data originally entered by the caller is transferred to the agent.** **The agent does not have to enter that information again.**	A customer calls a third-party call center or PBX system. In the external IVR menus, the customer enters information, such as account number and personal identity, that corresponds to call variables. The information captured by the IVR is attached to the call in UUI or other SIP headers. The external IVR transfers the call to the VCC, which extracts the data to route the call variables. The VCC IVR uses these call variables to route the call to the appropriate skill group or agent. Once the agent accepts the call, all data originally entered by the caller is transferred to the agent. The agent does not have to enter that information again.



Requirements

Before using this feature, you must be able to provision a private SIP trunk to connect to Five9 across the internet, VPN, or Multiprotocol Label Switching (MPLS). With VPN and MPLS, you may incur additional fees. For more information about private SIP trunks and to implement this feature, contact your Five9 representative or Professional Services.

Creating Call Variables

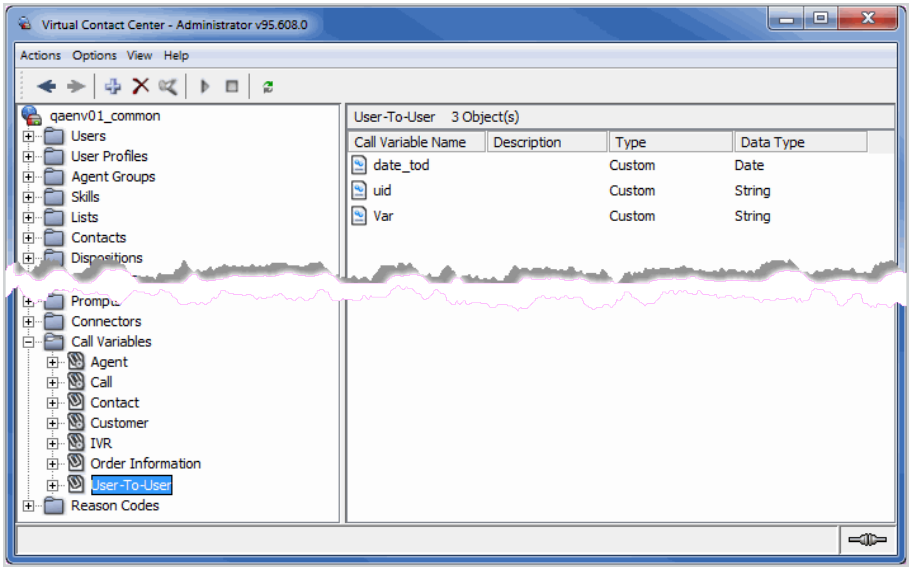
> **Note:** UUI.XHeaders, UUI.XHeadersOut, and UUI.AllHeaders CAVs are set by the system.

Create these items:

- A call variable group specific to UUI data. You may choose any group name.
- As many variables as you need for the data that you want to transfer between locations. You may choose any variable names. Variables can have any format, value, restrictions, and default values. Choose the format expected by the remote side to which the SIP trunk is linked. For example, if you expect UUI data to be an integer, create an integer variable.

Example

Your remote call center or PSTN system expects UUI data in the body of a User-To-User SIP header to be an integer. Your call variable for UUI data is named `my.var`. Its type is integer. The IVR script validates the format of the value when assigning it to the variable. Five9 inserts the value of `my.var` in the initial SIP message of each outbound call as follows: `User-To-User=<my.var-value>`.



Preparing Your Implementation

When done, provide to Five9 the names and types of your variables, such as string or date, for the UUI data to add to SIP headers.

While Five9 is setting up your implementation, add the call variables to campaigns and IVR scripts as usual. You can start transferring data as soon as Five9 has completed your implementation.

When you receive decoded data, you can add it to an IVR script, show it to an agent, send it with the SIP protocol during third-party transfer, and store it for reports.

System Call Variables Groups

You cannot edit system variables. Default settings are overridden by campaign settings.

Agent Group
Call Group
Customer Group
IVR Group
Omni Group

Agent Group

Key	Type and Format	Description
Agent.first_agent	string	ID of the first agent associated with the call. If only one agent handles the call, `Agent.id` and `Agent.first_agent` are the same.
Agent.full_name	string	Full name of the last agent on call
Agent.id	string	Agent object ID (up to 20 digits)
Agent.station_id	string	Last agent's station ID used when logging in
Agent.station_type	string	Last agent's station type: softphone, gateway, or PSTN

Key	Type and Format	Description
Agent.user_name	string	Last agent's user name

Call Group

Key	Type and Format	Description
Call.ANI	string	ANI. The Automatic Number Identification provides the receiver of a telephone call with the number of the calling phone. Up to 20 digits, including 011 for international numbers
Call.bill_time	hh:mm:ss	Bill time for the call. Roughly equivalent to Call Time but can vary based on the call plan
Call.call_id	string	Call ID. Up to 20 digits
Call.campaign_id	string	Campaign object ID. Up to 20 digits
Call.campaign_name	string	Campaign name
Call.comments	string	Call notes recorded by an agent
Call.disposition_id	string	Disposition object ID. Up to 20 digits
Call.disposition_name	string	Name of a disposition.
Call.DNIS	string	DNIS. Dialed Number Information Service is the number that is being dialed. Up to 20 digits, including 011 for international numbers.
Call.domain_id	string	Domain ID that can be added to reports.
Call.domain_name	string	Domain name that can be added to reports.
Call.end_timestamp	yyyy-mm-dd hh:mm:ss	Call completion time stamp.
Call.handle_time	hh:mm:ss	Handle time duration (starts with call being answered by an agent and ends with call disposition).
Call.hold_time	hh:mm:ss	Hold time (duration)

Key	Type and Format	Description
Call.language	string	IVR language
Call.end_ timestamp	yyyy-mm-dd hh:mm:ss	Call completion time stamp
Call.handle_time	hh:mm:ss	Handle time duration (starts with call being answered by an agent and ends with call disposition)
Call.hold_time	hh:mm:ss	Hold time (duration)
Call.length	hh:mm:ss	Call duration
Call.mediatype	string	Type of customer interaction with your agents. In reports, you see these values: Voice or Visual IVR.
Call.number	string	Contact number Read-only variable that indicates the format of the record that was found. In the future, it can be assigned to email or login, for example. For a comparison of variables that can contain phone numbers, see About Call.number, Customer.numberX, and Call.ani.
Call.park_time	hh:mm:ss	Duration of park time
Call.queue_time	hh:mm:ss	Queue time
Call.session_id	string	Call session ID that can contain 32 to 64 characters.
Call.skill_id	string	Skill object ID (up to 20 digits)
Call.skill_name	string	Skill name
Call.start_ timestamp	yyyy-mm-dd hh:mm:ss	Date and start time of the call.
Call.tcpa_date_of_ consent	yyyy-mm-dd hh:mm:ss	Date and time of consent used for consenting to callbacks from a Visual IVR contact page.
Call.type	string	Two-digit call type ID.
Call.type_name	string	Call type name.
Call.wrapup_time	hh:mm:ss	Duration of after-call work.

Customer Group

In the Call Variables folder, this group is named **Customer**. However, this group is named **Contact** in the menus from which you select call variables.

Key	Type and Format	Description
Contact._record_id	string	Default contact field. You cannot select this contact field in the VCC menus.
Contact.city	string	Default contact field
Contact.company	string	Default contact field
Contact.email address	string	Default contact field
Contact.first_name	string	Default contact field
Contact.last_name	string	Default contact field
Contact.number1	phone	Default contact field (primary phone number)
Contact.number2	phone	Default contact field (first alternate phone number)
Contact.number3	phone	Default contact field (second alternate phone number)
Contact.state	string	Default contact field
Contact.street	string	Default contact field
Contact.zip	string	Default contact field

IVR Group

Key	Type and Format	Description
IVR.error_code	int	Four-digit error code of the last module of the IVR script. For a complete list, see the Interactive Voice Response (IVR) Administrator's Guide.
IVR.error_desc	string	Description of script module errors.
IVR.last_module	string	Name of last IVR module.
IVR.last_state	string	Name of last branching module in a script: If/Else, Case, Answering Machine, or Menu.

Omni Group

The Omni variable group is designed for digital engagement interactions, such as email and chat.

> **Note**
> Chat and email sessions must use Omni.* system variables. Chat and email sessions using custom Omni.* prefix variables are not established.

Key	Type and Format	Description
Omni.campaign_sms_number	string	E164 formatted phone number assigned to campaign.
Omni.client_sms_number	string	E164 formatted phone number user employs.
Omni.contact_id	string	Reserved for future use.
Omni.domain_id	string	Unique ID for your VCC domain.
Omni.domain_name	string	Unique name for your VCC domain.
Omni.email	string	Sender's email address.
Omni.email_priority	number	Reserved for future use.
Omni.external_id	string	Unique ID for Salesforce chat and case objects.
Omni.interaction_id	string	Unique ID for text interactions.
Omni.main_recipient	string	Campaign's main email account.
Omni.name	string	Email name if available in the email or chat name field.
Omni.published_time	date/time	• Email: Time that email is received in the customer's mail server. • Chat: Start time of the chat.
Omni.question	string	Chat question.
Omni.source	string	Predefined list that includes Five9_chat and Salesforce. The media type is specified in `Call.mediatype`.
Omni.start_time	date/time	Time that email reaches Five9 (synchronized with mail server).
Omni.subject	string	Subject of email.
Omni.to	string	Additional email recipient addresses.

Key	Type and Format	Description
Omni.total_body_bytes_size	number	Body size in bytes.
Omni.total_body_chars_size	number	Body size in characters.

The Intelligent Cloud Contact Center

Campaign

Administrator's Guide

September 2025

Learn how to create, configure, and manage outbound, inbound, and autodial campaigns.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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What's New

Release	Change	Topic
Sep 2025	Added a header on how to define the maximum number of outbound lines.	Outbound Campaign General Properties
Aug 2025	Added a paragraph to clarify the abandon rate monitoring for US and UK domains.	Default Campaign Settings
Jun 2025	Removed note.	Resetting List Position in Outbound and Autodial Campaigns
	Updated to clarify the behavior for default skills with outbound campaigns.	Skill Groups for Outbound Campaigns
Apr 2025	Updated screenshot and descriptions. Updated description.	Setting Dialing Options for Preview Campaigns Using Telemarketing Max Queue Time
Jul 2024	Added content on answering machine detection (AMD) for call analysis.	Configuring Call Analysis for Outbound and Autodial Campaigns
Jun 2024	Updated information about staffing.	Predictive Dialing Mode

Types of Campaigns

The following lists the different types of campaigns in Five9.

Outbound Campaigns
Inbound Campaigns
Autodial Campaigns
- Autodial Information in Reports
- Telemarketing Rules
- Types of Autodial Campaigns
- Campaign Profiles for Autodial Campaigns
- Dispositions for Autodial Campaigns
- Testing Autodial Campaigns

Outbound Campaigns

Outbound campaigns are used to dial customers in lists that you create and to deliver the calls to the agents that process the calls. The dialing process is typically handled by the dialer. Outbound campaigns may use one of four dialing modes: the predictive, power, or progressive dialer modes to dial through a list of contacts and deliver connected calls to your agents. An additional preview dialing mode allows agents to preview contacts and individually dial their numbers. For more information, see **Configuring Dialing Modes, Options, and Call Processing in Outbound Campaigns**.

When managing outbound campaigns, you must understand how the dialer works and how lists are processed. For more information, see **Understanding the Dialer in Outbound Campaigns**.

Inbound Campaigns

Inbound campaigns are used to receive customer calls coming from a DNIS. The calls are processed according to your rules in the IVR script of the campaign. With the inbound campaign, you can use customized greetings and create different scenarios for

Interactive Voice Response (IVR). Automated call routing of customer inquiries is used to transfer calls to the most appropriate agents:

- Incoming calls can be sent to agents based on availability or skill with custom prompts and hold music.
- You can create loops and branching. You can collect caller information.
- You can use contact data.
- If queue times are long or agents are unavailable, callers can leave a message.
- Calls can be forwarded to a third party when agents are not available.
- You can prioritize inbound call traffic. etc.

To create IVR scripts that automate skills-based call routing, see *Routing Users to Skill Groups* in the Interactive Voice Response (IVR) Administrator's Guide.

The campaign must be running to answer inbound calls. Otherwise, callers hear a busy signal.

Autodial Campaigns

Autodial campaigns are designed to dial phone numbers in a list and to use call-progress detection to understand whether the call was received by an answering machine or person. When a call is answered, it follows a predefined IVR Script. The most common flows include leaving messages to the called party. You can also optionally configure the auto-dialer so that your customers can interact with a menu of options and messages, and even allow them to add their phone number to the do-not-call list without interacting with an agent. So, with Five9's advanced capabilities you can define many different flows to meet your business needs. And each successfully connected number will follow the call flow defined for the campaign. The call flow can even pass an outbound call to an agent.

When one of your customers needs to talk to a live agent, the call can be queued up for the next available agent. When your agents are connected to live parties, they can follow the scripts you've written and record the results in the Five9 contact history.

Autodial Campaigns can dial multiple numbers at the same time based on the number of lines available for your account and the number of lines allocated to the campaign. There is an ability to stop dialing based on agent availability.

If your call flow does not have the possibility to deliver calls to agents, you need to consider only running it at the times when you want to deliver your messages to your customer base. You can either manually start and stop campaigns or use a profile to help you in delivering your messages at targeted times.

Autodial Information in Reports
Telemarketing Rules
Types of Autodial Campaigns
Campaign Profiles for Autodial Campaigns
Dispositions for Autodial Campaigns
Testing Autodial Campaigns

Autodial Information in Reports

To determine if a contact hangs up before listening to the entire message, check the total length of the call in reports. If the call is shorter than the length of your message, you know the contact hung up before the message completed. You could also verify the path in the IVR flow that the customer took by creating a report and looking at the `ivr_flow` column.

To view the IVR path taken for each autodial call, look at reports, which may contain an `ivr_flow` column. This column shows the IVR modules used by the call. Because the `ivr_flow` field uses the module name, Five9 recommends to identify each step of the call flow by naming each module accordingly.

Telemarketing Rules

Important

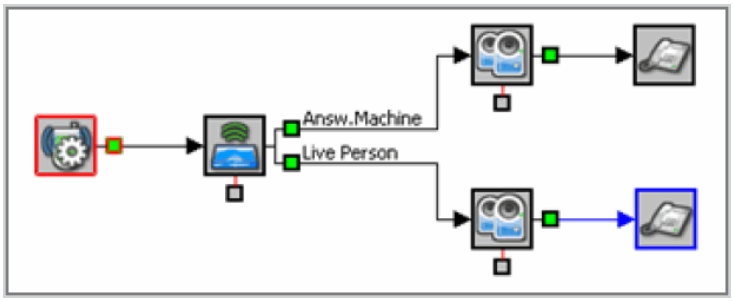
You are responsible to know and comply with the telemarketing regulations in the regions in which you operate. Consult your compliance team if you are not sure about applicable laws.

In the U.S., autodial campaigns are governed by the Federal Trade Commission's telemarketing sales rule. You may not use an autodialer for telemarketing purposes. You may use an autodialer only if you have an existing business relationship with the people you are calling. For example, they may be used for collections, feature announcements, reminders to existing customers, or for exempt organizations, such as charities or political campaigns. For more details, a copy of the telemarketing sales rule can be found online at the Federal Trade Commission's Telemarketing Sales Rule Web site.

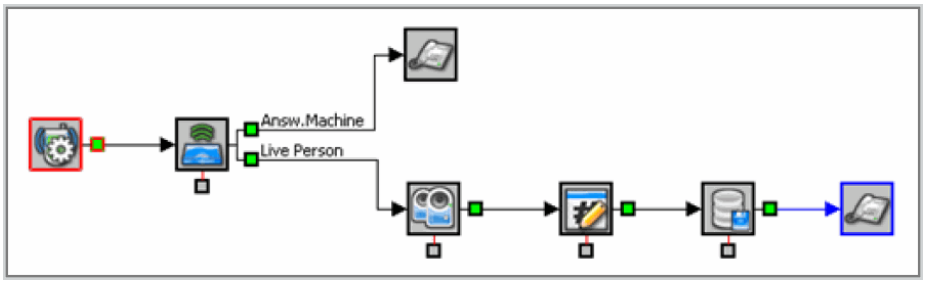
Types of Autodial Campaigns

Autodial campaigns comprise these categories:

- **Basic Autodial Campaign**: Plays a message to answering machines. The message in the Play modules can be the same or different.

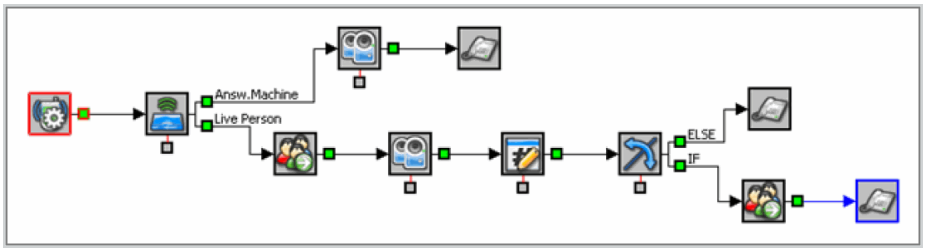


- **Smart Autodial Survey**: Plays a prompt to the connected party and records the response in a contact field. If an answering machine is detected, the system disconnects the call. See Configuring Autodial Agent Linkback Campaigns.

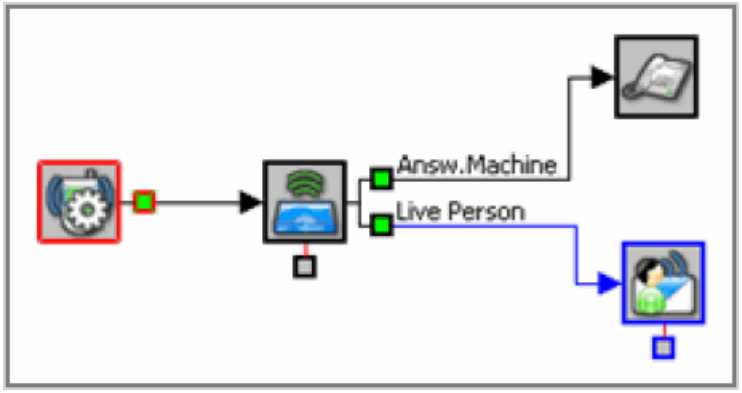


- **Automated message delivery campaigns**: Plays a recorded message to persons and answering machines, for example to broadcast a recorded message.

- **Agent Linkback**: Usually plays a recorded message to answering machines but gives persons the option to connect to an agent.



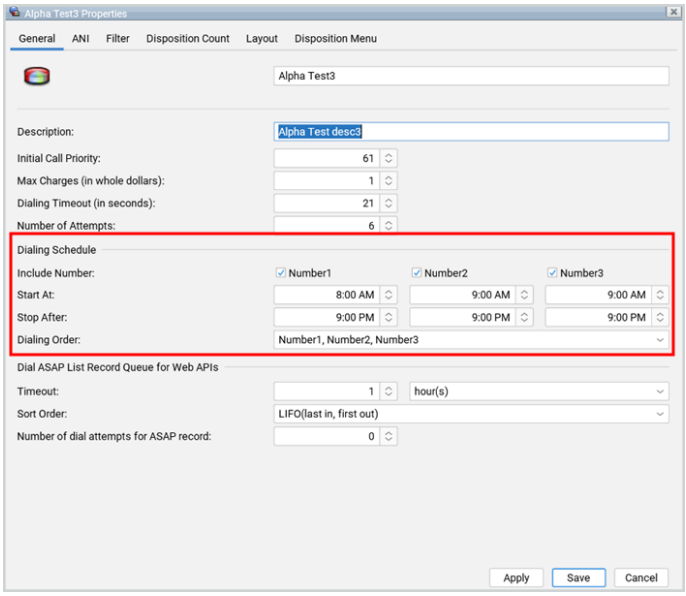
- **Autodial Campaign to Record a Response in Voice mail**: The Voicemail Transfer module plays a greeting providing instructions to the contact and asks to record the response.



Campaign Profiles for Autodial Campaigns

All campaign profile features can be used with autodial campaigns. For example, you can use a campaign profile to start and stop dialing automatically, based on the time of day. Use the Start At and Stop After settings to set the start and stop times. You can adjust more settings by using profiles.

In the example below, the campaign dials between 8AM and 9PM to phone numbers in the number1 contact field of list records. Remember to account for time zones, as the dialing hours are based on the time zone of the phone number being dialed, not your local time zone.



See **Outbound Campaign General Properties**.

Dispositions for Autodial Campaigns

Because many autodial calls do not reach an agent, to be assigned a disposition, autodial campaigns can record a disposition in some IVR modules. The purpose of IVR dispositions is to provide reporting of where the call disconnected in the IVR flow. For example, your autodial campaign plays a message when a person answers and disconnects the call with the Hang Up module. The disposition in the Hang Up module is recorded as the result of the call. In this case, the disposition for the Hang Up module can be *message left - person*.

Autodial campaigns have two disposition categories:

- Agent dispositions are used when a call is connected to a Five9 agent.
- IVR dispositions are used by the system when a call is disconnected during the IVR flow.

To determine which IVR dispositions are required, create an IVR flow first, and add the dispositions as needed. You can also use the default dispositions assigned by the system. All IVR dispositions have the same configuration options as agent dispositions. Features such as Send Email Notification and Add to DNC are available.

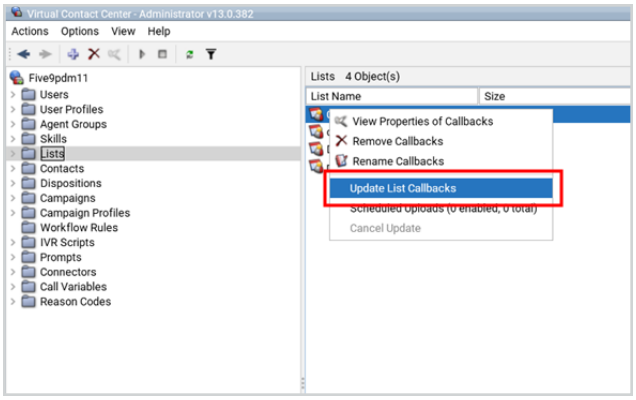
Agent Must Confirm, *Agent Must Complete Worksheet*, and *Worksheet Cannot Be Used With This Disposition* are configuration options that apply only if the call reaches the agent. They do not apply to IVR Dispositions.

Testing Autodial Campaigns

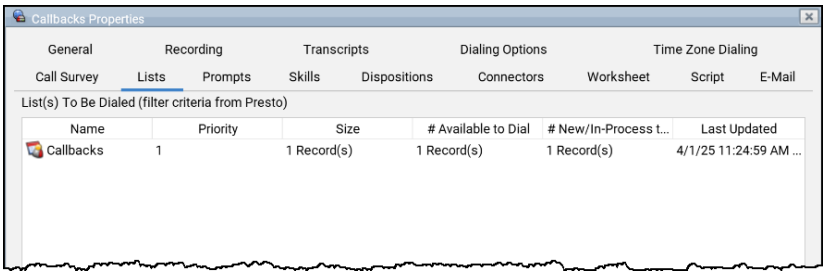
Before running an autodial campaign, Five9 recommends that you test the campaign.

1. Upload a list of known test numbers, such as your office number, your cell phone, your home number, and co-workers' phone numbers.

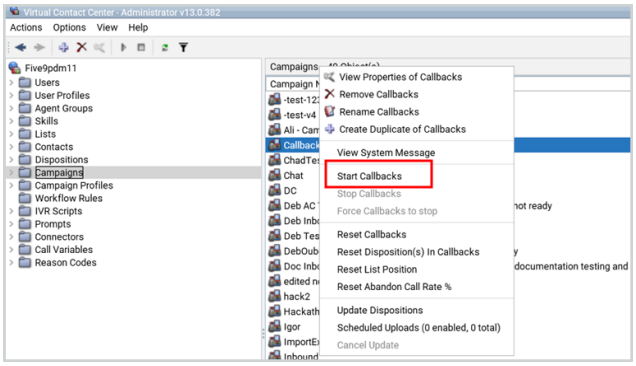
   For more information, see Importing and Updating Call Lists in the Basic Configuration Administrator's Guide.



2. Assign the test list to the autodial campaign in the same way as for outbound campaigns.



3. Run the campaign with the test list to be sure messages are played as expected.



4 Test the campaign by answering some of the calls and going through the IVR script, allowing some calls to go to voice mail.

Creating Campaigns

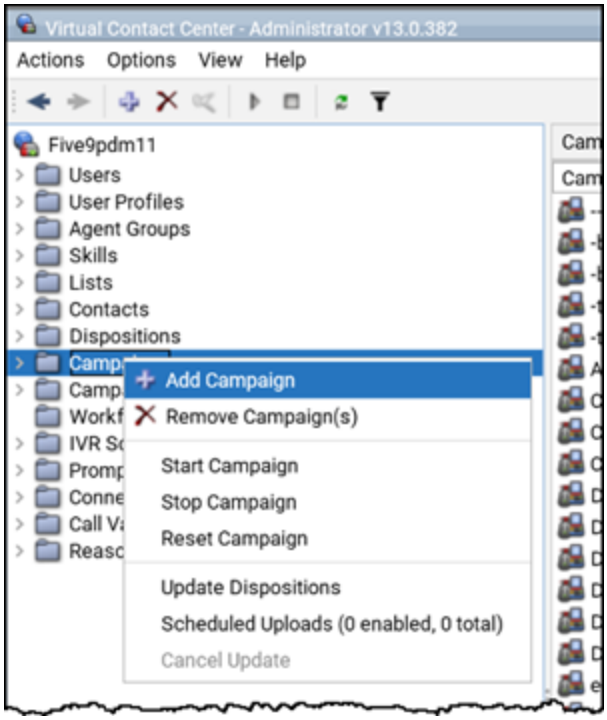
Duplicating Campaigns
Renaming Campaigns
Managing Campaigns
Troubleshooting Campaigns

Before creating campaigns, be sure that you have prepared the components required to configure the campaigns:

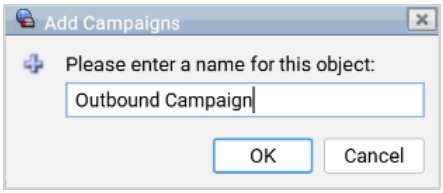
Type of Campaign	Requirements
Outbound	• Skill groups • Users, user profiles, and agent groups • Imported one or more lists • Adjusted system dispositions or created custom dispositions
Inbound	• Skill groups • Users, user profiles, and agent groups • Adjusted system dispositions or created custom dispositions
Autodial	• Skill groups • Users, user profiles, and agent groups • Adjusted system dispositions or created custom dispositions • Created call lists • Created IVR scripts If your autodial campaign will not transfer calls to agents, you do not need users or skill groups.

1 Right-click **Campaigns**, and then select **Add Campaign**.

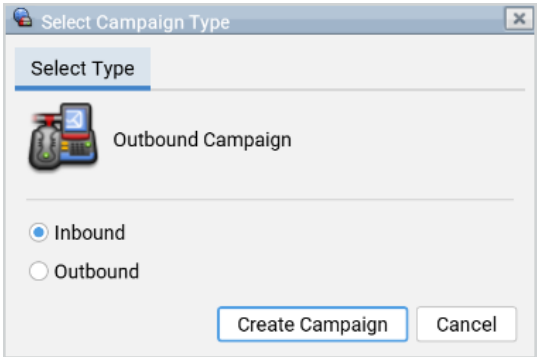
You can also click the **Campaigns** folder, and then click **Add Object** ( ).



2 Enter the name for the new campaign, and click **OK**.



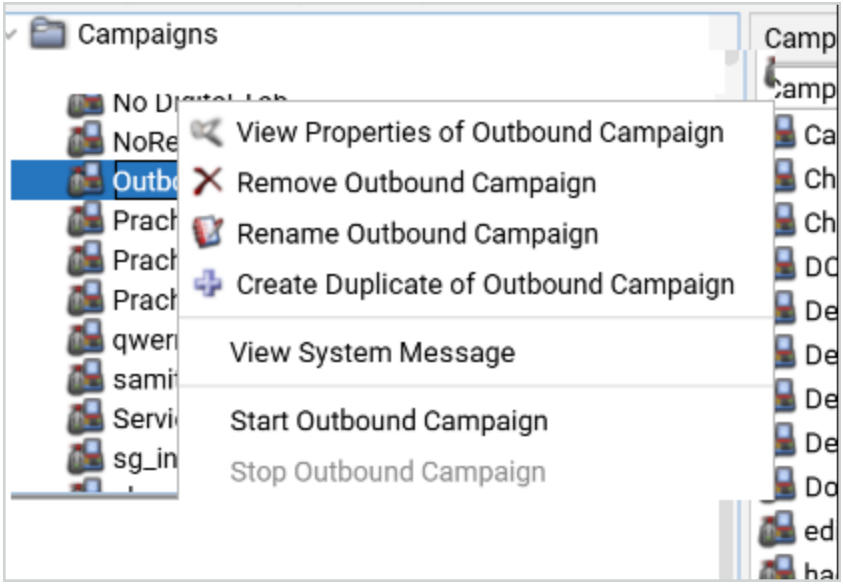
3 Select the type of campaign: Outbound, Inbound, or Autodial.

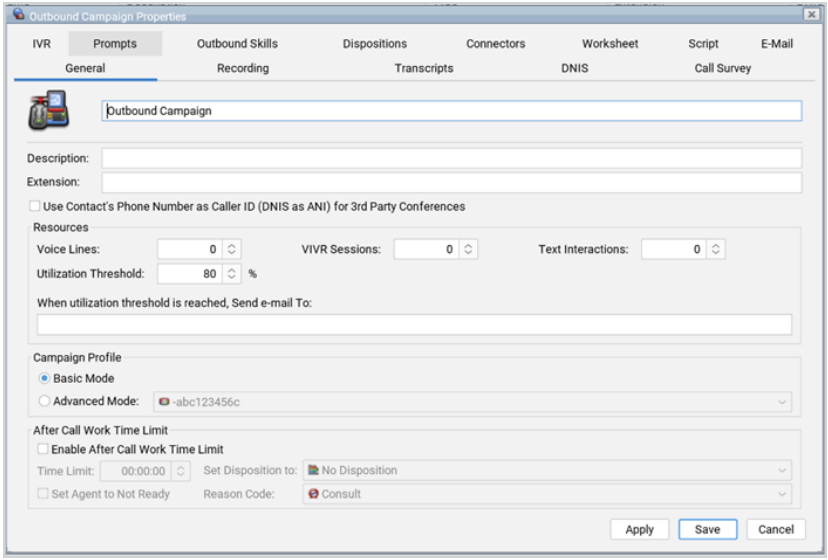


4 Click **Create Campaign**.

The new campaign is added to your Campaign folder.

5 To open the campaign properties, right-click the campaign name and select **View Properties of <campaign name>**, or double-click the campaign name in the list.

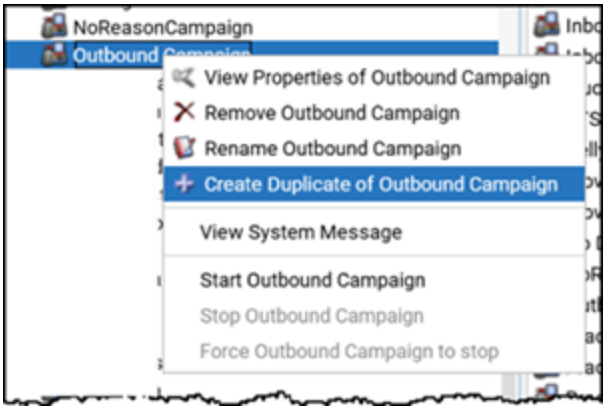




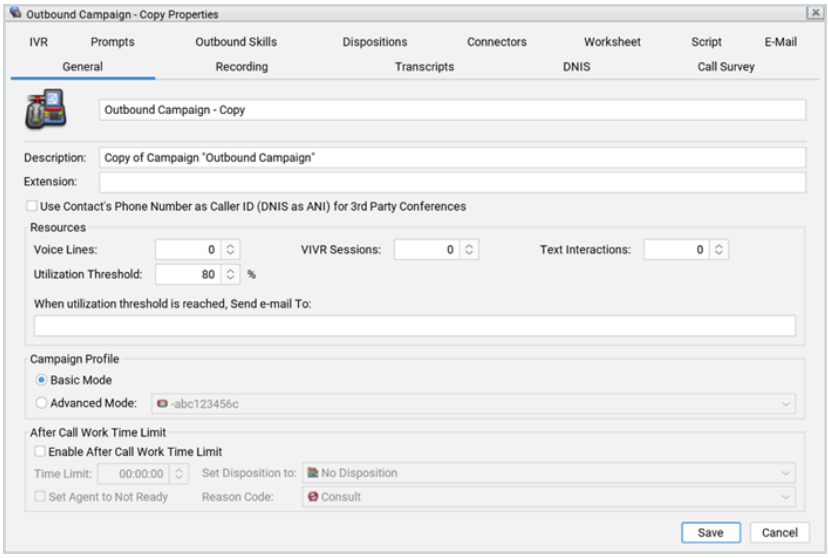
Duplicating Campaigns

You may create a new campaign by copying an existing campaign. For outbound and autodial campaigns, all the campaign information is copied to the duplicate. For inbound campaigns, the campaign information is copied to the duplicate, except for the extension and the DNIS.

1 Right-click a campaign, and select **Create Duplicate of <campaign name>**.



The property window of the duplicate campaign opens, showing the name in this format: **<original object name> - Copy Properties**.



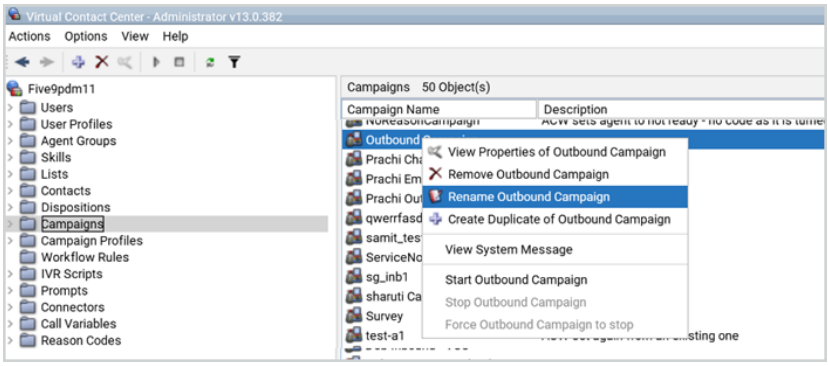
2 Make your changes to the duplicate, and click **Save**.

Renaming Campaigns

Follow these steps to change the name of an existing campaign.

1 Right-click a campaign, and select **Rename**.

You can also click the **Campaigns** folder and click **Add Object** ( ).

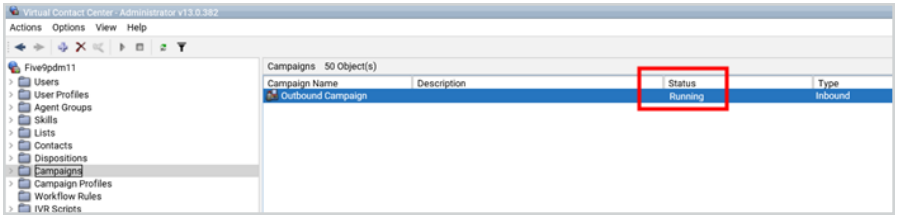


2 Enter another name, and click **OK**.

Managing Campaigns

Starting Campaigns
Understanding Campaign Current Actions
Stopping a Campaign
Resetting Campaigns

Campaign status is indicated in the main pane:



Campaign State	Description
Running	An outbound campaign must be running to dial your list and send calls to agents.
Not Running	The campaign is not running.
Starting	After a domain host is restarted (after a maintenance downtime), campaigns that were previously running may take some time to start running again.
Stopping	A campaign may be in this state if a user attempts to manually stop a running campaign while there are still active calls to or from the campaign. Using Force Stop immediately disconnects all calls and puts the campaign in the Not Running state.

You can start an outbound campaign in one of these modes:

- Basic
- Advanced
- Training

Starting Campaigns

An outbound campaign must be running for you to be able to dial your list of numbers and send calls to agents. When the campaign is running, it does not start dialing until there is at least one agent available to take calls.

A running outbound campaign does not start dialing until at least one agent is available to take calls. If the campaign runs out of numbers to call, the Current Action column contains Waiting for Available Numbers. The campaign remains in a running state. If numbers are activated later (for example, due to dialing restrictions that no longer apply or new list records being added), the campaign starts dialing immediately if agents are available.

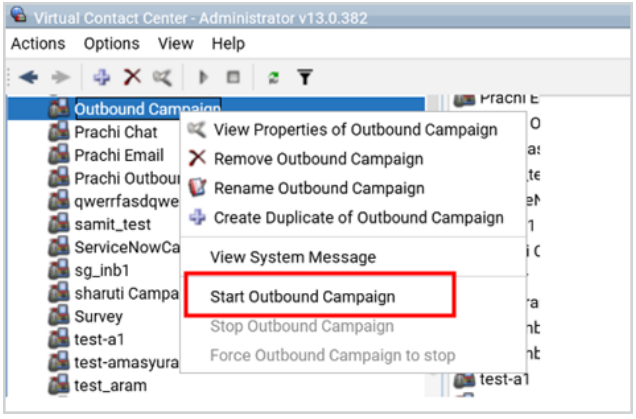
The running inbound campaign answers and follows your IVR script when dialing the phone number selected in the DNIS tab. After an autodial campaign is started, it begins dialing depending on the **Agent Availability** option defined in Dialing Options of the campaign properties. You can use Workflow Rules to start the campaign automatically when defined conditions are true.

Starting a Selected Campaign

1. Click or open the **Campaigns** folder.

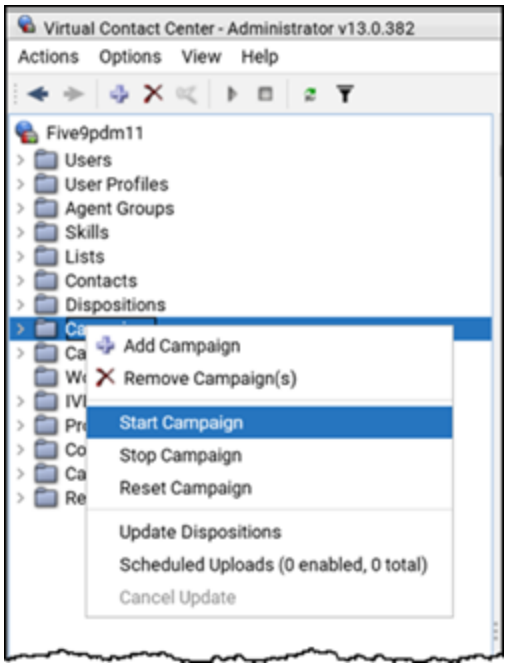
2. In the navigation pane or in the main pane, right-click a campaign, and select **Start <campaign name>**.

   In the main pane of the VCC Administrator's console, the campaign status changes to Running. Both methods are shown here:

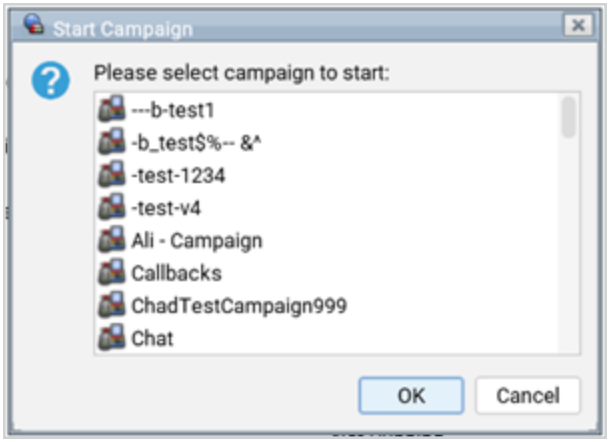


Starting a Campaign

1 Right-click the **Campaigns** folder, and select **Start Campaign**.



2 In the list that appears, select a campaign.

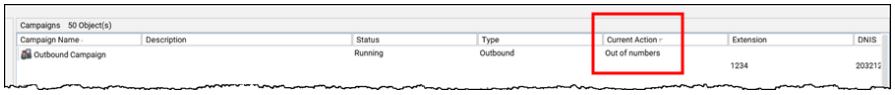


3 Click **OK**.

The campaign status changes to **Running**.

Understanding Campaign Current Actions

Your campaigns and their current actions are available in your VCC Administrator and Supervisor applications under the **Current Action** column.



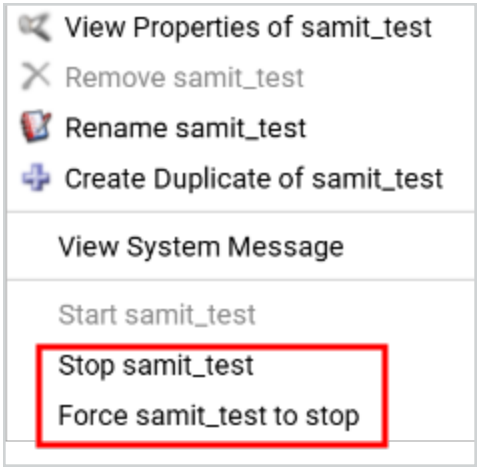
The following table describes the possible campaign actions.

Campaign Action	Description
Dialing	Campaign is currently dialing.
Waiting for available agents	Campaign is currently unable to make calls because no agents are available. Some calls may still be dialing, in queue, or assigned to agents.
Waiting for numbers	Campaign is currently unable to make calls because no numbers (contact records) are available to dial. Some records may become available later as reminders expire. Some calls that are currently may still be dialing, in queue, or assigned to agents.
Waiting for resources	Campaign is currently unable to make calls because no outbound domain lines or autodial campaign lines are available. Some calls may still be dialing, in queue, or assigned to agents.
Outbound calls are not allowed	Outbound calls are not allowed at the moment. For example, automatic calling is not allowed for a state/province. Some calls may still be dialing, in queue, or assigned to agents. See **Dialing Rules** for more information.
Out of numbers	Campaign can make no calls because no numbers (contact records) are available to dial. No contact records will appear in the future without changing the data, such as adding additional records to the dialing lists or changing the campaign settings or changing some records to satisfy the campaign filters.

Stopping a Campaign

You can stop a campaign in one of these ways:

- **Normal stopping**: waits for all active calls to end before stopping. The length of time it takes for the campaign to stop depends on how long the active calls take to complete.
- **Immediate stopping**: stops dialing numbers immediately and disconnects all calls in process.
- **Automatic stopping**: stops automatically when long distance charges are inadequate, the maximum configured number of dispositions in the campaign profile is reached (see Campaign Profiles in the Basic Configuration Administrator's Guide), the campaign runs out of numbers to dial, and a workflow rule is triggered (see Managing Disposition Counts in the Basic Configuration Administrator's Guide).



You can create a workflow rule for the case when campaign is stopped. You can use the Workflow Rules to stop the campaign automatically when the certain conditions (events) are true.

Stopping a Campaign Normally

Stopping a campaign allows all active interactions to finish. Once you stop the campaign, no new interactions begin.

1. Click to expand **Campaigns** in the navigation pane.
2. Right-click a campaign name, and select **Stop <campaign name>**.
3. Click **Yes**.

   The campaign status changes to **Not Running**.

Stopping a Campaign Immediately

When you stop a campaign immediately, all dialing of numbers ceases and all active calls are disconnected.

1. Click to expand **Campaigns** in the navigation pane.
2. Right-click a campaign name, and select **Force <campaign name> to stop**.
3. Click **Yes**.

   The campaign status changes to **Not Running**.

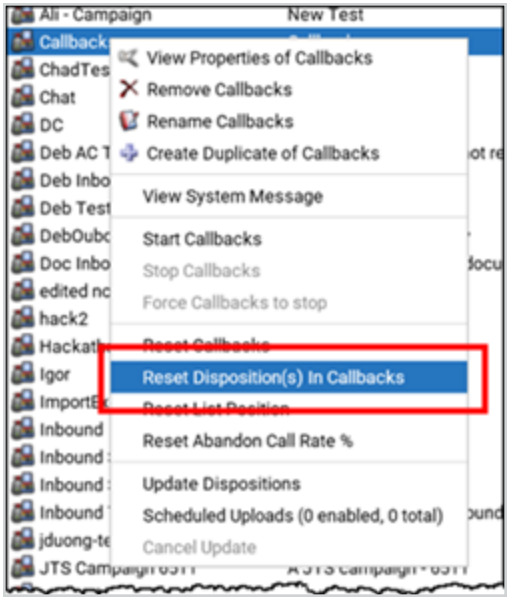
Stopping a Campaign According to Charges or Dispositions

You can stop a campaign according to the long distance charges or number of dispositions selected in the Profile. See Managing Campaign Dispositions

Resetting Campaigns

This feature forces campaigns to redial every number, except for Do Not Call numbers. Resetting dispositions for a campaign applies only to the lists used in the campaign.

To reset only some dispositions, select **Reset Disposition(s) in <campaign name>**.

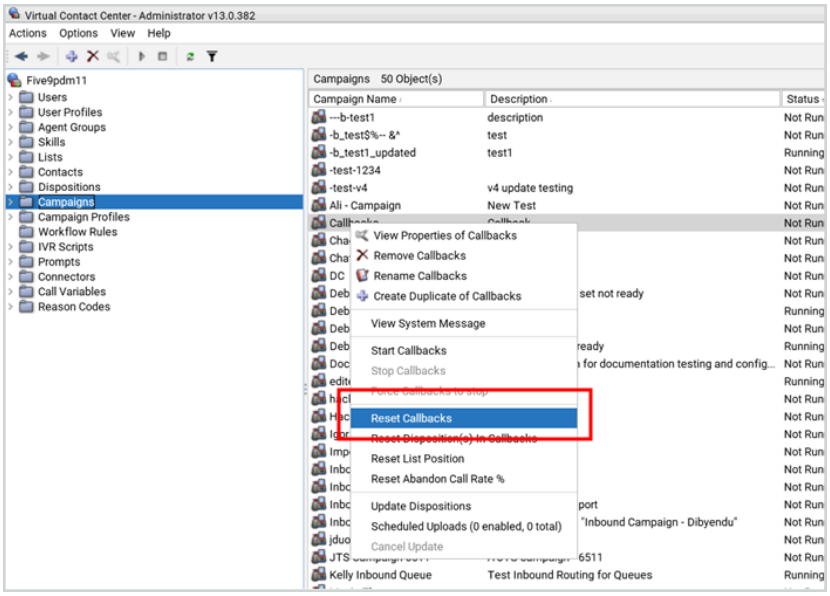


Warning

This feature erases all dialing results and some reporting information.

1 Click the **Campaigns** folder.

2 Right-click a campaign name, and select **Reset <campaign name>**.



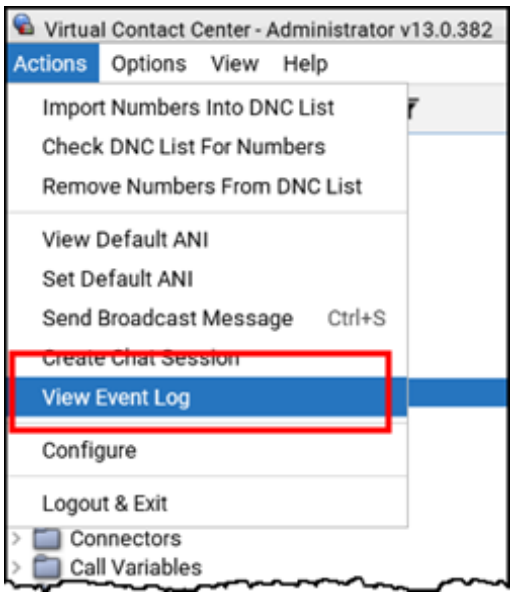
3 Click **Yes**. Campaign completion is reset to 0%.

Troubleshooting Campaigns

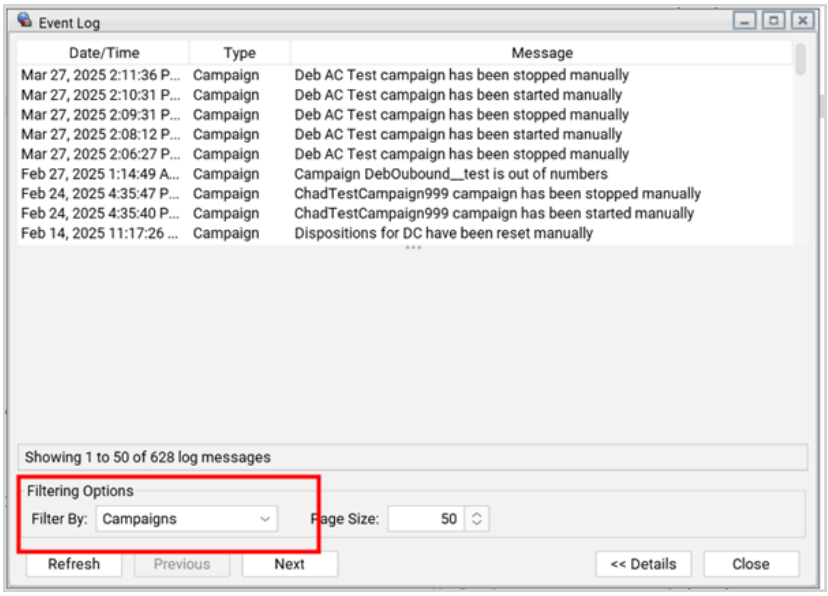
Troubleshooting Campaigns in Admin Console
Troubleshooting Outbound Campaigns
Troubleshooting Inbound Campaigns

You can see some types of information about campaigns by viewing the event log.

1 In the VCC Administrator application, click **Actions**, and then select **View Event Log**.

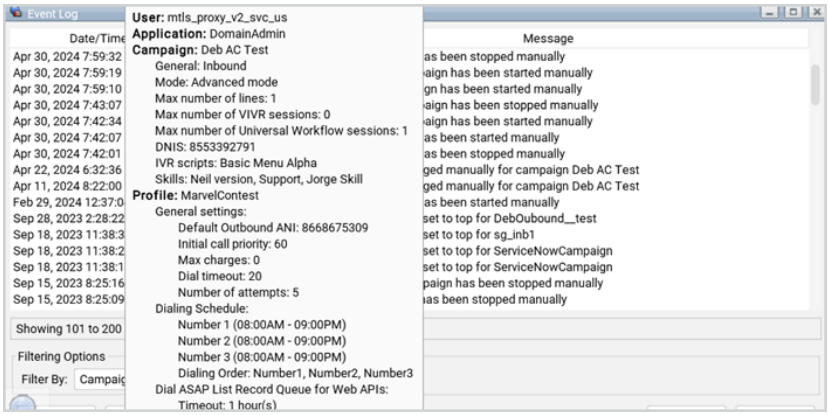


2 In the **Filter By** dropdown, select **Campaigns**.



3 Select a row in the event log.

4 To see the details about an event, hover over it or click **Details** at the bottom of the window.



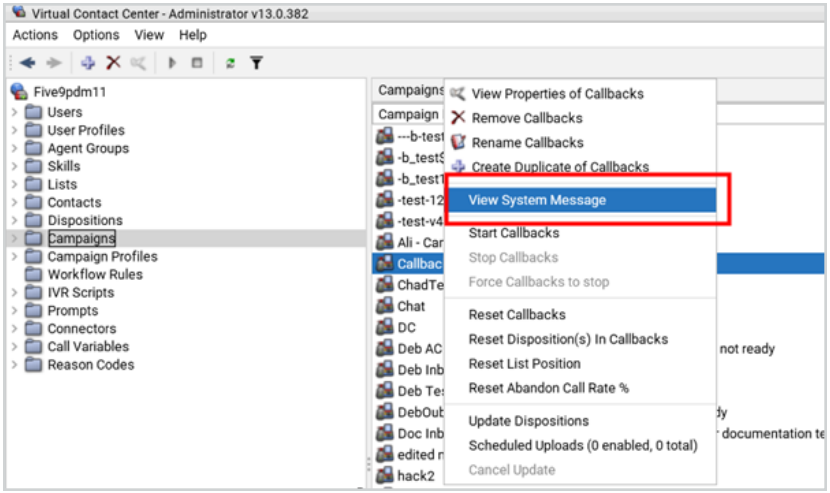
Troubleshooting Campaigns in Admin Console

You can access configuration events by selecting the **Configuration Events** on the home page or **Manage Environment** in the left navigation. To troubleshoot campaigns, see *Configuration Event Log* in the Administrator Console Adminstrator's Guide.

Troubleshooting Outbound Campaigns

Agents not receiving calls from outbound campaign.

- **Are agents logged in and ready?.** Check with your agents to ensure they are logged in and in Ready Call status.
- **Are agents in the proper skill group?.** The skill groups determines which agents receive calls. Check the agent's skill group from the properties of the user account. Click the Skills tab in the campaign to determine which skill groups it is using. See also, **Managing User Definitions** in the Basic Configuration Administrator's Guide.
- **Is the campaign running?.** The outbound campaign must be running to dial and deliver calls to agents. In the Campaigns folder, there is Status column where you can see if the campaign is running. If the campaign is not running, right-click the campaign and choose Start. See **Starting Campaigns**.
- **Is the campaign running out of numbers or processing calls that are not answered?.** The campaign stops if it runs out of numbers. Right-click the campaign and select **View System Messages** to see if the campaign is out of numbers.



It is possible the dialer is processing a lot of numbers that are not connected (busy, no answer). To check the status of the dialer, run the Call Log reports. When you run the report, do not choose any users and do not choose any dispositions. This allows you to see calls processed by the system.

Check the Result column for calls with the User name [None]. These calls did not reach an agent. You can see blocks of time where the dialer was busy processing calls that did not reach an agent. It takes at least twenty seconds, by default, to

process a *no answer* call, due to ring time.

Same contacts are called multiple times.

- **Are you using the redial disposition?.** Redial dispositions instruct the dialer to call the phone number again. If the dialer is near the end of a list, or if a redial timer is configured for a short, the number may be redialed again in a short time.

  Try replacing dispositions redial dispositions (especially those with timers) with ones that do not. You can use the Reset Dispositions to redial numbers based on disposition rather than allowing the dialer to control when the number is redialed.

  As a rule, use a redial dispositions only when the agent does not speak to anyone or if a contact asked to be called again.

- **Are you resetting the campaign?.** The Reset Campaign feature instructs the dialer to redial every number again (with the exception of Do Not Call numbers). Normally you should not use the Reset Campaign feature. Use the Reset Dispositions option instead. See also, Renaming Campaigns.

Contact Hangs up Before Reaching an Agent.

- **Are you performing call analysis (answering/fax machine detection)?.** If using Fax and Answering Machine Call Analysis in the properties of the Outbound Campaign, be sure to set the Voice Detection Level to Fast. A setting above Fast allows for a longer delay after the person says Hello, which could account for the hang-ups.

  If you still get hang-ups when using the Fast setting, try turning off Call Analysis.

Contact Hangs up Immediately After Reaching an Agent.

- **Agent not responding quickly enough.** Be sure agents start their greeting as soon as the Incoming Call screen appears. The contact has already answered so the agent should not wait to hear a hello but should start speaking immediately.

High Dropped Call Rate.

- **Check the calls-to-agent ratio in campaign properties.** Calls to Agent Ratio for the Power Dialing Mode sets how many phone numbers are dialed for each agent. A high setting could result in a lot of dropped calls. Try reducing the Calls to Agent Ratio or setting it all the way to 1.

  A setting of 1 dials only one phone number for each agent, eliminating the chance of dropped calls.
- **Are you running multiple outbound campaigns?.** If you run multiple outbound campaigns at the same time, check if the campaigns use the same skill

groups. If two campaigns dial calls for the same agents, the dialer becomes less consistent, especially if the campaigns use different dialing modes or are completely different campaign types.

Try changing the Skill Groups so the campaigns do not send calls to the same agents.

Troubleshooting Inbound Campaigns

Busy signal when calling an inbound campaign.

- Check to see if the campaign is running

  An Inbound Campaign must be running to answer calls. If the campaign is not running, right- click the campaign and select **Start <Campaign Name>**.

- Check the DNIS tab to be sure the correct number is selected

  Go to Campaign Properties and open the DNIS tab. Is the correct number selected? Click **Add** to view available numbers.

Call disconnected when dialing an inbound campaign.

- If you uploaded your own greeting, is it formatted correctly?

  Confirm the prompt is in the correct format. The supported format for new files uploaded to the system is WAVE audio, ITU G.711 mu-law, mono 8000 Hz. In some applications it is also listed as CCITT u-Law, 8.000 kHz, 8 bit, Mono, 7 kb/sec.

- Did you update a prompt or greeting?

  In the IVR script, open the Play module at the point where the call disconnects. In the Prompt tab, remove the prompt and re-add it.

Campaign accepts only one caller at a time. Second caller receives a busy signal.

- Check the maximum number of lines

  If the maximum number of lines has been reached, the succeeding callers receive a busy signal. Try increasing the maximum number of lines in the General tab in Inbound Campaign Properties. The default is 1 which limits the campaign to only one call at a time. Increase this setting as needed up to the total number of lines assigned to your account.

Customers are not being directed to the correct skill group, agent, greeting, and so on.

- Is the IVR script set up correctly?

  Go to Campaign Properties and open the IVR tab. Review the IVR routing. Check the IVR in the IVR Script by right clicking on the IVR Script. Then click <IVR Script> Properties. Verify that the correct skills are associated with the script.

- Are agents logged in and ready?

  Check with your agents to ensure they are logged in and ready.

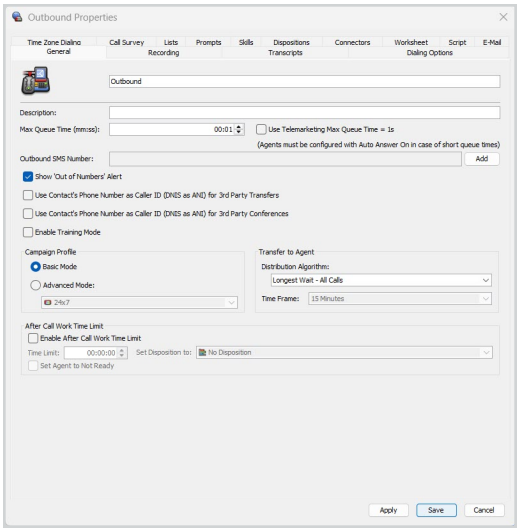
Configuring Campaigns

Administrators create and manage campaigns. Several campaigns may be active at any time.

The following lists how to configure campaigns in Five9:

Outbound Campaign General Properties

Defining the Maximum Number of Outbound Lines
Setting the Maximum Queue Time for Campaign Calls
Using Telemarketing Max Queue Time
Adding an Outbound SMS Number
Setting Notification to Show Out-Of-Numbers Alerts
Using Contact Numbers as Caller ID in Third-Party Transfers
Using a Contact's Number as Caller ID for Third-Party Conferences
Ignoring the DNC List for a Campaign
Using the Campaign in Training Mode
Choosing the Campaign Start Mode
Defining Settings for Calls Transferred to Agents
Defining the After-Call Work Time Limit



Defining the Maximum Number of Outbound Lines

An administrator can use the **Max Number of Lines** field to configure the maximum number of outbound lines for an outbound campaign type and **Limit Max Number of Lines** checkbox to limit a single campaign to the allotted outbound lines.

> **Note:** This configuration is optional.

Setting the Maximum Queue Time for Campaign Calls

This is the maximum time that the system holds the dialed party by the dialer if no agents are available to process the call. After this time expires, the system takes the action selected in Action on Max Queue Time Expiration under the Dialing Options tab. See also, *Selecting General Settings for Campaign Profiles* in the Basic Configuration Administrator's Guide.

- Default value = one second. Do not increase the default value, except in specific cases, such as when using a dialer to connect calls to remote employees.
- Maximum value allowed by the FCC for dialed calls = two seconds.
- The system counts the FCC two seconds from the end of the called party's greeting; after two seconds the system considers the call dropped.

- Call Analysis uses the remaining second, if enabled, and for routing the call across the network.

Important

The Action chosen for the **Max Queue Time Expiration** setting impacts the abandon rate calculation.

Five9 offers three actions for **Max Queue Time Expiration** setting. You can configure one action for a given campaign. Available actions for Max Queue Time expiration setting include:

- Abandon call
- Play prompt
- Play IVR script (advanced)

Note: The abandon rate 2-second rule calculation option enables you to use a queue time of 2 seconds or higher to identify outbound calls as abandoned. The **Outbound Campaign Abandon Rate % 2 Seconds Rule** standard report shows these values.

This demonstrates how the action configured impacts the abandon rate calculation.

1. When the **Max Queue Time** expires, and if your campaign administrator has configured abandon call or play prompt action, then the system assigns the *Abandon* disposition and includes the call in the abandon rate calculation. The dialer maintains the abandon rate calculation as a 30-day rolling average for the **Monitor Abandoned Call Percentage** feature setting.
2. When the **Max Queue Time** expires, and if you have configured Play IVR script (advanced) action, then the disposition configured at IVR script level determines the disposition. Disposition can be abandon or something else. Abandon disposition calls do get counted in abandon rate calculation.

If the disposition set by IVR script isn't *Abandon* disposition then it will result in under reporting the abandoned calls and hence impact abandon rate calculation.

Customers are responsible for configuring these behaviors in a way that best suits their business requirements. Five9 offers custom reporting services to address various configuration approaches and specific customer requests on how to represent abandon rate in historical reporting.

Using Telemarketing Max Queue Time

To comply applicable telemarketing regulations, set a maximum queue time of one second. This is the recommended maximum queue time for telemarketing activity. Telemarketers typically employ an aggressive dialing strategy, such as predictive or power.

- If set to one second, the system also allocates a second for call analysis and routing; thus, the telemarketer can still have the call answered within two seconds if configured for auto answer.
- If set to two seconds, the telemarketer risks experiencing high abandon rates due to excessively long wait times when connecting callers to live agents.

Note

You must inform the agents to configure their agent desktop for auto answer on outbound campaign calls to comply with shortened queue times.

Adding an Outbound SMS Number

If your administrator enables the domain for SMS interactions you can add an SMS number to your outbound campaigns. You can add any specific number to only one outbound campaign but you can share with an inbound campaign. You can use this configuration to send outbound SMS when an agent receives a call from an outbound campaign that has an existing SMS-enabled number associated with it. When the agent chooses to send an outbound SMS during the call, then the default campaign used is the outbound campaign with an SMS-enabled number. If the outbound campaign doesn't have an SMS-enabled number, then the system uses the last defaulted campaign to send an outbound SMS.

Setting Notification to Show Out-Of-Numbers Alerts

Administrators can disable the notification message. The system displays this message to administrators and supervisors when an outbound campaign runs out of numbers to dial. When using Web2Campaign or the Configuration API to add records to a list, campaigns may often run out of numbers. In this case, alerts are distracting.

Using Contact Numbers as Caller ID in Third-Party Transfers

When an agent transfers a call to a third party, by default, the system sends the domain ANI as the caller ID number. This option enables customers to override the default domain ANI and send the contact's phone number as the caller ID number. The system uses the contact's number in these conditions:

- Agents can select **Include Caller Info** from the transfer window.
- The **Use Contact's Phone Number as Caller ID** selection is enabled in campaign properties.
- For transfers from inbound calls.

Using a Contact's Number as Caller ID for Third-Party Conferences

When an agent initiates a conference with a third-party, the system sends the domain ANI as the caller ID number by default. This option enables customers to override the default domain ANI and send the contact's phone number as the caller ID number.

Ignoring the DNC List for a Campaign

The system uses the DNC list in every campaign by default. This option enables you to override this feature and ignore the DNC list for this campaign. If you select this feature, ensure that you remain in compliance with any local, state, or federal regulations. This option isn't enabled on domains by default; if you are uncertain about your domain settings, please contact your Five9 representative.

Using the Campaign in Training Mode

The system runs outbound campaigns in training mode, which delivers calls to agents without dialing real phone numbers. The system presents calls to agents without dialing the phone numbers, to familiarize new agents with the Five9 Agent application

or the procedures to follow for a new campaign. The system simulates real campaign behavior by following dialing restrictions and campaign profile filters. Some features don't work in training mode, such as field mapping, final dispositions across campaigns, and statistics.

Training mode dialing rules:

- List penetration or vertical dialing list dialing mode can be used (see **Configuring Dialing Modes, Options, and Call Processing in Outbound Campaigns**).
- All three numbers associated with the contact record are enabled for dialing.
- Calls to Agent ratio is 1-to-1.
- Dispositions don't affect real records. REDIAL, FINAL, or DNC don't affect real campaign records.
- Campaign simulates real campaign behavior by following dialing restrictions and campaign profile filters.

Choosing the Campaign Start Mode

Select the mode to start the campaign:

- **Basic**: Run the campaign without a campaign profile, using default settings.
- **Advanced**: Run the campaign with a campaign profile. You should create a campaign profile before using this mode. See also, Selecting General Settings for Campaign Profiles in the Basic Configuration Administrator's Guide.

Defining Settings for Calls Transferred to Agents

The ACD (Automatic Call Distribution) algorithm defines how the system selects the next agent who will receive a call. The same option is available in the Skill Transfer Module.

- **Longest Wait - All Calls**: Selects the agent who has the longest wait (queue) time for all the calls.
- **Longest Wait - Non-Manual**: Selects the agent who has the longest wait (queue) time, excluding interruptions for manual calls.

  For example, an agent becomes Ready at 10:30, and then makes a manual call at 10:33. At 10:45 the agent is in Ready for 15 minutes.
- **Round Robin**: Selects the first agent from the list of agents for the queue. The list is initially sorted based on longest wait (queue) time for all calls. The system delivers the call to the agent on top of the list. When the agent receives a call, the system crosses off the agent from the list, and the ACD doesn't select this

agent until all other agents on the list have also received calls for the current round of dialing. When new agents make themselves ready for the queue, the system adds them to the bottom of the list. An agent who wasn't available or didn't accept an interaction isn't offered another interaction until the next round.

- **Min Calls Handled**: Selects the agent who has received the fewest calls relative to others based on statistics. The system takes the number of calls for the selected time period (see the following option). For example, if you select 8 hours for the Time Frame, then the system gives agents who started their shift the higher priority to receive calls.
- **Min Handle Time**: Selects the agent who has had the least total handle time for calls than others, based on statistics. The system calculates the handle time for the selected time interval (see the following option).

The system defines the **Time Frame** option for **Min Calls Handled** or **Min Handle Time** distribution algorithms. You can select from *15 minutes* to *This day*.

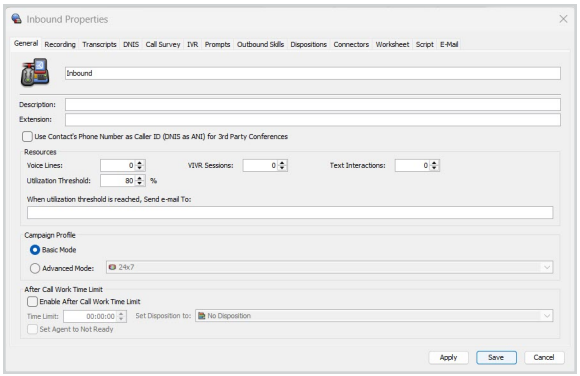
Defining the After-Call Work Time Limit

- **Enable After-Call work Time Limit**: Enable this option if you would like to limit agents' wrap-up time (the time between a disconnecting call and the agent selecting a disposition) when working on this campaign.
- **Time Limit**: Select the time limit for agents in wrap-up mode.
- **Set Disposition to**: Select the disposition that's automatically set for the call, if you reach the After-Call Work Time Limit.
- **Set Agent to Not Ready**: Enable this option if you would like to put agents who reach the After-Call Work Time Limit for a call to be automatically placed in a Not Ready State, so that they can't immediately receive more calls.
- **Reason Code**: If applicable, select the Not Ready Reason Code for agents who get automatically placed in a Not Ready state because of reaching the After-Call Work Time Limit. For example, you may want to create and assign a Reached ACWTL reason code so that Supervisors are aware of why these agents show Not Ready.

Inbound Campaigns General Properties

Setting an Internal Extension for the Campaign
Use Contact Phone Number for Third-Party Conferences
Defining Inbound Line Resources
Choosing the Campaign Start Mode
Setting After-Call Work Time Limits and Actions

When an inbound call is assigned to an agent, the system tries to find all records containing the caller's number. The first one found is associated with the call by default. When a caller uses a phone number that is not in the contact database, no automatic associations are provided.



To associate a call with another contact record or create a contact record for the current caller, agents can click **Select Contact Record** or go to the Contacts tab.

Setting an Internal Extension for the Campaign

Optionally define a four-digit number to be used as internal extension for the campaign.

Use Contact Phone Number for Third-Party Conferences

To use the contact phone number as caller ID for third-party conferences, select this option.

Defining Inbound Line Resources

Setting the Number of Voice Lines

Use this option to specify the number of inbound phone lines or ports (maximum number of simultaneous calls that can be made to the campaign) allocated to the campaign. See **Defining the Maximum Number of Lines**.

Setting the Number of VIVR Sessions

This setting runs an IVR script using a web browser URL, but instead of TTS prompts playing audio (as in a voice call), it displays the actual TTS text. A voice caller and a VIVR caller get the same IVR flow and experience; one uses voice, and the other uses a browser screen. For more information about VIVR, see the Interactive Voice Response (IVR) Administrator's Guide.

Setting the Number of Text Interactions

This setting runs IVR scripts for chat or email campaigns, limiting how many IVR sessions can run the IVR script concurrently. For example, if 10 customers are in a chat campaign and the number of text channels is set to five, then five of those customer interactions use the script, and the other five route to the chat campaign's default skill without any scripting logic.

Setting the Line Utilization Threshold

Use this setting to set an upper limit for the percentage of lines used by this campaign. The default value is set in global configuration window. See *Domain Settings* in the Basic Configuration Administrator's Guide.

To send an email notification when your line utilization threshold has been reached, enter a semicolon-delimited list of the email addresses.

Choosing the Campaign Start Mode

The campaign may be started in one of two modes:

- **Basic Mode**: Uses the default campaign settings.
- **Advanced Mode**: Additional campaign settings are defined using a campaign profile. Campaign profile is defined in the selector.

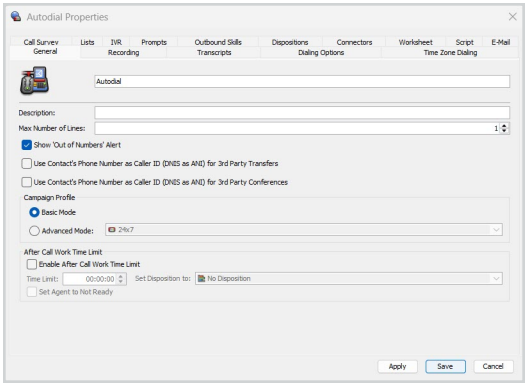
Setting After-Call Work Time Limits and Actions

You can define time limits and follow-on actions for after-call work, such as these:

- **Maximum Time Limit**: Specify the maximum time that agents may spend finishing a call.
- **Disposition**: Select the disposition that is automatically assigned to calls if the After-call Work Time Limit is reached.
- **Agent State**: To place agents in a not ready state following expiration of the after-call work time limit, select this option. The agents cannot place or receive any additional interactions until they are ready.
- **Reason Code**: Use this option to select the reason code to assign to agents who are placed in the Not Ready state if they have reached the After-call Work Time Limit.You may want to create a Reached ACWTL (After-Call Work Time Limit) reason code so that supervisors understand why these agents are not ready.

Autodial Campaigns General Properties

Defining the Maximum Number of Outbound Phone Lines
Creating a Notification to Show Out-of-Numbers Alerts
Using a Contact's Phone Number as Caller ID for Third-Party Transfers
Defining the Campaign Start Mode
Defining the After-Call Work Time Limit



Provide a meaningful name and description to identify the campaign.

Defining the Maximum Number of Outbound Phone Lines

The number of lines controls the number of outbound lines dedicated to the Autodial Campaign. This setting determines how many phone numbers are dialed at one time when the campaign is started.

Creating a Notification to Show Out-of-Numbers Alerts

Allows an administrator to turn off the notification messages stating that the campaign is no longer dialing because the lists have no numbers available for dialing. This message appears to administrators and supervisors when an Outbound Campaign runs out of numbers to dial. When using Web2Campaign or APIs to add records into a list, it is possible for a campaign to frequently run out of numbers. These alerts can distracting.

Using a Contact's Phone Number as Caller ID for Third-Party Transfers

When an agent transfers a call to a third party, the domain ANI is sent as the caller ID number by default. This option enables you to override the default behavior and to send the contact's phone number as the caller ID.

Defining the Campaign Start Mode

Select which start mode is used when the campaign starts. The following two modes are available:

- **Basic**: Use this mode to run the campaign with default settings.
- **Advanced**: Use this mode to run the campaign using a campaign profile. If this option is chosen, you must select a campaign profile. Before using this mode, first create a campaign profile.

Defining the After-Call Work Time Limit

- **Enable After-call work Time Limit**: Enable this option if you would like to limit agents' wrap-up time (the time between a call being disconnected and the agent selecting a disposition) when working on this campaign.
- **Time Limit**: Select the time limit for agents in wrap-up mode.
- **Set Disposition to**: Select the disposition that is automatically set for the call if the After-call Work Time Limit is reached.
- **Set Agent to Not Ready**: Enable this option if you would like to put agents who reach the After-call Work Time Limit for a call to be automatically placed in a Not Ready State, so that they cannot immediately receive more calls.
- **Reason Code**: If applicable, select the Not Ready Reason Code for agents who get automatically placed in a Not Ready state, as a result of reaching the After-call Work Time Limit. For example, you may want to create and assign a Reached ACWTL reason code, so that Supervisors are aware of why these agents are Not Ready.

Understanding the Dialer in Outbound Campaigns

List Order for Outbound Campaigns
Records Order
Numbers Order
Dialing Rules

List Order for Outbound Campaigns

List priorities may be set in the Campaign Properties window. This feature gives you the power to change the order in which calling lists are dialed. Setting equal priorities enables multiple lists to be considered as one sortable, virtual list, without the need to combine the lists. Setting different priorities for multiple lists in one campaign makes the dialer first go through the list with the higher priority, followed by lists with lower priorities.

Setting a list priority of zero (0) disables the campaign's ability to dial that list. You may use a priority of 0 if you would like to leave an old list associated with a campaign for

reporting purposes, but not dial it. You may also use workflow rules to set a list priority of 0 to temporarily disable dialing of a list, based on certain condition, such as time of day.

If using multiple lists with different priorities, the dialer completes all lists before returning to the top of the first list for a second pass.

If you partially dial one list, stop the campaign, and add a second list with higher priority, the dialer starts at the top of the new list. After completing the new list, it continues with the original list from the position where it left off.

Dialing ratios force the dialer to call records from multiple lists at specified frequencies (number of times). The dialing ratio is an optional function and can be defined in the Campaign Properties. For example, if your campaign has separate lists with hot and cold leads, you may dial hot leads more often than cold ones, without excluding any leads.

While the dialer attempts to dial lists at their configured ratios, the actual number of connected calls may not completely match this ratio, due to factors like call results and list lengths that do not match the configured ratio.

Records Order

If a sort order is not configured in a campaign profile that is associated to the campaign, the dialer dials the list records in the order they are presented in the list. This allows you to control the order in which the list records are dialed in an external application. You can organize the records in your lists in the necessary order, prior to uploading the list. The system follows this order while dialing.

You can use campaign profile settings to set the dialing order of a calling list, based on any of the contact record fields, along with several other functions and variables. See *Dial Order, Filtering And Sorting Lists* (Campaign Profiles) in the Basic Configuration Administrator's Guide.

The Dialer always remembers the list position even after stopping the campaign. If a campaign is restarted, the dialer returns to that position. It completes the entire list or lists before returning to the top to dial numbers marked for redial.

The list position applies to each campaign. If you move a list to a different campaign, that campaign starts dialing from the top even if another campaign has partially dialed

the list. You can use work flow rules to start dialing from the top of the list. See *About Workflow Rules* in the Basic Configuration Administrator's Guide.

You can also manually reset list position. In this case, the dialing will be restarted from either the first records that were added to the list or from the beginning of a specified sort order. See also **Resetting List Position in Outbound and Autodial Campaigns**.

Numbers Order

Each contact record can support up to three numbers. You can select one of two possible ways to dial the numbers. With vertical dialing, the dialer attempts to call number 1 in the list, then number 2, and then number 3, before attempting to dial the next record in the list. With list penetration, the dialer attempts to call one number per contact record during each list cycle, and only attempts dialing the next numbers for contact records on subsequent list cycles. See **Understanding the Dialer in Outbound Campaigns**.

Dialing Rules

The dialer uses rules during the automatic dial process and while selecting numbers for dialing.

Skipped Numbers or Records
General Dialing Rules

Skipped Numbers or Records

Numbers or records can be skipped by the dialer for many reasons:

- Dialing rules exclusions:
  - Number does not fit the dial time window set in the campaign profile.
  - Another number for the same contact record has already been dialed.
  - The same number has been dialed for another contact record.
  - State dialing rules exclusions prevent the dial attempt.
- Redial exclusions:
  - Maximum number of redial attempts has been reached.
  - Redial time-out has not yet expired.
  - The number has been assigned a final disposition for this campaign.

- Campaign profile exclusions:
  - The number is not enabled in the campaign profile.
  - Campaign profile filters specifically exclude this number.
  - Campaign list order or dialing mode prevent dial attempts.
- Do not call exclusions:
  - The number is on the Do Not Call list.
  - The number has been assigned a Do Not Call disposition.

General Dialing Rules

- Each contact record can contain up to three phone numbers.
- The dialer attempts to reach a contact record using any of the provided numbers.
- The same phone number can be in several contact records, depending on the list update process used when importing records.
- The campaign stores the state of dialed numbers for each contact record. If several campaigns use the same contact record, each campaign stores its dial history for attempted numbers from the contact record.
- Each number is assigned a disposition separately. Therefore, a contact record can have up to three dispositions per campaign. However, depending on disposition type and specific settings, a disposition may affect the entire contact record.
- Each number in the contact record has its own disposition, time stamp when the disposition was set for the number, and a counter recording the number of dialing attempts.

Campaign Profile Settings. If a campaign has been started in basic mode, the default campaign profile settings are used. Basic mode enables all three phone numbers for dialing (if using multiple phone numbers per record) and sets the dialing hours to 8:00 AM to 9:00 PM.

You can use the advanced mode to run campaigns using custom campaign profiles. Using campaign profiles, administrators can disable phone numbers if using multiple phone numbers per record, set different dialing hours per number, configure list dialing orders, add contact record filters, and configure a number of other options.

Disposition Type. The dialer skips list records if they have been assigned a disposition by Redial or Do Not Dial (DND) for campaign dispositions with enabled timers, and the timers have not yet expired.

> **Important**
>
> Contact numbers updated after a DND disposition has been applied have no disposition associated and are exempted from the DND timer restrictions.

In List Penetration dialing mode, redial-type dispositions without timers and Do Not Dial Number for Campaign dispositions with expired reactivation timers are dialed, based on their position in consecutive list cycles. In Vertical list dialing mode, the dialer attempts to dial numbers or contacts with expired timers as soon as possible if they are higher in the configured sort order or list position.

The dialer does not retry a number that has already been assigned a disposition and if its disposition does not have Redial or Do-Not-Call (which has timeout and can be dialed) type.

The Dialer does not dial contact records with the following dispositions:

- Final Disposition For Contact Record
- Add Number to DNC List with a selected option:
    - Add Active Number and Finalize Record for the Campaign
    - Add All Numbers and Finalize Record for the Campaign

The dialer also does not dial contact records that have any combination of Do Not Dial Number for Campaign (without a reactivation timer) or Add Number(s) to DNC List dispositions applying to all of the numbers for that contact records. See also, **Configuring Dispositions**.

Manual Intervention. The dialer does not choose a record if there is a call taking place using a record's associated number, in cases when one number is associated to multiple records.

Only the Final Disposition of a manual call affects Dialer behavior with regard to the record. Manual calls do not affect campaign runtime statistics (except Final dispositions).

Available Agents. An outbound campaign in power or progressive mode *reserves* an agent before making a call. The campaign makes calls to customers for the reserved

agents. If a call made for an agent fails, the campaign removes the hold on the agent. The agent can be reserved again by the same campaign or another campaign.

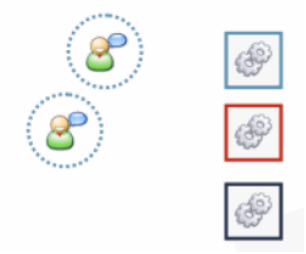
The estimated number of calls at a given time for such campaigns can be calculated by the following formula: Calls to Agents Ratio * Number of Reserved Agents.

Example

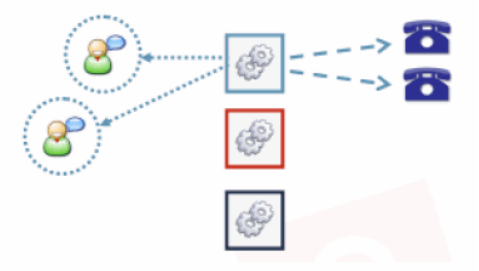
Assumptions:

- Campaigns have the same skills.
- Any campaign call can be assigned to any agent.
- Calls to Agents Ratio = 1.

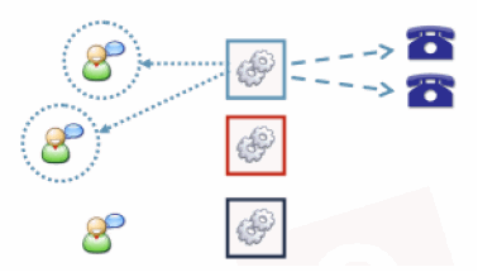
1 Blue campaign is first - it is reserving two agents.



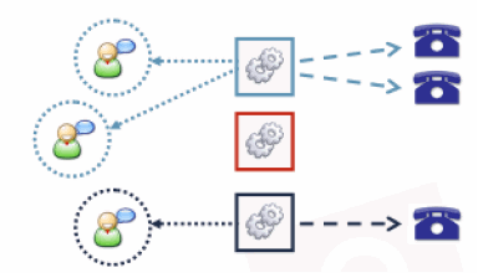
2 It makes calls to customers for the reserved agents.



3 New agent is appearing (go off break).



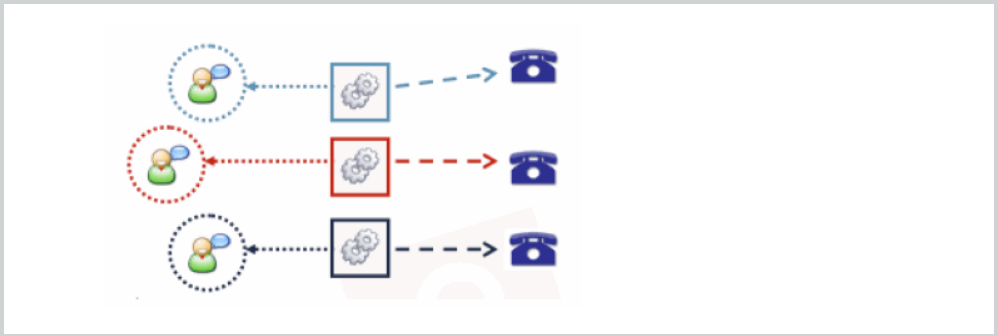
4 Third campaign is reserving it, calling the customer for the reserved agent.



5 One of two calls of blue campaign is broken and it is un-reserving one agent.



6 Red campaign is reserving the agent and making call for the agent.



Call Priority. Call priority is measured on a scale of one to 100, with one being the lowest priority. Call priority determines which calls in queue are answered first. Higher priority calls are typically answered before lower priority calls, regardless of when they enter the queue. Additionally, call priority may also be adjusted in the IVR Skill Transfer module during queue time and affected by your task distribution settings.

Basic inbound and autodial campaigns not using a campaign profile begin with a call priority of 10. Basic campaign outbound calls begin with a priority of 50 for preview dialing mode and 60 for all other dialing methods. Campaign profiles begin with an initial priority of 60 for all call types.

See *Creating Campaign Profiles* and *Setting the Distribution of Interactions* in the Basic Configuration Administrator's Guide . See also, *Skill Transfer Module* in the Interactive Voice Response (IVR) Administrator's Guide.

State Dialing Rules. State Dialing Rules define the dates, days, and times when contact records in a particular State will not be dialed. This feature can be enabled for a campaign in the General tab of the Campaign Properties. See **Dialing Rules**.

Statistics. Predictive Dialer Campaigns automatically control the pace of outbound calls, based on several statistics, such as average wrap time (AFTER-CALL WORK TIME), average handle time, and abandonment (dropped call percentage). See **Predictive Dialing Mode**.

For Power Dialing Mode campaigns with the Monitor Abandoned Call Percentage option enabled, the dialer automatically drops the Calls to Agent ratio to 1-to-1 if the configured Max Abandon Call Percentage is reached. Predictive Dialing Mode campaigns gradually drop the dialing rate if the campaign exceeds its Max Abandon Call Percentage. This change is more subtle than in Power Dialing campaigns.

Changes to Running Campaigns. You may apply some changes to your running campaigns. Read below how changing options influences the dialer.

Any changes to list orders or dialing modes do not affect the behavior of records that have Redial-type dispositions with timers. These records are dialed as close as possible to the scheduled redial times.

Records Order Changed. The administrator can change the Dialing Schedule for a number in Campaign Profile Properties, which may affect the order of dialing records.

The administrator can change the sort order in the campaign profile. In this case, the dialer applies new criteria to the list immediately and start using the new criteria for dialing, from the top of the newly configured list order. See *Dial Order*, *Understanding The Dialer*.

New Records Appear. If a record is added to the list while a campaign is in the middle of the list, it considers the record for dialing, according to sort order defined in the Campaign Profile. If the new list record is higher in the sort order than the dialer's current list position, it is considered for dialing right away. See *Adding Contact Record, Editing/Updating Contacts and Importing/Updating Call Lists*.

APIs and Web2Campaign list records that arrive with `F9CallASAP` flags set to true are put into their own special queue, which has higher priority than other list records. The sort order for this ASAP queue is determined independently from the rest of the list in Campaign Profile Properties under *Dial ASAP List Record Queue for Web APIs*. The available sort orders are:

- FIFO (first in, first out)
- LIFO (last in, first out)
- Contact Record Field(s): Sorts the ASAP queue according to the Order by criteria configured in the Filter tab of Campaign Profile Properties.

In addition to the sort order, you can specify the timeout period for ASAP queue records. If the lead has not been dialed and assigned a disposition during the timeout period, it is moved to the normal list queue and is no longer considered as an ASAP record.

You can also set the number of dial attempts for ASAP record in the Campaign Profile Properties window. This parameter indicates the number of dial attempts for an ASAP record, after which it loses the ASAP flag and gains regular priority. If you are using dial ASAP, the number must be set to 1 at minimum. See also *Web2Campaign*.

Campaign restarted. If the campaign was restarted without changing the sort order defined in the profile, it continues dialing from the last record before stopping.

Sort Order Changed. If the sort order is changed in the campaign profile properties, the campaign starts calling from the beginning of the list.

List Dialing Mode Changed. If the list dialing mode is changed, contact records are treated based on the new list dialing mode setting. For more information, see **Configuring the List Dialing Mode for Outbound and Autodial Campaigns**.

List Position Reset Manually. Dialing starts over from either the first records that were added to the list or from the beginning of a specified sort order. The list position can be reset manually or as a result of a workflow rule. For more information, see **Resetting List Position in Outbound and Autodial Campaigns**.

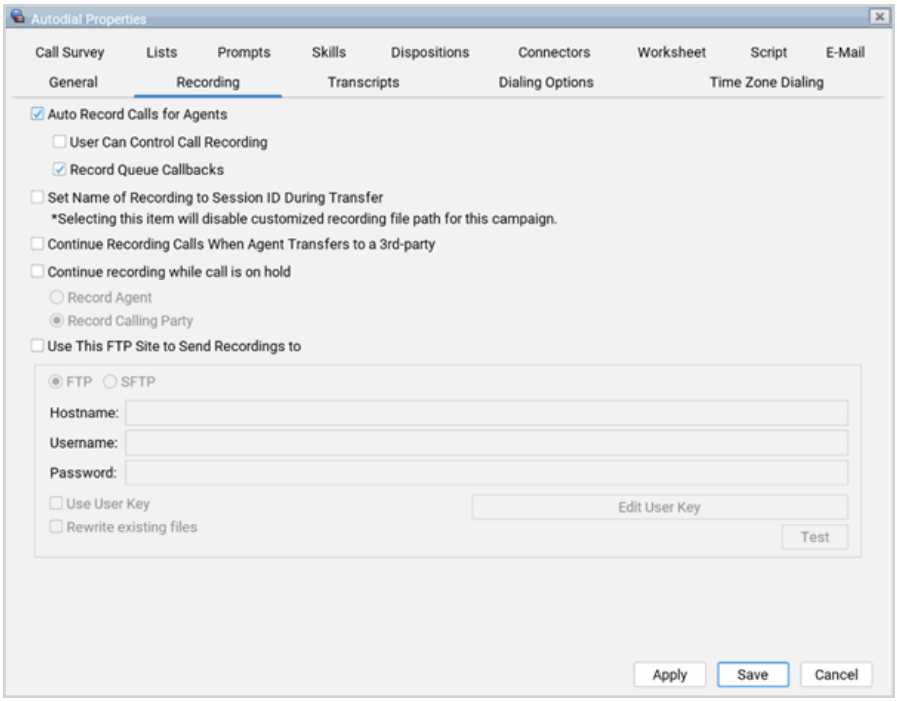
Configuring Call Recordings

This section applies to all types of campaigns. Call recordings are saved in the user properties of the agents as separate files that have the same session ID as the original call. Recordings are listed in call logs, worksheets, and call segment reports.

Agent Settings
Campaign Settings
IVR Settings

By default, call recordings are limited to one hour. If your campaigns make or receive calls that may exceed this duration, contact your Five9 support representative to increase the maximum call recording length to up to three hours.

The recording is a WAV file that contains the agents' conversations during the call sessions. The number of calls recorded is determined by the number of recording ports provisioned for your account. By default, an account with five seats has one recording port. An account with ten seats has two recording ports. Therefore, if ten agents are taking calls at the same time, 20% of the calls are recorded.



This table describes each option:

Setting	Description
Auto Record Calls for Agents	Automatically record all campaign calls, from beginning to end. To enable the agent to control when calls are recorded, check **User Can Control Call Recording**. To enable queue callback recording, check **Record Queue Callbacks**.
Set Name of Recording to Session ID During Transfer	By default, the file name for a recording transferred to your FTP server is the agent's name with a time stamp. However, you can name your recordings with the unique session ID. This option enables you to track recordings. Applies only to FTP transfer.
Continue Recording Calls When Agent Transfers to a 3rd-party	If enabled, you can continue recording calls after third-party call transfers are initiated in an IVR. If this feature is greyed-out (disabled) contact your Five9 representative.
Continue recording	Record either the contact or agent on hold or the parked contact.

Setting	Description
while call is on hold	This call segment, except for the on-hold music, is saved in a separate file. The entire call recording is associated with the agent. You are responsible for ensuring that parties are informed that they are being recorded.
Use This FTP Site to Send Recordings to	Transfer the recordings to your server. Select an FTP option, and enter the host name, user name, and password of your server. Passwords are masked. Avoid using FTP credentials that contain the @ symbol or other special characters. To test your FTP settings, click **Test**. Recordings are stored on the Five9 system for 30 days. You can access them in the agent's account properties. The files are exported via FTP daily. The original file is deleted from the VCC after the transfer is complete. See *Configuring Default FTP Settings*. These values may be different from the defaults set in the **Actions** > **Configure** menu. Recordings for this campaign are sent to a different FTP address. If you configure FTP settings for each campaign, those settings override the settings in the VCC Configuration window.

Agent Settings

If the permission is enabled, agents can record the calls by pressing the appropriate button.

The Voicemail/Recordings tab of the user properties window includes the Call Recording section. If **Always Record Agent's Calls** is checked, all the agents' calls are recorded, whether or not call are associated with a campaign.

To record more than the default 20% of allocated agent seats, your account must have enough provisioned recording ports.

Campaign Settings

You can enable these options for a campaign in the Recording tab:

- Auto-Record Calls for Agents
- Control Call recording by User
- Setting Recording name to Session ID

- Record Calls when Agent transfers to a third party
- Campaign-specific FTP server

IVR Settings

The following IVR modules can collect audio information:

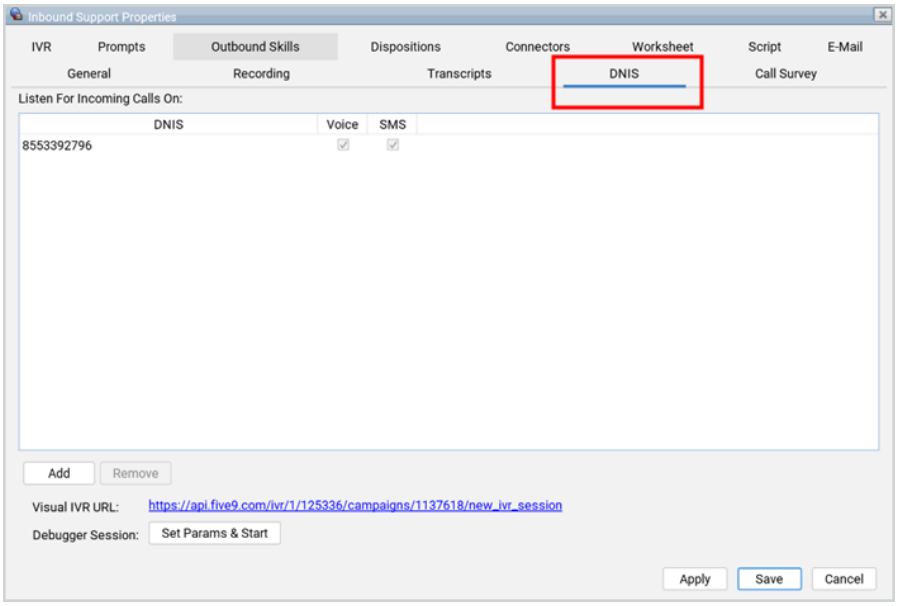
- Input Module (Record User's Input as Audio File option)
- Menu Module (Record User's Input as Audio File option)
- Conference Module (Make Recording of the Conference option)
- Voice Input Module
- 3rd Party Transfer Module (Record 3rd party Call option).

See also, Using Recorded Files in the Interactive Voice Response (IVR) Administrator's Guide.

Configuring DNIS for Inbound Campaigns

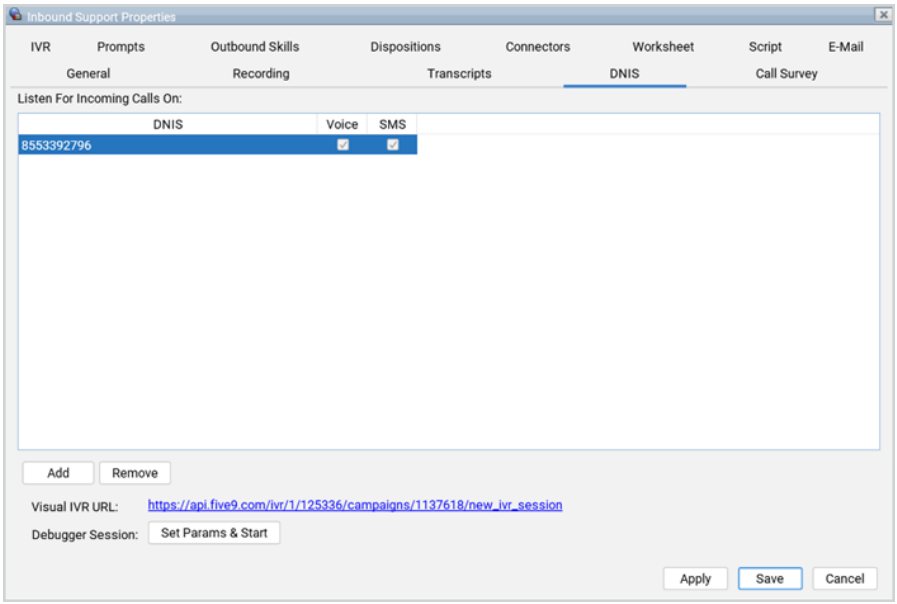
Use the Dialed Number Identification Service (DNIS) tab to associate a phone number or multiple phone numbers with this campaign. When a contact calls or sends an SMS message to this number, the interaction is processed by the campaign and routed based on the IVR setup. You must have available DNIS numbers assigned to your account to be able to add them to your campaigns.

Associating DNIS to an Inbound Campaign
Forwarding Calls to a Five9 Inbound Campaign
Removing DNIS from an Inbound Campaign



Associating DNIS to an Inbound Campaign

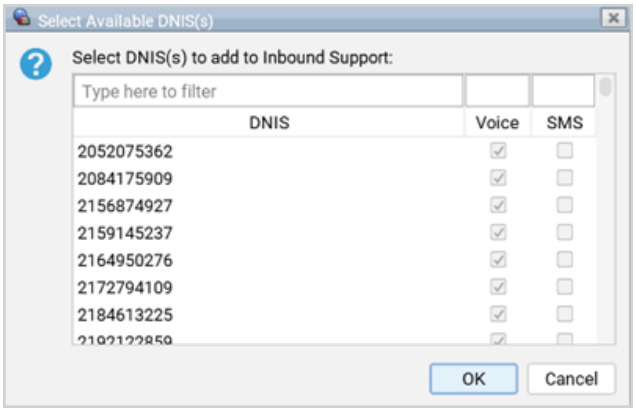
When a contact calls or sends an SMS message to this number, the interaction is processed by the campaign and routed by the IVR or Visual IVR script to the appropriate agents or skill group. Each campaign can have multiple inbound numbers. A specific may be assigned to only one campaign. You do not have to stop a campaign before adding a DNIS number.



1 In the Campaign Properties, select the DNIS tab.

2 Click **Add** to display the list of all available numbers assigned to your account.

Numbers already assigned to other inbound campaigns do not appear in the list. If your domain is enabled for SMS, this list identifies numbers enabled for voice, SMS, or both.



You can filter your results using exact match or contains using an alphanumeric string or boolean match specific to the field.

3 Select one or more numbers for this campaign.

4 Click **OK**.

5 Click **Save** or **Apply**.

For information about the Visual IVR URL at the bottom of the tab, see Using the Visual IVR URL in the Interactive Voice Response (IVR) Administrator's Guide.

Forwarding Calls to a Five9 Inbound Campaign

If you own toll-free numbers, you can instruct your carrier to forward calls to a DID number provided by Five9, which would enable calls to your toll-free numbers to be answered by the Five9 campaign. Simply add the selected DID number to the campaign.

You can also move the toll-free number to Five9 (RESPORG: Responsible Organization). Contact your account manager for more details.

Removing DNIS from an Inbound Campaign

You do not have to stop a campaign before removing a DNIS number.

1. Select the numbers to remove.
2. Click **Remove**.
3. Click **Yes**.
4. Click **Save** or **Apply**.

Configuring Dialing Modes, Options, and Call Processing in Outbound Campaigns

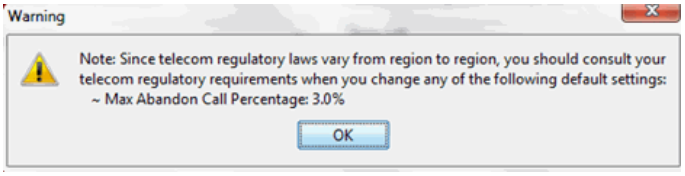
The campaign dialing mode defines how the outbound campaign dials the records. Configuration options differ for each type of campaign dialing mode. Dialing options define how the campaign processes records in the list.

Default Campaign Settings
Predictive Dialing Mode
Power Dialing Mode
Progressive Dialing Mode
Preview Dialing Mode
TCPA Manual Touch Dialing Mode

Default Campaign Settings

For all campaign dialing modes, campaign dialing options are set initially to default values recommended by Five9 to help you to remain in compliance with Federal Communications Commission (FCC), Federal Trade Commission (FTC), and UK Ofcom telemarketing regulations.

If you change the default settings, you see a warning which indicates that you might become out of compliance. For example, a U.S.-based domain administrator would receive this warning if trying to change the Max Abandon Call Percentage value from the preset default:

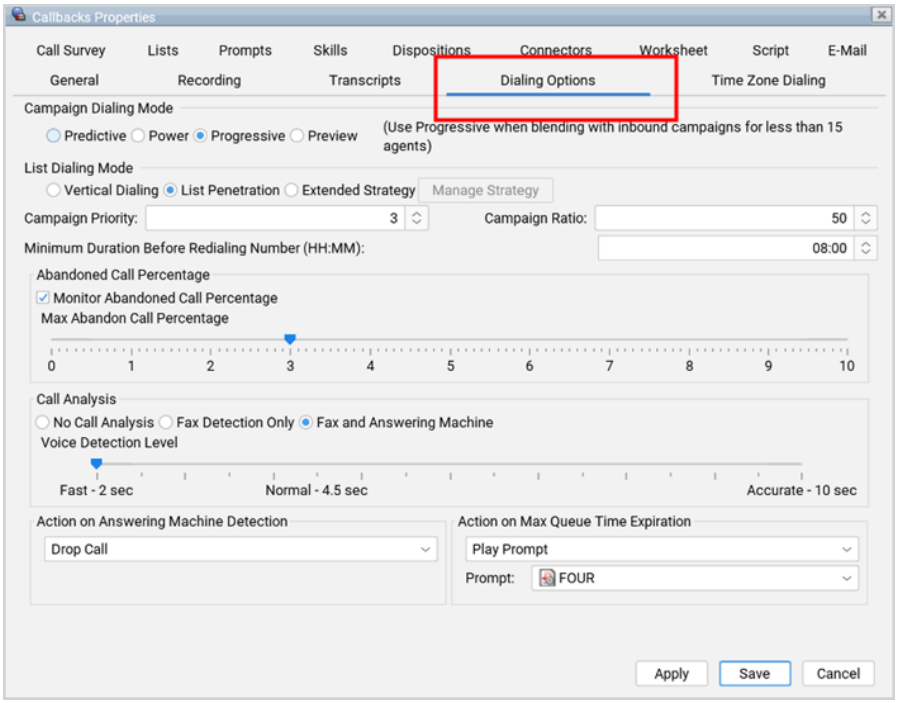


Default values are set for these campaign fields:

- Max Queue Time
- Show ‘Out of Numbers’ Alert
- Monitor Abandoned Call Percentage
- Max Abandoned Call Percentage
- Call Analysis
- Voice Detection level
- Action on Max Queue Time Expiration

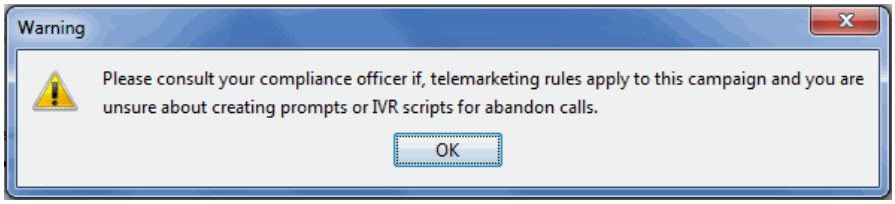
The calculations for some values differ between U.S.- and European-based domains. Outbound campaigns use the rolling 30 days to monitor the abandon rate for US domains, while for UK domains it uses 24 hours. Customers can request a Five9 business representative to set up their domain as either a US or UK domain.

Refer to the appropriate agency regulations for current requirements.



The message below is displayed when any of the following conditions occur:

- The campaign is saved for the first time.
- A new prompt is configured for queue time expiration action.
- Abandon call or play IVR script is selected for queue time expiration action.



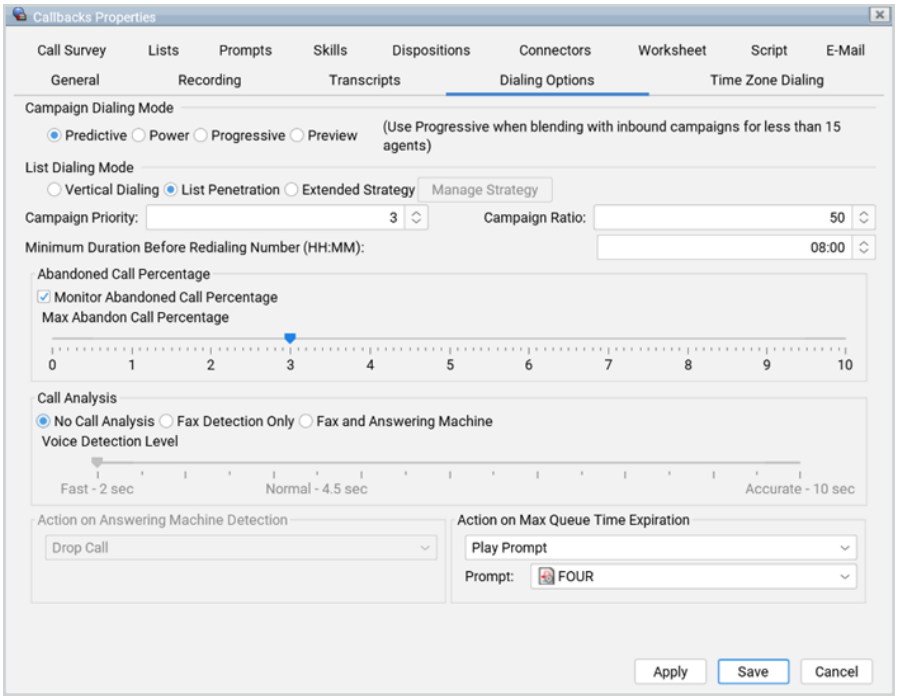
Predictive Dialing Mode

The predictive dialer automates outbound activities and maximizes agent productivity by ignoring unreachable numbers, such as those with busy signals, operator intercepts, no-answers, and do-not-call numbers, and by automatically adjusting the dialing pace. The dialing pace is determined by the predicted agent availability based on historical

and short-term statistics, such as call handle and ring times, percentage of answered calls, and dropped call percentage for the last 30 days. The dialer attempts to keep the campaign below the configured dropped call percentage. All rules are described in Dialing Rules.

The Predictive Dialing Mode option is designed for contact centers and businesses that regularly perform large numbers of outbound calls. Predictive Dialing mode is an aggressive outbound algorithm that is best suited for high volume outbound environments with a large pool of agents dedicated to outbound activity. Predictive Dialing mode should never be used with less than 15 agents consistently active in the campaign at all times. Agents skilled for a campaign that uses Predictive Dialing should be committed to that campaign, and not be skilled for other campaigns, particularly inbound campaigns. Sharing agents with other campaigns or having inconsistent staffing levels may result in a high number of abandoned outbound calls. Five9 recommends that you consult your Five9 representative before implementation to determine if Predictive Dialing mode is right for your contact center.

Tuning the Predictive Dialer
Controlling the Dialing Pace
Setting Action on Max Queue Time Expiration



Tuning the Predictive Dialer

To set the predictive dialing options, use the **Abandoned Call Percentage** and **Call Analysis** options.

Calls are presented to agents when they are available. The calls-to-agent ratio is automatically adjusted, which maximizes agent usage while attempting to stay below the configured dropped-call percentage. The dialer automatically paces the number of calls, without reserving agents or waiting for individual agents to be available. Numbers may be dialed in anticipation of an agent becoming available. When reaching the maximum dropped call percentage, the dialer gradually reduces the calls-to-agent ratio to attain an acceptable value.

Several factors can lead to increased numbers of dropped calls, for example:

- Few calls
- Short campaign run-time
- Few agents
- Agents shared across multiple campaigns
- Agents suddenly not ready

Controlling the Dialing Pace

Enable **Call Analysis** to monitor Abandon Call Percentage and Fax and Answering Machine Detection (Call Analysis). Both are optional.

If too many calls are abandoned, adjust the tolerance. The default values are provided to help you remain in compliance with dialing regulations. If you attempt to change the value, you see a warning and a reminder of the default value.

Setting Action on Max Queue Time Expiration

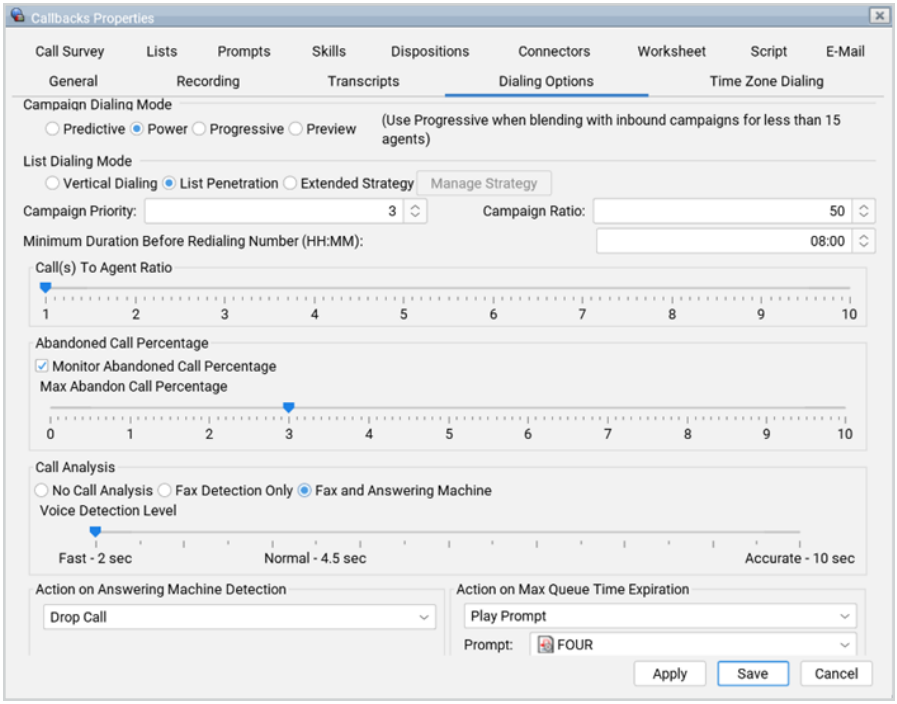
When the maximum queue time is reached, you must play a recorded prompt for the caller. The script must give the caller your company name and callback number.

Power Dialing Mode

Use Power Dialing mode when you want to set a fixed Calls-to-Agent Ratio for dialing multiple calls per agent. The dialing algorithm identifies agents as they become available for calls and continuously dials at the configured rate, until live persons are connected with the agents. The dialer automatically detects and filters out unreachable

numbers, such as those with busy signals, operator intercepts, and no-answer calls, and avoids do-not-call (DNC) numbers to ensure compliance with regulations.

Power Dialing Mode Characteristics
Controlling the Dialing Pace
Using Call Analysis and Detect Fax or Answering Machines



Power Dialing Mode Characteristics

- **Dials at a fixed Call(s)-to-Agent Ratio with between 1 and 10 calls placed per agent**: Dials whenever an agent becomes ready for calls.
- **Agent usage varies, depending on the configured Call(s)-to-Agent ratio.**
- **Dialer reduces the Calls-to-Agent ratio when reaching the maximum abandoned call %**: Abandoned call percentage for last 30 days (if Monitor Dropped Call Percentage is enabled) for U.S.-based domains; Last 24 hours for U.K.-based domains. Calls are immediately reduced to a 1:1 call-to-agent ratio if this percentage threshold is reached.
- **Campaign statistics control the dialing pace**: If the Calls-to-Agent Ratio is set to a rate that exceeds your account's maximum number of outbound lines, and

depending on how many agents are currently available for calls, the dialing rate at any given time will not exceed your maximum number of lines.

Controlling the Dialing Pace

You may also enable the Monitor Abandon Call Percentage option for this dialing mode. If the campaign's Abandoned Call Percentage for the last 30 days exceeds the configured threshold, the Power Dialer can gradually throttle down to a 1-to-1 Call-to-Agent Ratio, until an acceptable Abandoned Call level is reached.

Keep in mind that the default value is set to help you remain in compliance with dialing regulations. If you change from the default value, you will receive a warning and are minder of the default value.

Using Call Analysis and Detect Fax or Answering Machines

Fax and Answering Machine Detection (Call Analysis) is optional.

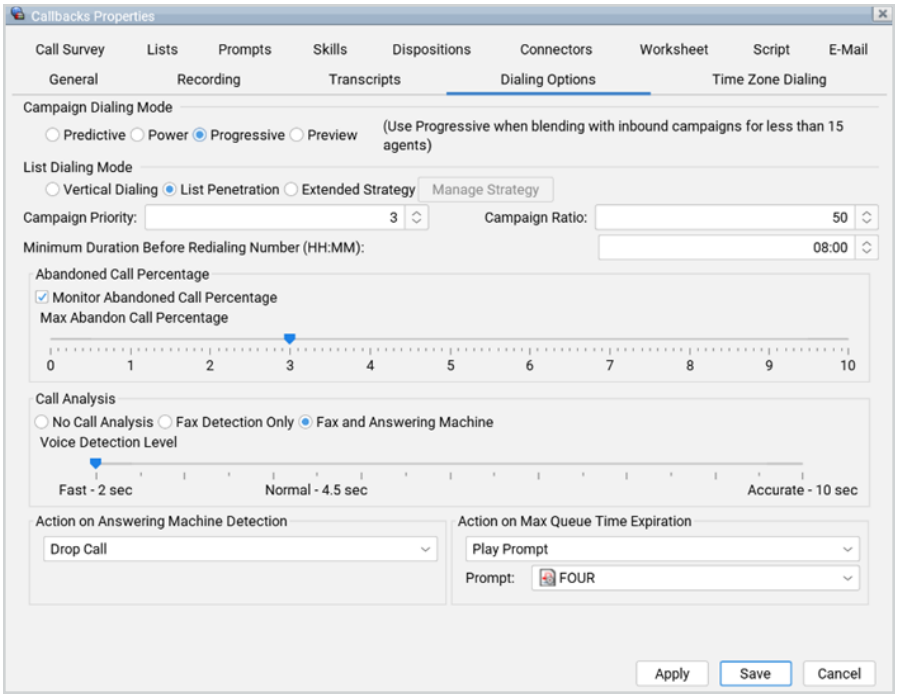
> **Note**
> Five9 recommends that you disable abandoned call monitoring and the calls-to-agent ratio option when using fax and answering machine detection.

Progressive Dialing Mode

Progressive dialing is designed for campaigns that have a relatively high level of agent usage, delivering calls to the agents as they become available. Progressive dialing uses campaign statistics to adjust the calls-to-agent ratio without exceeding the configured maximum abandoned call percentage defined in the default campaign settings (see **Default Campaign Settings**). Progressive dialing is less aggressive than predictive dialing and is appropriate when fewer than 10 active agents enabled for the campaign.

To configure additional dialing mode characteristics, see **Defining the Extended Dialing Strategy**.

Progressive Dialing Mode Characteristics
Controlling the Dialing Pace
Using Call Analysis and Fax Machine Detection



Progressive Dialing Mode Characteristics

- **The dialer automatically adjusts the Calls-to-Agents ratio**: Based on the percentage of answered calls and the current dropped call percentage level.
- **The dialer reserves agents as they become available for calls**: Starts dialing numbers from the campaign's list(s), until a live party is reached.
- **Agent usage is medium**.
- **Calls-to-agent ratio is automatically controlled**: Numbers are dialed only when an agent becomes available for calls.
- **Dialer manages Calls-to-Agent ratio**: When reaching the maximum dropped call %, the dialer gradually reduces the Calls-to-Agent ratio.

Controlling the Dialing Pace

Monitor abandoned call percentage for last 30 days (U.S.) or last 24 hours (EU). If you are experiencing too many abandoned calls, you can adjust the tolerance for abandoned call percentage. Keep in mind that the default value is provided to help you remain in compliance with dialing regulations.

If you change the default value, you will receive a warning and a reminder about the default value.

Using Call Analysis and Fax Machine Detection

Fax and Answering Machine Detection (Call Analysis) are optional.

> **Note**
> Five9 recommends that you disable abandoned call monitoring and calls-to-agent ratio options when using call analysis.

Preview Dialing Mode

Use Preview Dialing mode as an alternative to the automatic dialing modes to give more control over dialing to agents. Preview Dialing is often used in sales-oriented call center operations, where agents have more frequent and personal interaction with contacts. Preview Dialing mode does not filter undesired call results, such as busy signals or operator intercepts. Instead of automatically dialing numbers from a list and delivering connected calls to agents, an agent receives the contact record before any number is dialed. The agent can review the contact record details before a call is made. Agents can be allowed to skip records which they preview.

Extended Strategy Support for Preview Dial
Prerequisites for Preview Dialing Mode
Preview Dialing Mode Characteristics
Preview Campaign Interrupt Options
Skipping Records or Forcing Numbers to be Dialed
Defining the Maximum Preview Time
Features Not Used with Preview Dialing Mode
Setting Dialing Options for Preview Campaigns
Dispositions in Preview Dialing Mode
Skipping Recodes in Preview Dialing Mode

Extended Strategy Support for Preview Dial

This feature adds support for the Extended Dialing Strategy to outbound campaigns using Preview dialing. Campaign administrators can define extended dialing strategies for Preview campaigns to how often and when to redial important leads. This feature is available for Predictive, Power, and Progressive dialing modes.

Prerequisites for Preview Dialing Mode

The desired campaign profile must already exist to use the Advanced Campaign Start Mode.

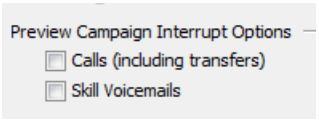
Preview Dialing Mode Characteristics

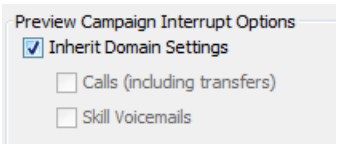
- **Preview Dialing option provides support for Extended Strategy List Dialing Mode**: Requires extended strategy to be configured and selected. To manage an extended strategy, see **Defining the Extended Dialing Strategy**
- **Agents receive the contact record before dialing takes place**: Agents make decisions about whether to call a contact.
    - If a Preview Dial campaign is configured to use extended strategy then agents receiving the contact record before dialing takes place: Agents make decisions about whether to call a contact.
    - Agent will not have a choice to select a number (primary, alternate 1, alternate 2) of the contact record number to dial. System will only show a single number which is based on campaign profile and extended strategy settings.
- **Workflow rules, dialing rules, dialing hours, list sort order, and contact record criteria apply**.
- **Agents can skip contact records**: Assign permission to individual users in the **User** > **Roles** tab or to groups of users in **User Profiles** to allow users to skip records in preview (*User Can Skip Contact Records)*.
- **Individual phone numbers are not dialed ahead of delivery to an agent.**

Preview Campaign Interrupt Options

Preview campaigns can allow contact preview sessions to be interrupted with an incoming call or a skill voicemail that is more important to the business. Agents interrupted with either a call or a voicemail are returned to the preview session after a disposition is set. Preview Campaign Interrupt Options can be set in the **Actions** > **Configure** > **Other** tab or in **Campaigns** > **Configure** > **Dialing Options** tab.

Allow interrupts from calls or Skill Voicemails for the campaign. Set in the **Actions** > **Configure** > **Other** tab.	When set in the **Campaigns > Configure > Dialing Options** tab, you can inherit what was set in the domain settings or override those settings in the campaign by selecting Calls, Skill Voicemails, or both.





Skipping Records or Forcing Numbers to be Dialed

Administrators can configure preview dialing to allow agents to skip records or force a number to be dialed after a configured preview time. The ability to skip records is configured as an agent permission in the Agent Role tab. Dialing rules and other campaign settings apply. When the agent skips a record, a disposition must be selected from the campaign's configured **Decline Preview Record Dispositions**, and the system delivers the next record.

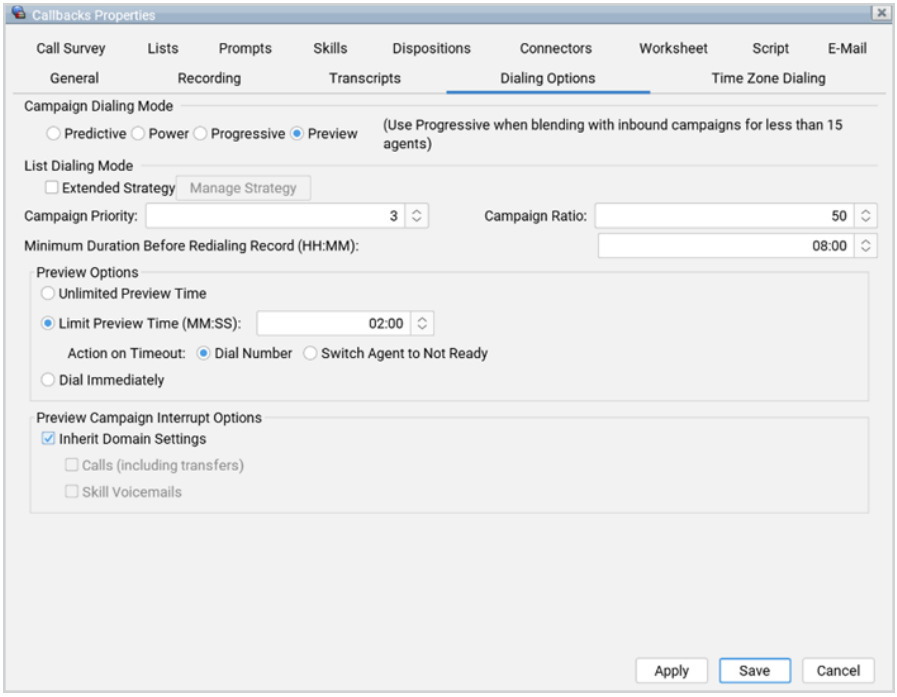
Defining the Maximum Preview Time

You can configure Preview Dialing to force the record to be dialed after a defined preview time. Presents contact records to agents who may select which number to dial and must manually set No Party Contact dispositions.

Features Not Used with Preview Dialing Mode

- Calls To Agent Ratio
- Dropped Call Percentage
- Call Analysis

Setting Dialing Options for Preview Campaigns



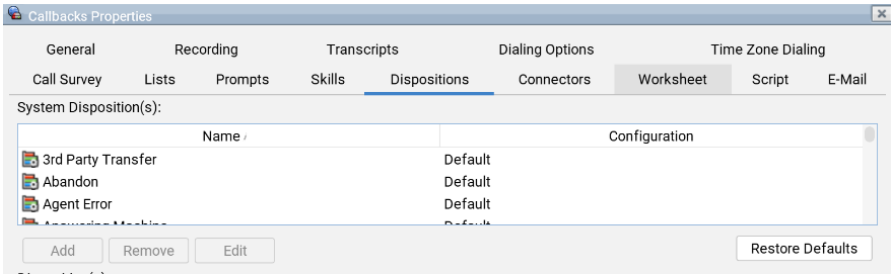
Minimum Duration Before Redialing Record (HH:MM)	Minimum time between calls to the numbers indicated in a contact record. This setting does not affect Redial dispositions with a Redial Timer until the disposition's number of attempts are reached. See *Number Redial Timeout*.
Preview Options	Select from: • **Unlimited Preview Time**: Agents can take as much time as needed to make calls to the record. • **Limit Preview Time (MM:SS)** : Limits the length of time an agent can preview a record. The timer appears on the bottom pane of the Agent application. The **Action on Timeout** selection determines what happens when the preview time expires. • **Dial Immediately**: Automatically dials the appropriate number for the preview record, without waiting for an agent to make a decision. • **Switch Agent to Not Ready**: Places the agent in the Not Ready state if they do not dial within the configured preview time. The

	agent receives a notification after the timeout period.
Preview Campaign Interrupt Options	• Inherit domain settings for interrupt options, or • Allow incoming calls, transfers, and skill voicemail to interrupt contact record preview. Cannot be used in Preview campaigns with Dial Immediately configured. When an agent switches to a Not Ready state after processing a voicemail that interrupted the preview task, no interruptions occur in the current preview task.

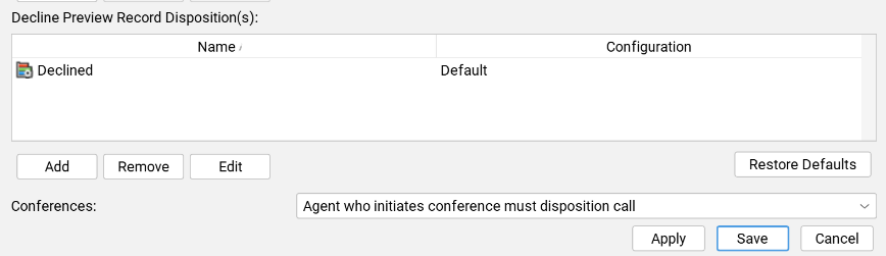
Dispositions in Preview Dialing Mode

Define the dispositions available to agents when the agent wishes to skip (decline) a previewed record. The default disposition for such cases is labeled as system disposition Declined. You can edit the properties of this system disposition or add a different, custom disposition that can be used in such cases. Examples of custom skip dispositions are Skip - Re-Queue (I do not want to dial this record now but I want to keep it in the list and dial later), Skip - Not Qualified (I do not have enough qualification to dial this number).

When working with preview dialing campaigns, agents initiate the call to the contact. Since some calls are not answered (busy, no answer, and so on), we must provide the agent with dispositions for these unanswered calls. Additionally, Operator Intercept and SIP Response Codes are available as call dispositions. Like other outbound campaigns, preview dialing campaigns have access to a set of system dispositions. Changes applies only to this campaign. The Configuration field for such dispositions displays Custom, instead of Default.



As with predictive dial campaigns, you should add custom dispositions for answered calls.



The disposition type and disposition redial timers are used for preview calls and for declined records. For example, if a decline disposition is configured to redial in five minutes, that record is available for preview again after the redial timeout.

> **Note**
> When a Preview Dial campaign is configured to use the Extended Strategy List Dialing Mode, you should avoid the use of disposition types with redial timers. Disposition types with redial timer will take precedence over extended strategy redial configuration if both are configured.

Skipping Recodes in Preview Dialing Mode

Depending on your configuration, agents may have the option to skip records when working with preview dialing campaigns. When agents skip records, they select a skipped disposition. Clicking the Dispositions tab makes the Decline Preview Record Disposition(s) section available. This section is only enabled if the Campaign Dialing Mode is set to Preview.

TCPA Manual Touch Dialing Mode

TCPA Manual Touch Dialing mode is available only in domains enabled for TCPA Manual Touch Mode. TCPA domains are generally used for telemarketing campaigns to dial cell phones when the business does not have expressed consent to call customers on their cell phone.

Campaigns are configured in a domain with no other dialing modes available. In the **Dialing Options** tab for the outbound campaign, you define the maximum preview time before the agent status is changed to Not Ready. This option is a strict version of the Preview Dialing mode: contacts are shown to agents but are not dialed automatically.

By default, agents are required to input all internal and external phone numbers manually. External numbers are not dialed automatically. Agents cannot cut and paste or drag and drop a phone number into the field. When ready to dial an external number, agents must enter the number in the field. After agents have entered the number correctly, the **Dial** button is activated.

This feature applies to these types of calls, whether or not they are part of a campaign: click-to-dial, call previews, and queue and voicemail callbacks. For queue callbacks, automatic dialing is disabled, and, for outbound calls, automatic answer is disabled. However, using speed dial for internal numbers and transferring calls to third parties do not require manual retyping.

Restrictions
Characteristics
Skipping Records
Removing Contact Records From a Running Campaign

Restrictions

You cannot set the dialing mode to force a record to be dialed after a specified preview time is reached.

No automatic dialing capabilities are available with this dialing mode (specifically, the Dial Immediately and Dial Number options have been removed).

Characteristics

- **Agents have complete control over dialing and setting call dispositions**: Any dialing actions associated with a call to an external number are performed manually.
- **Presents contact records to agents who may select which number to dial**: Agents must manually set No Party Contact dispositions.
- **Excludes any autodial capability to external numbers**: Dialing rules and other campaign settings apply.
- **Agent receives the contact record before any number is dialed**: Numbers cannot be automatically dialed from a campaign list or have connected calls delivered to agents.
- **Agent can review the contact record details and must enter numbers manually to dial**: Agents must retype any numbers that will be dialed to external customer numbers.
- **Calls to internal numbers, using speed dial to internal numbers, and transferring to third parties work the same way as in standard Five9 domains**: Manual retyping in these cases is not required.

Skipping Records

Agents can be allowed to skip records which they preview. The permission is called User Can Skip Contact Records in TCPA Manual Touch dialing mode, and is configured in the Agent role through the Five9 Administrator application.

When the agent skips a record, a disposition must be selected from the campaign's configured Decline Preview Record Dispositions, and the system delivers the next record.

If the set preview time is reached before the agent dials a number, the agent's status is set to **Not Ready**.

No external number can be dialed automatically in the event of a preview timeout.

Removing Contact Records From a Running Campaign

An outbound campaign prepares for dialing by placing a selection of contact records from the associated list into cache, typically about 100 numbers. A telephone number that exists in cache may be dialed again during that campaign.

To ensure that a number is not dialed, assign a final disposition to that record. The final disposition prevents any future dial attempts for that number during that campaign. For more information, see **Managing Campaign Dispositions**.

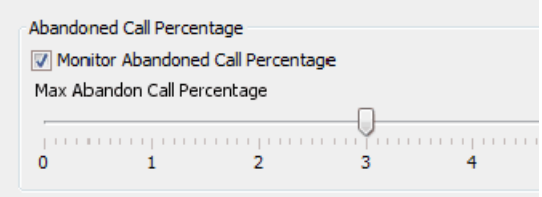
Summary of Dialing Mode Features

This table lists dialing mode features and provides other options for each campaign dialing mode. Interpret the column headings as:

- PD = Predictive
- PW = Power
- PG = Progressive
- PV = Preview
- TCPA = Preview only

Options	PD	PW	PG	PV	TCPA
List Dialing Mode: These options define the principle by which the numbers are dialed within a list. There are two dialing modes available:	X	X	X		

Options	PD	PW	PG	PV	TCPA
• **Vertical Dialing**: The dialer attempts to call all numbers in one contact record and proceed to the next contact record. • **List Penetration**: The dialer attempts to call all numbers in the number 1 column, then dials number 2, number 3, and so on. See also **Configuring the List Dialing Mode for Outbound and Autodial Campaigns**					
Minimum Duration Before Redialing Number (HH:MM): Minimum time between calls to the numbers indicated in a contact record. This setting does not affect Redial dispositions with a Redial Timer until the disposition's number of attempts are reached. See *Number Redial Timeout*.	X	X	X	X	X
Call(s) To Agent Ratio: Number of phone numbers are dialed for an agent when the agent is ready for a new call. To keep agents as occupied as possible, the progressive and predictive modes automatically adjust the dialing pace without exceeding the configured maximum lifetime abandoned call percentage for the campaign. If your list has a lot of numbers that are not answered or you are dialing at a time of day when people are not at home, you may want to set a higher Calls to Agent Ratio. If Calls to Agent Ratio is set too high it increases your dropped call rate (abandoned call percentage).		X			
Abandoned Call Percentage and Max Abandoned Call Percentage: Tracks the campaign's abandoned call percentage for the last 30 days (U.S.) or 24 hours (EU) or since the last reset using the Reset Dialer's Abandon Call % option, and slows the Dialer to keep the abandoned call percentage to the level selected with Max Abandoned Call Percentage.	X	X	X		

Options	PD	PW	PG	PV	TCPA
 FCC, FTC, and Ofcom regulations refer to dropped calls as *abandoned* calls. For telemarketing campaigns, adjust the Max Abandoned Call Percentage to match the federal requirements for abandonment. FCC and FTC telemarketing regulations require the abandoned call percentage for a campaign be kept to 3% or less over 30-day periods. Ofcom uses the last 24 hour period (midnight to midnight). For Five9 customers to remain compliant with FCC or Ofcom regulations for abandoned calls in campaigns, custom dispositions are not included in the calculation for the Abandoned Call Percentage. Refer to FCC or Ofcom regulations for current requirements and call abandonment rate calculation. For Power Mode, this setting works with Call to Agent Ratio by dialing fewer numbers at a time if the abandoned call percentage exceeds the Max Abandoned Call Percentage you select. Only an integer (whole number) may be selected for the percentage setting. If the abandoned call percentage exceeds the configured Max Abandoned Call Percentage, the dialing algorithms will attempt to gradually slow down dialing to maintain the Max Abandoned Call Percentage for the last 30 days (U.S.) or 24 Hours (EU). In this case, you may experience longer agent wait times between calls.					
Monitor Abandoned Call Percentage: Enables the automatic throttling of the Call(s) to Agent Ratio to a lower setting if the specified Dropped Call Percentage threshold is reached.	X				
Unlimited Preview Time: Agents can take as much				X	X

Options	PD	PW	PG	PV	TCPA
time as needed to make calls to the record.					
Limit Preview Time: Limits the length of time an agent can preview a record. The timer appears on the bottom pane of the Agent application. The Action on Timeout selection determines what happens when the preview time expires.				X	X
Dial Number: Automatically dials the number for the preview record. For example, you may allow your agents to preview a record for 30 seconds before dialing. The first available number is dialed. The Agent application switches to the General tab automatically.				X	
Switch Agent to Not Ready: Places the agent in the Not Ready state if they do not dial within the configured preview time. The agent receives a notification after the timeout period.				X	X
Dial Immediately: Automatically dials the appropriate number for the preview record, without waiting for an agent to make a decision.				X	
Call Analysis: Enables you to filter out answering and fax devices: • **No Call Analysis**: All connected calls pass through, including those to answering and fax devices. • **Fax Detection Only**: Calls to fax machines are prevented, but those to answering machines are passed to agents. You cannot change the detection speed because a fax is identified almost immediately after the number is dialed. • **Fax and Answering Machine**: Calls to fax machines and to most answering machines are prevented. After the call is answered, the voice is analyzed to differentiate a person from a recording. For recordings, you can set the campaign in one of two ways instead of sending the call to the agent: ◦ Hang up and dial the next number. ◦ Leave a message that contains dynamic information, such as the name of the	X	X	X		

Options	PD	PW	PG	PV	TCPA
contact spoken using Text-to-Speech, when used with IVR scripts. • **Voice Detection Level:** If you select Fax and Answering Machine, this setting determines the time-out for analyzing the voice when a call is answered. See also: **Configuring Call Analysis for Outbound and Autodial Campaigns** **Important:** If your contacts hang up before calls reach your agents, set the Voice Detection Level to Fast. If this setting is not sufficient to resolve the problem, try disabling Call Analysis.					
Action on Answering Machine Detection - This setting applies to Fax and Answering Machine: • **Abandon Call:** By default, the dialer hangs up without leaving a message. • **Play Prompt:** To leave a recorded message, select this option, a prompt, and a maximum greeting time (seconds). See also: *About Prompts*. • **Play IVR Script (Advanced):** To connect the call to an IVR script, select this option and a script. See also: *About Interactive Voice Response (IVR)*.	X	X	X		
Preview Campaign Interrupt Options • Inherit domain settings for interrupt options, or • Allow incoming calls, transfers, and skill voicemail to interrupt contact record preview. Cannot be used in Preview campaigns with Dial Immediately configured. When an agent switches to a Not Ready state after processing a voicemail which interrupted the preview task, no interruptions will occur in the current preview task.				X	X
Action on Max Queue Time Expiration - Action on Max Queue Time Expiration occurs when the Max Queue Time (See Campaign Profiles: *Selecting*	X	X	X		

Options	PD	PW	PG	PV	TCPA
General Settings) expires because there are no agents available to take the call. The following actions can be selected via this menu: • Abandon Cal: The default selection. • Play Prompt: To play a recorded message, select Play Prompt, and choose a previously uploaded prompt. This feature give you control over setting a *safe harbor* message and allows you to configure different messages for each campaign. See also, About Prompts. • Play IVR Script (Advanced): This option can be used to connect the call to an IVR script for further actions. An example would be an IVR script to play a recorded Safe Harbor message plus present options for adding the number to the domain DNC list. See also,Interactive Voice Response (IVR) Administrator's Guide. For telemarketing campaigns, you may need to record a safe *harbor* message for abandoned calls and play it as a prompt.					

List Dialing Mode.

- **Vertical Dialing**: The dialer attempts to call all numbers in one contact record and proceed to the next contact record.
- **List Penetration**: The dialer attempts to call all numbers in the number 1 column, then dials number 2, number 3, and so on.
- **Extended Strategy**: The dialing pattern is customized to focus on contacts that are more important to the business.

  See **Configuring the List Dialing Mode for Outbound and Autodial Campaigns**.

Minimum Duration Before Redialing Number. The minimum time that should pass between calls to the numbers indicated in an individual Contact record. This setting can be used for adjusting the interval between redialing a record in Vertical Dialing mode. This setting does not affect Redial dispositions with a Redial Timer until the disposition's Number of Attempts are reached. See **Setting the Time-Out for Redialing Numbers**.

Call Analysis

Voice Detection Level. An agent connects to the call after the voice is detected. Adjust the voice detection level to set the accuracy of answering machine detection. A setting at or closer to Fast detects fewer answering machines, while a setting closer to Accurate detects more answering machines. However, the Accurate setting may also increase the delay in delivering a call to an agent or starting your recorded message after the call is answered.

The Voice Detection Level setting is only used when using the Answering Machine IVR module.

The seconds marks on the Voice Detection Level slider indicate the maximum time-out interval, after which a call that is not yet determined to be a person or an answering machine is passed to an agent. In most cases, the Answering Machine Detection system attempts to determine faster than the indicated cut-off period.

Agent Availability. This option allows the Autodialer Campaign to dial only when agents are available to handle calls. If this option is unchecked, the list is dialed continuously regardless of agent availability. Check Dial only, and select Any Agent or a skill. You can select the following conditions to make the autodialer call the dialing list:

- **Dial Only if Agents Are Available in the Following Skill Group**: The campaign pauses dialing, based on agent availability, and resumes dialing when one or more agents become available within the skill chosen in the drop-down menu. Select Any Agent to stop dialing if there are no agents available in any skill group.
- **Ready to Receive Calls**: The dialer dials only if one or more agents are available, ready, and not on call.
- **Ready to Receive Calls or Busy** : The dialer dials only if one or more agents are logged-in and are either ready or busy with another call (on call or wrapping up). In this case agents should not be counted as busy if they are making a manual call and were on break before this.
- **Logged In**: The dialer dials only if one or more agents are logged in and in any state. If the configured agent availability setting is met, the Autodial campaign makes a fixed number of calls, regardless of how many agents are available. There is no Calls to Agent Ratio for Autodial campaigns.

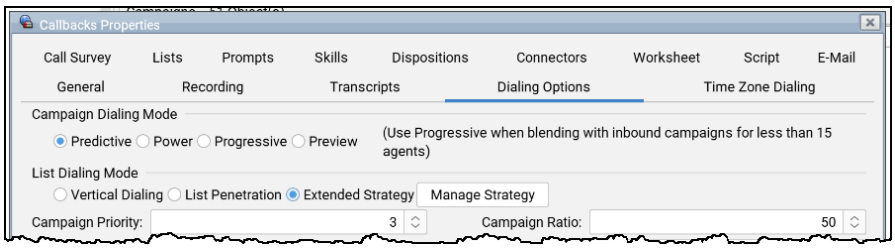
Dialing Rules

Apply dialing rules to outbound and autodial campaigns. The dialer ignores numbers in the specified states during specified days/hours. Dialing rules are configured in the global settings, based on the values in the state contact field. Before using the rules, ensure that the state field is not empty in your lists and that it corresponds to the value specified in Dialing Rules options. See Configuring Dialing Rules in the Basic Configuration Administrator's Guide.

Configuring the List Dialing Mode for Outbound and Autodial Campaigns

The dialing method defines how the dialer processes contact records in the dialing lists assigned to the campaign.

Using Vertical List Dialing
Using List Penetration Dialing
Processing Dialing Lists with an Extended Dialing Strategy



The dialing process goes through the lists that were added during the outbound campaign configuration. We describe the dialing process in terms of the contact records, but only the contact records that belong to the dialing list added to the campaign are dialed.

The Dialing mode options are not available in Preview Campaign Dialing Mode (see **Preview Dialing Mode**).

The descriptions below assume you are using multiple phone numbers per record. You should always use List Penetration Mode if your lists have only one phone number per contact record or if most records have only one phone number.

The Campaign Profile associated to the campaign can influence on how the lists are dialed. In the Campaign Profile settings, you can select which numbers are dialed (Number1, Number2, Number3) and in what order.

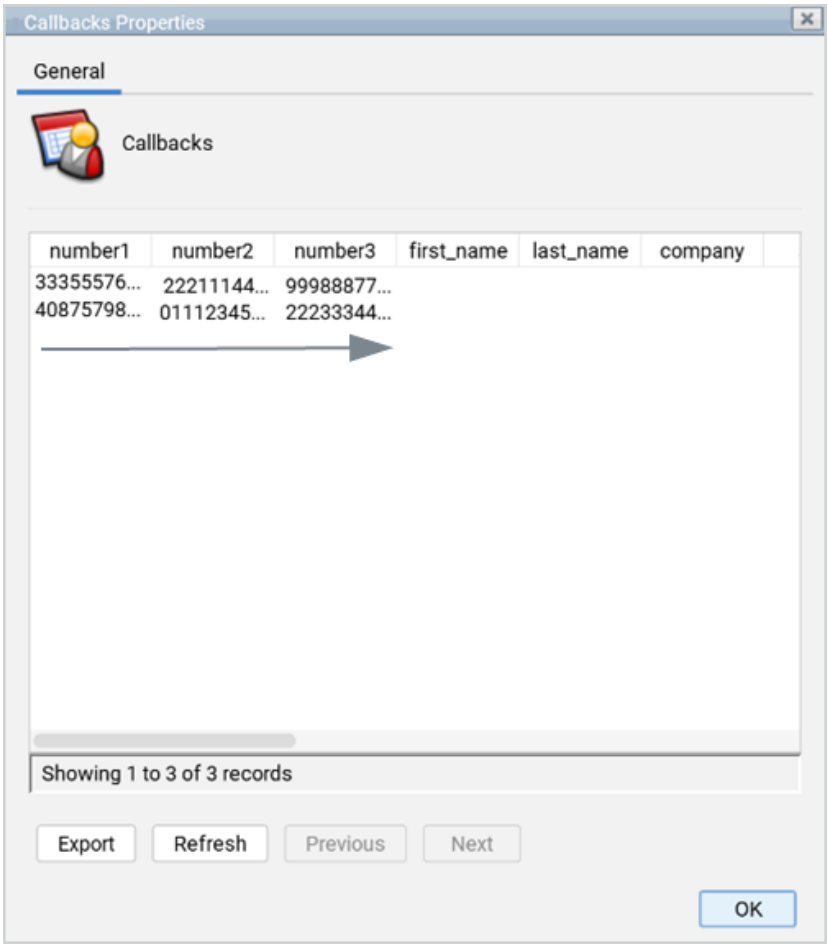
Using Vertical List Dialing

In Vertical Dialing mode, the purpose is to reach the maximum number of contacts (CRM records). The dialer attempts to call all numbers in the contact record and proceed to the next record. The goal is to reach each contact as soon as possible. It dials each available number for a list record (unless one of them has reached final disposition) before proceeding to the next record in the list. Choose this mode in these cases:

- If the first number is considered (dialed or skipped) and does not result in a final disposition for the contact record, the next number is considered immediately.
- After all numbers for the contact are dialed or skipped the system waits the minimum duration (Configured on the Dialing Options Tab) and try the record again.
- The system considers the contact again as soon as the minimum duration has elapsed, regardless of list position.

1 Select the **List** tab and double-click a list.

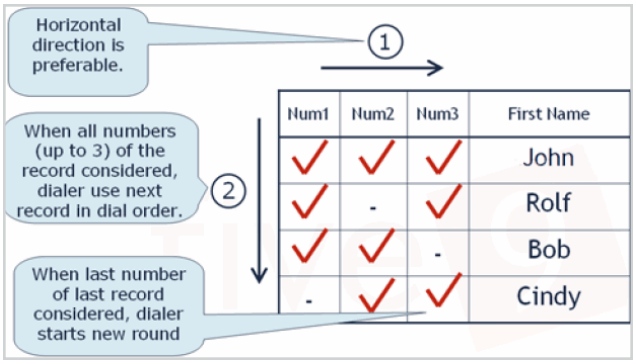
The dialer dials all numbers from the first contact record. Then it proceeds to the second record.



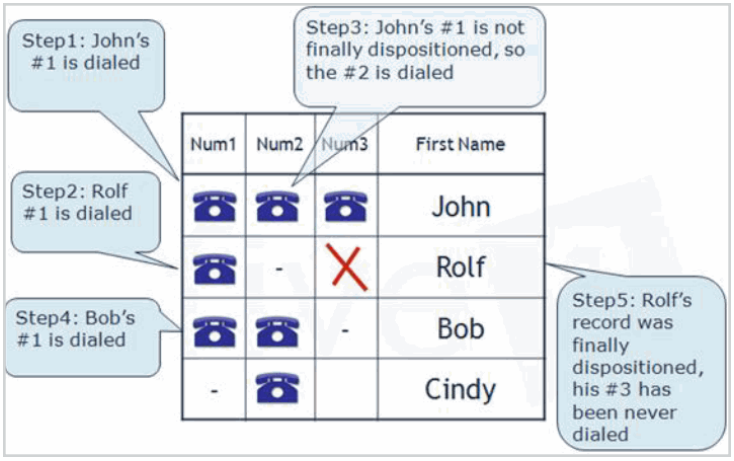
2 The system considers the contact again as soon as the Minimum Duration Before Redialing Number (option on the Dialing Options tab of Campaign Properties) has elapsed, regardless of list position. Disposition redial setting can affect this dialing behavior. See also, **Configuring Dispositions**. In reality, the system moves to the following records when dialing for multiple agents.

3 When the last contact record in the list is dialed, the dialer starts a new round following the above described process.

Example 1



Example 2



Using List Penetration Dialing

In List Penetration dialing, the main purpose is process the list quickly by dialing the first phone number for each record before moving to the second phone number. The dialer attempts to call the first number for every contact in the list, then number 2, number 3, etc. List Penetration is the default dialing mode. The goal is to process the list quickly by attempting one number for each record before moving to the second and third numbers.

When to Use List Penetration Dialing
The List Penetration Dialing Process
Adding Records During List Penetration Dialing

When to Use List Penetration Dialing

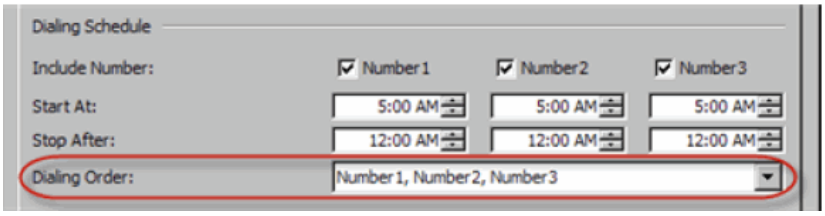
Use List Penetration dialing when you have only one phone number for each contact record.

- If the first available number in a record is considered (dialed or skipped) and does not result in a final disposition for the contact record, the next available number is considered on the next pass through the list, even if the minimum duration has not elapsed.
- If all numbers for the contact have been considered (dialed or skipped), and the contact record is encountered again in list order and the minimum duration has not passed, the record is skipped and considered again on the next cycle through the list.
- The main difference between vertical dialing and list penetration is vertical dialing dials the contact immediately after the Minimum Duration has elapsed while list penetration waits until the contact is encountered again in the list.
- However, if a number for a contact is assigned a disposition with a redial timer, such as the Busy disposition, the system does not move to the next number until that number is dialed again.

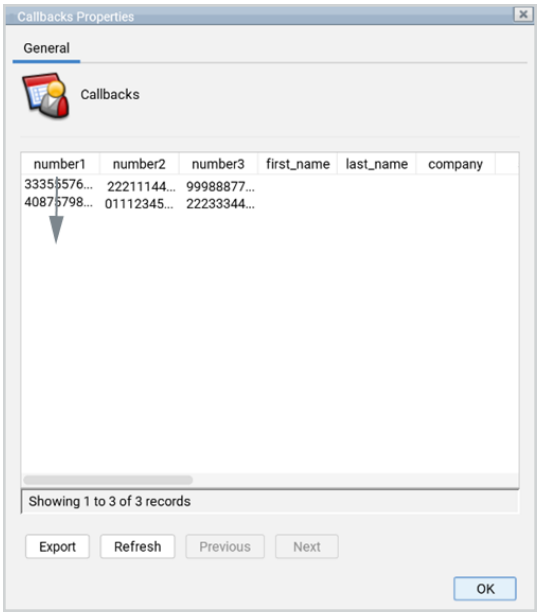
The List Penetration Dialing Process

1. During the first cycle, the dialer dials all the records from the contact record database using the first available phone number from the dialing order specified in Campaign Profile Properties.

   In the example below, the following dialing order is set: Number1, Number2, Number3.



   The dialer starts at number1.



2 For consecutive cycles, the dialer considers the records' next phone numbers in the specified dialing order (in Campaign Profile), if they are available, one number per record per list cycle. In the example below, number2 is dialed after the first list cycle.

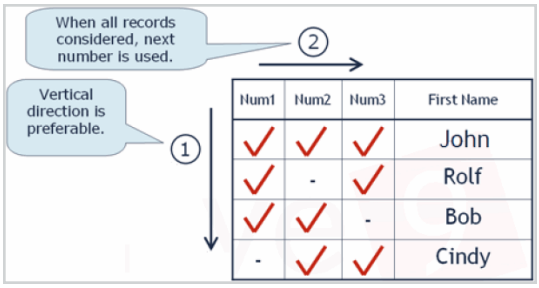
3 During the third cycle, number3 is used. In the following example, the number3 field is taken.

4 When all numbers from all records have been dialed or skipped, the dialer starts the next round with the first available phone number from the dialing order specified in Campaign Profile Properties and repeat the above dialing process, skipping any numbers which have not met the Minimum Duration Before Redialing Number (option on the Dialing Options tab of Campaign Properties).

5 If a record is assigned a final disposition, no further attempts are made on any of the phone numbers for the record for the campaign.

> **Note**
>
> Although the physical direction of the dialing is vertical in List Penetration Mode, the industry term Vertical Dialing actually refers to dialing numbers horizontally across.

Example



Adding Records During List Penetration Dialing

You can add records during a running campaign without interrupting the campaign. In most cases, the new records are dialed in the current dialing cycle, in the requested order, no more than 15 minutes after insertion into the campaign dialing list.

Following the dialing of newly inserted records, the dialer resumes at the pre-insertion list position to consider the records that have not been dialed in the current dialing cycle. If an outbound campaign that is set for list penetration dialing is out of numbers, it may take up to 30 minutes for the campaign to begin dialing the inserted numbers.

Processing Dialing Lists with an Extended Dialing Strategy

The extended dial plan strategy allows you to reach contacts while they are fresh and during a time span when they are likely to be more important to the business.

The Extended Dialing Strategy is similar to the vertical dialing strategy. It first dials all the numbers for a contact record, before moving to the next record. However, the Extended Dialing Strategy allows you to configure varying recall strategies over time.

The Extended Dialing Strategy allows administrators to specify how often and when to go back and dial important leads again instead of first processing to the end of the list. You can tailor campaigns to prioritize calls based on the importance of each contact to the targeted business goals of that campaign.

- By default, a simple extended dialing strategy is already defined.
- You can define up to twenty extended dialing strategies per campaign ad run any number of them at any one time.
- You must always have a default strategy defined.
- At a minimum, the Default strategy must be running.

- You may delete any strategy that you no longer need, but you cannot delete the Default strategy.

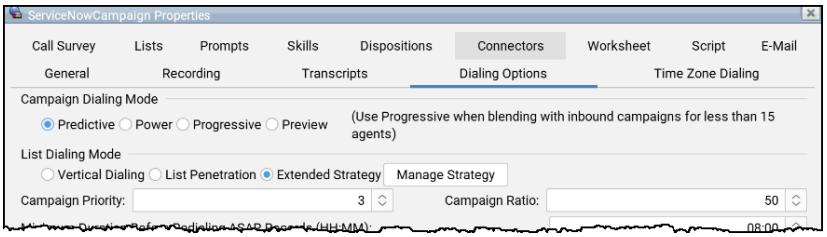
Selecting the Dialing Strategy
Defining the Extended Dialing Strategy

Selecting the Dialing Strategy

1 Navigate to **Campaigns** > **Configure** > **Dialing Options** tab.

2 Select the **Predictive Campaign Dialing Mode** and **Extended Strategy**.

You can create an extended dialing strategy for Predictive, Power, or Progressive dialing modes.



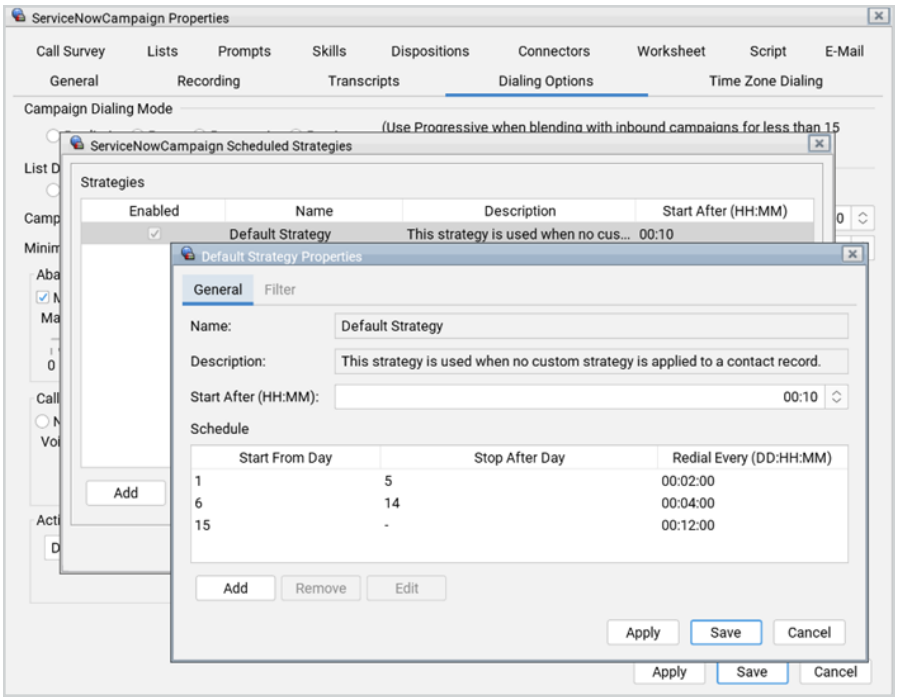
3 Click **Manage Strategy** to open the configuration screens.

Defining the Extended Dialing Strategy

The first step is to define the parameters the extended dialing strategy will follow. The strategies menu contains a default strategy that has these settings:

Name	Default Strategy
Description	This strategy is used when no custom strategy is applied to a contact record
Start After (HH:MM)	00:10 (which means it will apply after 10 minutes to any new contact added to the list that meets the filter criteria for the strategy.)
Schedule	Three schedule rules are set for the Default strategy: **Start From Day**: 1 **Redial Every** (DD:HH:MM): 02:00 **Start From Day**: 6 **Redial Every** (DD:HH:MM): 04:00 **Start From Day**: 15 **Redial Every** (DD:HH:MM): 12:00

When the **Strategy Properties** screen opens, the default values are displayed. You can use the default values or customize them for your strategy.



Strategy Properties General Settings

Name	Provide a name for the extended dialing strategy you are creating.
Description	Provide a meaningful description for the extended dialing strategy.
Start After (HH:MM)	Indicate how long after you add a contact to the list that meets the define filter criteria for the strategy the dialing should begin.
Schedule	Set the dialing schedule. You can include multiple redial attempts. **Start From Day**: Indicate the day of the campaign to start dialing the list. • Possible values: 1 through 365 • The first Start From Day value is always 1. • Must be unique for a schedule. You cannot configure 2 timeouts for the same interval. **Stop at Day**: The Stop After Day field cannot be edited. It is calculated based on the start day of the subsequent dialing period, minus one day.

	Redial Every (DD:HH:MM): Specify how often during this dialing period to redial contacts if no live person answers. Set up as many dialing periods as appropriate for the campaign and this strategy.

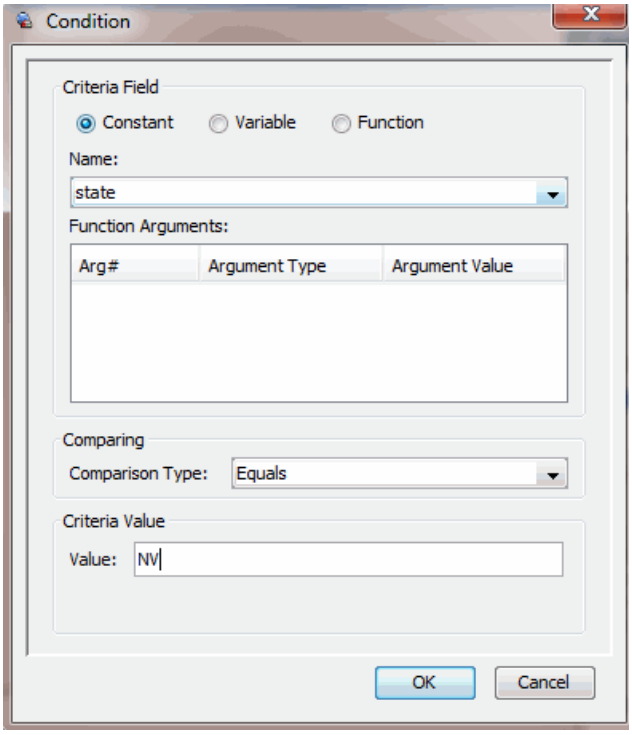
Filter

Condition Grouping	Select All, Any, or Custom. **All** = Match all characteristics **Any** = Match any of the characteristics **Custom** = Match characteristics defined in an expression to identify the contacts to be redialed.
Expression	For a Custom contact grouping, enter a simple expression to define the criteria based on attributes of contact records in the dialing list. For example, you might want to classify contacts as highly important if they attended a certain trade show, and they have purchased more than $1000 of goods from your company in the past year. The expression might look like this: >1000 2014 + Tradeshow West or Age > 55 + State = NV

To define the conditions for your expression, follow these steps.

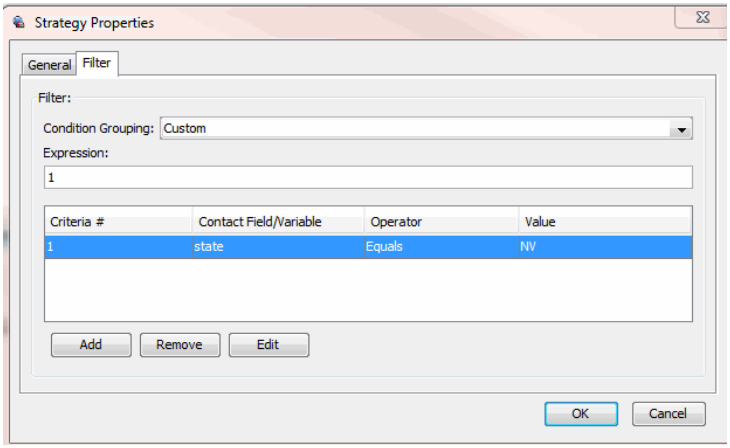
1 After you define the expression, click **Add** to display the **Condition** screen.

You are prompted to define the conditions you have included in the expression.

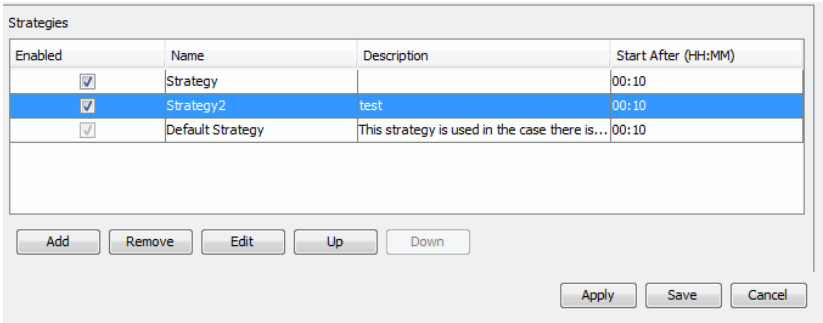


2 Select the **Comparison Type** from the drop-down list and define the **Criteria Value**.

The **Strategy Properties** screen is populated with the values that you have defined.



3 Click **OK** and the new strategy appears in your **Scheduled Strategies** screen.



- You can create and schedule up to 20 strategies for any campaign.
- Strategies are applied according to their priority. That is, the strategy highest in the list has the highest priority.
- Use the Up/Down button to move a strategy up or down in the list to change its priority.
- Only one strategy is applied to any contact record at a time.
- To edit a defined strategy, select the strategy and click Edit. You will be prompted to edit the conditions.
- Call disposition permissions set in the system disposition **Caller Disconnected Properties** screen of the Dispositions configuration take priority over criteria defined in an Extended Dialing Strategy. See *Types of Dispositions* in Basic Configuration Administrator's Guide.

Setting the Time-Out for Redialing Numbers

This option, Minimum Duration Before Redialing ..., is located in the Dialing Options tab of the Campaign Properties. It defines the time interval before a phone number in a list can be considered for redialing. The default value is 10 minutes.

Vertical Dialing with Number Redial
List Penetration Dialing with Number Redial
Extended Strategy

This setting takes priority over a lower Activate After timer for Do Not Dial Number for Campaign type dispositions. Numbers with such dispositions cannot be redialed until the minimum duration before redialing has passed. However, a lower Redial Timer for Redial Number type dispositions takes priority. It ignores the minimum duration before redialing until the maximum number of redial attempts for the disposition is reached.

This setting does not set the wait time between phone numbers for a contact record. However, if two phone number fields for a record are identical, the setting applies to fields. Numbers may be skipped for several reasons, such as being outside the dialing hours or in a do-not-call list.

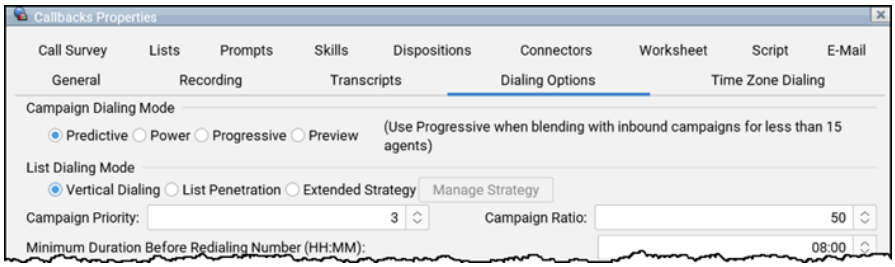
The main difference between vertical dialing and list penetration is that vertical dialing dials the contact immediately after the minimum time has elapsed while list penetration waits until the contact is encountered again in the list.

In either List Dialing Mode, if a number for a contact is assigned a disposition with a redial timer, the dialer does not move to the next number until that number is redialed. For example, this may occur with the default settings of the Busy disposition, which has a redial timer is.

Vertical Dialing with Number Redial

This option is named Minimum Duration Before Redialing Number. If the first number is dialed or skipped but does not result in a final disposition for the contact record or in a redial disposition with a timer, the next number is considered immediately.

After all numbers for the contact have been dialed or skipped, the dialer wait the minimum time before retrying the record's first number. The dialer redials or skips the contact as soon as the minimum time for any of the numbers has elapsed, regardless of list position.



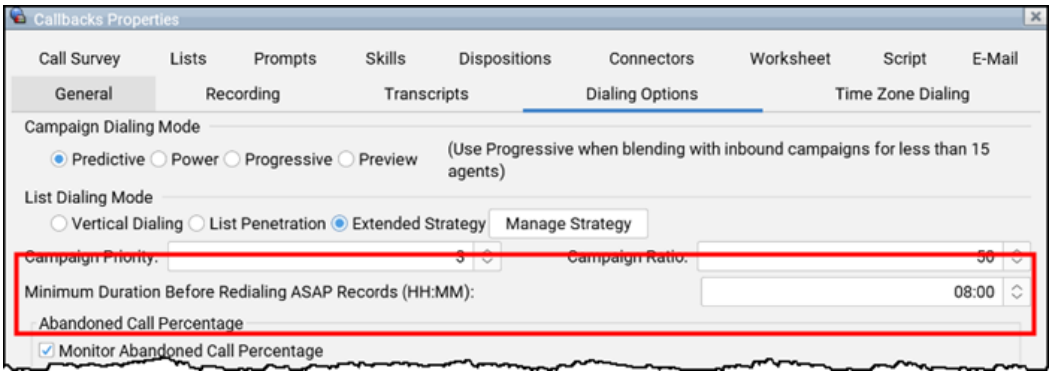
List Penetration Dialing with Number Redial

This option is named Minimum Duration Before Redialing Number. If the first number is dialed or skipped but does not result in a final disposition for the contact record or a redial disposition with a timer, the record's next number is considered on the next cycle through the list.

If all numbers for the contact have been dialed or skipped, and if the contact record is encountered again in list order, but the minimum time has not elapsed for the number, the record is skipped. It will be reconsidered during the next cycle through the list.

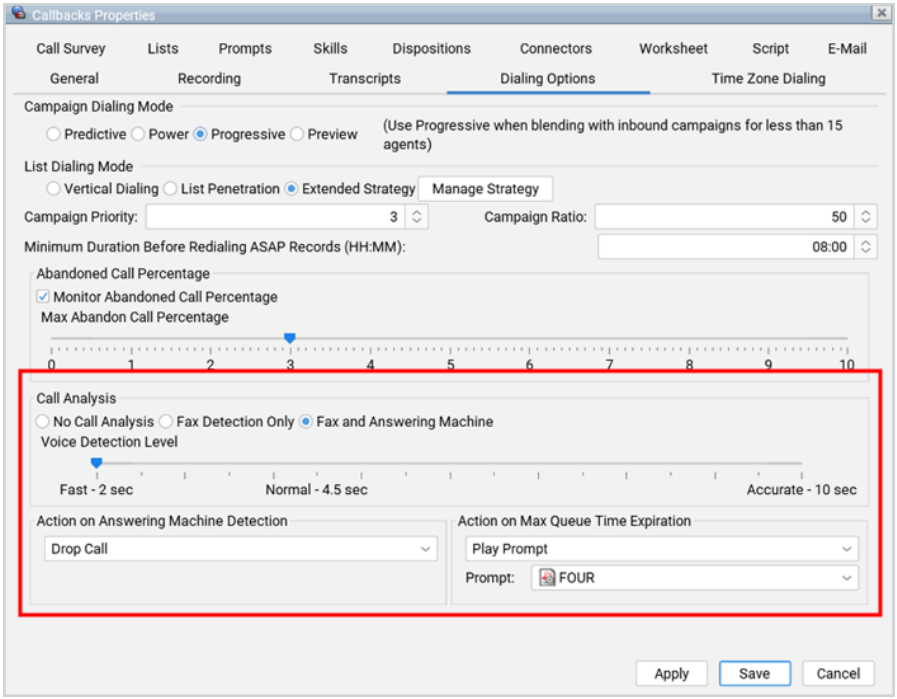
Extended Strategy

This option is named Minimum Duration Before Redialing ASAP Records. If the number is dialed or skipped but does not result in a final disposition for the contact record or a redial disposition with a timer, the number is redialed as soon as possible after the time-out that you set regardless of the number's position in the list.



Configuring Call Analysis for Outbound and Autodial Campaigns

Use the Call Analysis section of the Dialing Options tab to configure outbound and autodial campaigns to automatically filter answering and fax machine connections and increase the delivery of human interactions to your agents.



Answering Machine Detection (AMD)

AMD optimizes outbound calling campaigns by ensuring that human agents are only engaged for human interactions. AMD is a crucial component in outbound calling systems to save costs and time, and reduce agent fatigue and resources. AMD leverages audio signal analysis to differentiate between calls answered by a human, answering machine, and other devices (for example fax machines).

AMD Workflow

1. **Call Initiation**: Your autodial campaign starts the outbound call.
2. **Detection**: On answer, the AMD module gathers data for the first few seconds.
3. **Analysis**: The AMD module determines whether the connection is to a human or other device by using voice pattern, beeps, tone, pitch, cadence, and background noise analysis. Analysis is language agnostic and does not use commonly used phrases in voicemail greetings.
4. **Decision and Action**:
    - Human voice detected: Transfers the call to an available agent.
    - AMD and other devices detected: Plays a recorded message, leaves a voicemail, or hangs up, as set in the Fax Call Analysis options.

Call Analysis Duration Best Practices

The default setting is No Call Analysis. Because the analysis takes some time to perform (up to 10 seconds), using any type of call analysis delays call delivery to agents. If it's important that agents hear the first hello, don't select the **Fax and Answering Machine** option or use the **Fast - 2 sec** Voice Detection Level setting.

To use call analysis, select the **Fax and Answering Machine** option (always enabled for autodial campaigns) and set the Voice Detection Level.

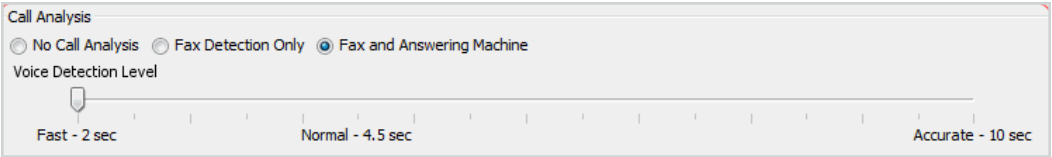
> **Important:** Any change to these settings may result in non-compliance with telemarketing regulations. If you are running telemarketing and cold call campaigns, consult the telemarketing regulations before using this feature. It may be illegal to broadcast messages or you may have to play a Safe Harbor message for abandoned calls.

Based on internal testing and customer feedback, setting the Voice Detection Level from 4.5–10 seconds yields the best call analysis results. Note that longer durations don't make calls take longer to route to agents. The AMD module always connects the call to an agent when it's confident a human voice answered. The AMD module then handles the call accordingly and as quickly as possible.

> **Important:** Call analysis is not a foolproof solution. We recommend using the AMD feature just as a tool to assist in call handling and routing decisions. AMD module analysis performance varies with external factors such audio signal quality, answering machine or voicemail system characteristics, and environmental variables. Voicemail greetings greatly vary in length, content, speech patterns, background noise, and signal quality, making it difficult for the AMD module to classify with the highest level of confidence between live human and answering machine connections.

Voice Detection Level Settings

We recommend that you setup test campaigns to try various Voice Detection Level settings to ensure that your outbound and autodial campaigns perform well in your environment.



While the **Fast 2-sec** setting provides swift decision making and often has very little time for call audio signal pattern analysis, which can sacrifice accuracy compared to a longer analysis, some percentage of connected calls always result in *false negatives*, where a call is incorrectly identified as answered by a human. By using the Fast 2-sec setting, you are prioritizing speed and efficiency over AMD accuracy, which is a great factor in contact center environments where minimizing call handling times is critical.

The **Normal - 4.5 sec** setting strikes a balance between the need for accurate classification and minimizing call handling time. By analyzing the audio signal for a reasonable duration, the AMD module can make timely classification decisions while still capturing enough information to accurately differentiate between human and machine responses. The Normal - 4.5 sec setting provides efficient and reasonably accurate classification of connected calls, and helps optimize call handling processes. We recommend using this setting to get started.

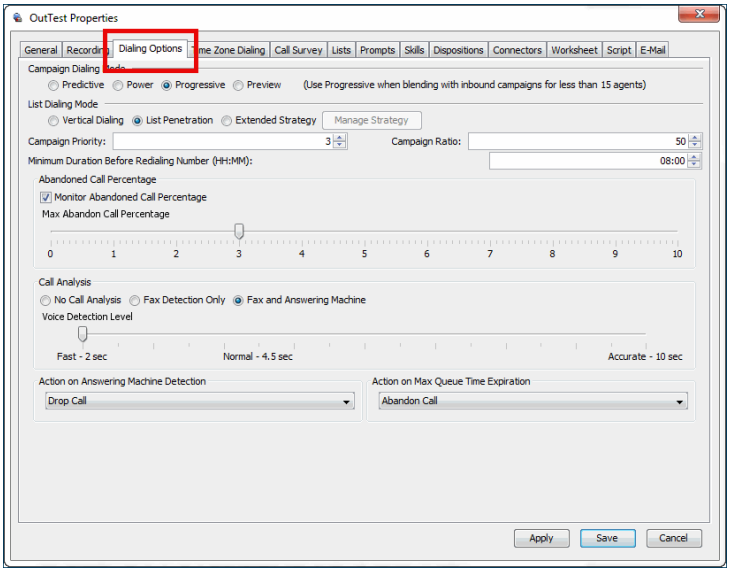
The **Accurate - 10 sec** setting places focus on accuracy and precision. Ten seconds provides the AMD module time for a more thorough analysis of the call audio signal, which can result in more accurate determinations of whether the connection is human or machine. This reduces the chance of misclassifying calls, leading to more appropriate routing or handling. With a longer analysis time, the AMD module has more data for an informed decision. This reduces *false positives*, where a call is incorrectly identified as answered by a machine, and missed opportunities for direct customer interactions.

Configuring Call Analysis for AMD

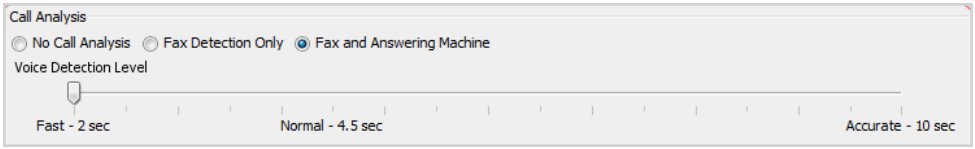
Use Call Analysis in your outbound and autodial campaigns to listen for the call to connect to a human before transferring the call to an agent.

To configure outbound and autodial campaigns to automatically filter AMD calls:

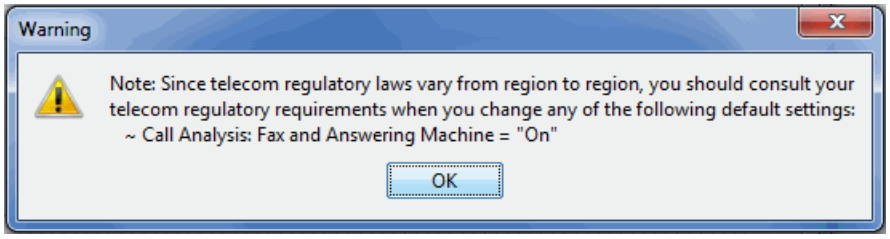
1 Open the Campaign Properties for your campaign, and select the **Dialing Options** tab.



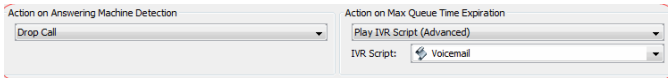
2 Set the **Call Analysis** options.



- **No Call Analysis**: The AMD module won't analyze calls. All connected calls, including answering machines and fax machines, go to agents. No Call Analysis is the default setting. When you try changing this setting, this warning message displays:



- **Fax Detection Only**: The AMD module disconnects fax machines but forwards AMD and humans connections to agents.
- **Fax and Answering Machine**: The AMD module removes fax and most AMD connections. On connection, the AMD module voice analysis determines whether it's a person or recording. A recording causes the AMD module to hang up without sending the call to the agent. You can play audio prompts or IVR scripts for answering machines and abandoned outbound calls on Max Queue Time Expiration.



Select from these options in the **Action on Answering Machine Detection** menu:

  - **Abandon Call**: By default, the dialer hangs up without leaving a message. The Abandon call option displays as **Drop Call** for AMD and **Abandon Call** for **Max Queue Time Expiration**, and are correctly reported as abandoned calls.
  - **Play Prompt**: Select the prompt to play.
  - **Play IVR Script (Advanced)**: Select the IVR script to run. You can configure your campaigns to automatically leave answering machine messages without having to connect an agent to the call, and use dynamic information (such as speaking the name of the contact, using TTS) in IVR scripts. Use this feature for advanced outbound communications to contacts.

    Select the audio prompts or IVR scripts to use **Action on Max Queue Time Expiration** for Safe Harbor messages or advanced outbound communications for contacts with an existing business relationship. The queue time expiration results in abandoned and dropped calls. This occurs when a dialed number connects but no agents are available to accept the call. Calls may be abandoned when dialing multiple lines per agent. For option details see, **Outbound Campaign General Properties**.

The outbound dialer always filters out unanswered calls such as busy signals, no answer, and operator intercepts. As all answering machines aren't detected, some still reach your agents.

For autodial campaigns, the active IVR script handles any resulting call flow.

3 Set the **Voice Detection Level**.

- **Fast**: Performs the quickest test (typically, two seconds), which allows more answering machines through to agents.
- **Normal**: Performs a 4.5-second analysis to optimize differentiation of human and typical answering machine responses.
- **Accurate**: Performs a 10-second analysis to detect more answering machines but may slow delivery of calls to agents.

4 Select **Save**.

Configuring Campaign Priority and Ratio Settings

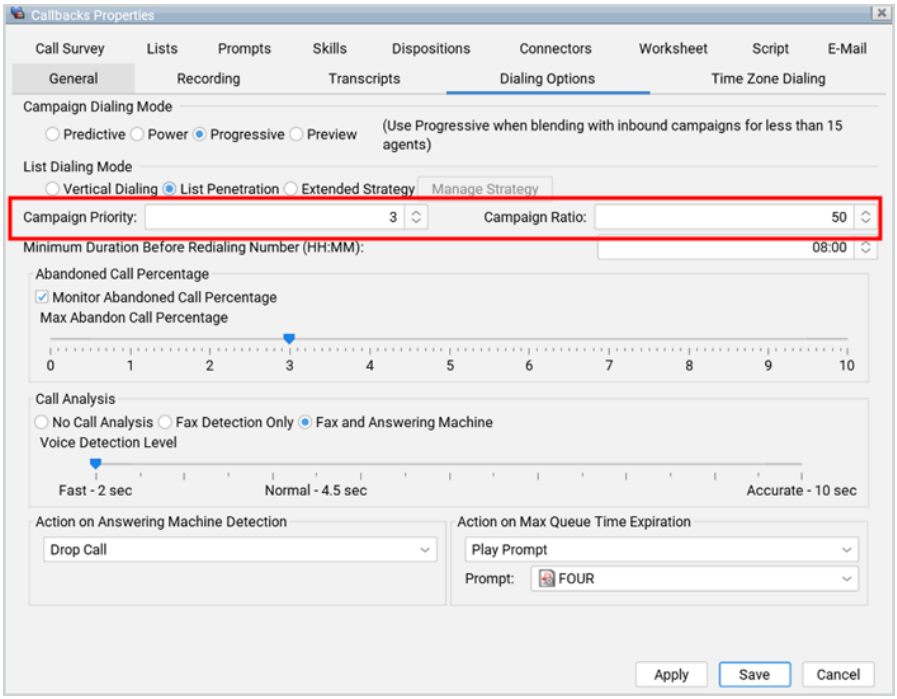
Campaign priority and ratio are optional features that enable you to manage your outbound campaigns based on their importance in your business. To use these features, they must be enabled in the Campaigns tab of the configuration menu of the VCC Administrator application.

To enable these settings in your outbound campaigns, select the **Dialing Options** tab. You may also create work flow rules based on time or events to automate the changes in modes, priorities, and ratios.

Configuring Campaign Priority
Configuring Campaign Ratio
Combining Campaign Priority and Ratio

Note

Campaign priority takes into account the number of agents when calculating call-to-agent ratio. Therefore, priority is applied more precisely when many agents are available instead of few agents. For optimal performance, use campaign priority and ratio settings in campaigns staffed with 10 or more agents.



Configuring Campaign Priority

You can prioritize when your running outbound campaigns are dialed based on the business value of each campaign. Changes to campaign priority are implemented as soon as you save your changes. The default campaign priority (3) is automatically assigned unless you apply a different one. You are prompted to reset the priority whenever you start the campaign. You may assign a priority from 1–99.

Example

Campaign A priority = 1. Campaign B priority = 3.

Campaign A is dialed until no numbers can be dialed immediately; campaign B is dialed in the same manner.

Depending on the availability of numbers, the dialer alternates between campaigns as needed.

However, priorities may be ineffective for multiple campaigns where a wide difference in the number of skilled agents.

Example

Campaign A with priority 1 has one available agent.

Campaign B with priority 3 Skill2 has 10 available agents.

Campaign A makes a call. Its one agent is busy.

In the meantime, campaign B starts to make calls and continue until campaign A is ready to make another call.

When the agent in campaign queue A finishes the call, campaign A makes another call.

Although campaign B has lower priority, it is busier because it has 10 agents. Priority is ignored if the campaign has only one agent.

Configuring Campaign Ratio

You can assign dialer resources spent on your running outbound campaigns based on their importance in your business. Changes to campaign ratio are effective immediately. The default setting for campaign ratio is 50 when campaign ratio is enabled in your domain. The range is 1–99.

If you use campaign ratios, you must assign a ratio to the campaign before running it the first time. Otherwise the default ratio of 50 is assigned. You are prompted to reset the ratio whenever you restart the campaign.

Example

- Campaign A ratio = 60.
- Campaign B ratio = 50.
- Campaign C ratio = 20.

130 dialing attempts are made:

- Campaign A: 46% of dialing attempts (60/130)
- Campaign B: 39% of dialing attempts (50/130)
- Campaign C: 15% of dialing attempts (20/130)

Dialing ratios may be ineffective for multiple campaigns when a wide difference exists in the number of agents that are to the queues of the campaigns.

Example

- Campaign A: queue 1 and dialing ratio = 20
- Campaign B: queue 2 and dialing ratio = 60

- 10 agents assigned to queue 1
- 1 agent assigned to queue 2

Campaign A remains busy because it has 10 agents.

Combining Campaign Priority and Ratio

You can combine campaign priority and dialing ratio to specify how the dialer should distribute calls of multiple campaigns with the same, or different, priorities.

The main goal of the outbound dialer is to generate enough traffic to keep all the agents busy without exceeding your maximum calls abandoned percentage criteria. Keeping in mind the goal of the dialer, the concept of combining ratio and priority is simply to give a campaign with the highest priority/ration the chance to be the first campaign to generate calls. This basic reasoning also assumes that all the campaigns considered have the same amount of agents logged in and ready.

When that campaign with the highest priority cannot generate sufficient traffic then the next highest campaign has the opportunity to place calls, and so on. Additionally, there are several reasons why a campaign may not generate enough calls, such as:

- A campaign is out of numbers to dial
- A campaign has no numbers to dial at the moment, but some may become available later for these reasons:
  - State dialing rules
  - Redial timers are assigned to numbers
  - Do Not Dial timers are assigned to numbers
  - Filters that are configured in the campaign profile
- A higher priority campaign does not yet have enough calling statistics compared to a lower priority campaign. This typically happens with a recently started campaign, which cannot dial aggressively due to this deficiency in statistics.
- A higher priority campaign is close to reaching the Max Abandon Call criteria, this causes the dialer to slow down resulting in lower priority campaigns placing calls.

The dialer always tries to maintain agent load before campaign priority and ratio, allowing lower priority campaigns to place calls when higher priority campaigns are unable to create sufficient traffic.

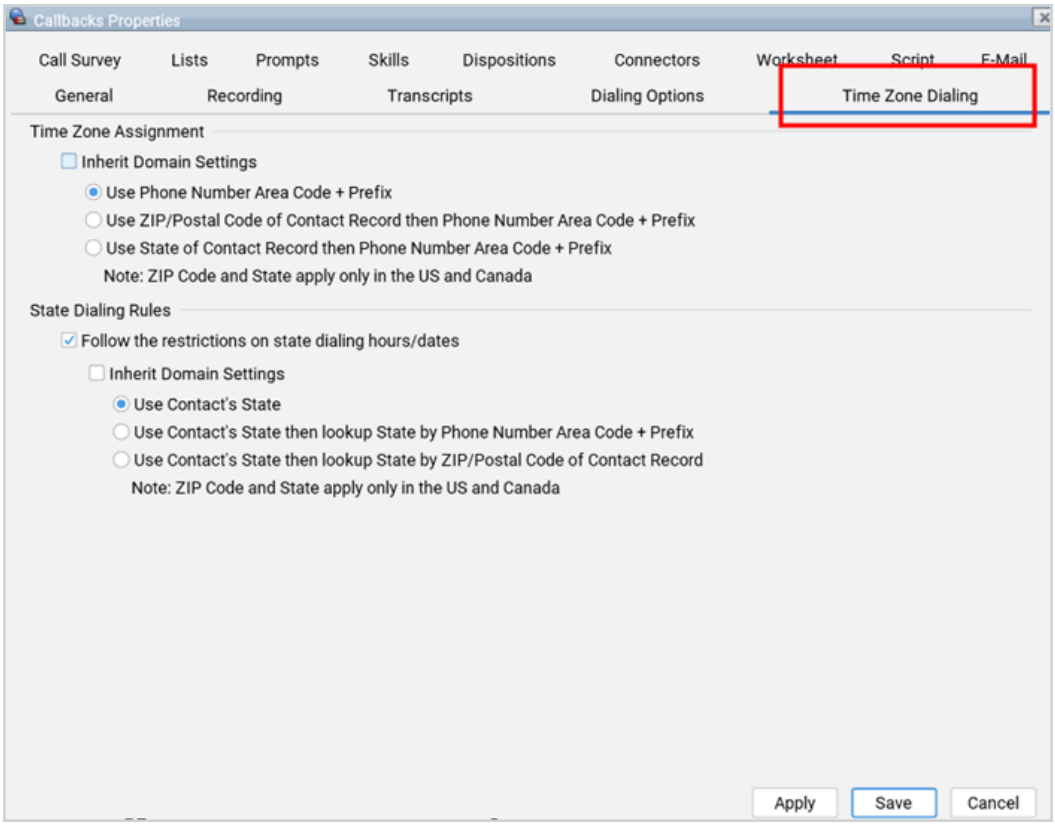
Example

You want to spend all efforts on Campaign A and Campaign B but commit the greater ratio of efforts to Campaign B until Campaign A and Campaign B are out of numbers:

Campaign	Priority	Ratio	Description
Campaign A	1	20	Campaigns A and B are dialed until all available records are dialed.
Campaign B	1	80	
Campaign C	2	20	Campaigns C and D are dialed only when campaigns with priority 1 no longer have records to dial.
Campaign D	2	80	

Configuring Time Zone Dialing Options

You can set time zone rules in your domain configuration (see Basic Configuration Administrator's Guide, *Configuring Dialing Rules*) and for each outbound campaign in the Time Zone Settings tab. Time zones automatically update between standard and daylight saving times.



Time Zone Assignment

To inherit the dialing rules defined in the VCC global configuration, select **Inherit Domain Settings**. Using campaign-specific options you can apply specific time zone settings to apply to outbound dials associated with this campaign. Be sure to consider what location data is available (for instance, the contact's state may not always be specified) and what works best for your contact center's business. The options are as follows:

- Use Phone Number Area Code + Prefix. This is the default.
- Use ZIP/Postal Code of Contact. If this is not available, use Phone Number Area Code + Prefix. Applies only to U.S. and Canada.
- Use State of Contact Record. If that is not available, use Phone Number Area Code + Prefix.

In configuring Time Zone Assignment, consider what location information is available and works best for your contact center's business.

State Dialing Rules

Important

- Manual calls will not follow state dialing rules if the State is not populated in the contact record.
- State dialing rules do not apply to toll-free numbers.

To follow defined state dialing hours and dates, select **Follow the restrictions on state dialing hours/dates** in the lower half of this tab. To inherit the dialing rules defined in the VCC global configuration, select **Inherit Domain Settings**. By using campaign-specific options you can specify campaign-specific dialing rules:

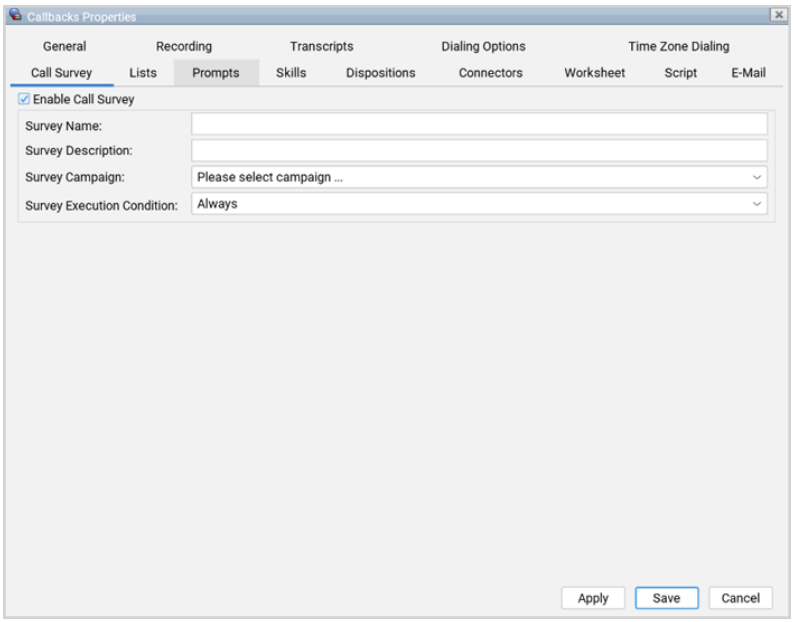
- Use contact's state. This is the default.
- Use contact's state. If the state is not available, use contact Phone Number Area Code + Prefix to search for state.
- Use contact's state. If the state is not given, use the ZIP/Postal code of contact record to search for the state. ZIP/Postal code and state apply only to the U.S. and Canada.

Configuring Post-Call Surveys

The feature allows post-call surveys in the IVR. Start by creating an IVR script with survey questions, using call variables where desired to track answers. At the end of the campaign the call is forwarded to another inbound campaign. When agents end calls, callers are transferred to an inbound campaign, based on Survey Execution Condition.

By default, the Always option is selected as the Survey Execution Condition. To transfer only calls with a specified Call Variable value, you can select a user-defined boolean variable from the drop-down menu. If the variable value is set to true, the survey is started. You can use the Post-Call Survey function with an CallSurvey.opt_in variable in the campaign's IVR script.

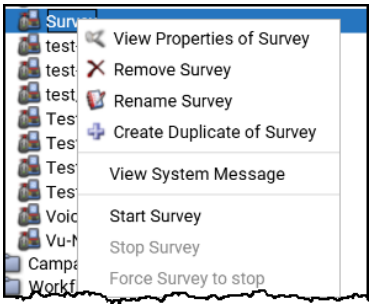
Reports save disposition of Call Survey campaign in the Call Survey Result field in the following data sources: ACD queue, Agent, Call Log, Call Segment, Contact, IVR. You can configure the Post-Call Survey function in **Campaign Properties > Call Survey**.



- **Enable Call Survey**: This box activates the options.
- **Survey Name**: The title of the current post-call survey.
- **Survey Description**: Any additional information about the current post-call survey.
- **Survey Campaign**: A campaign that is started once the Survey Execution Condition happens.
- **Survey Execution Condition**: When agents end calls, callers are transferred to the campaign based on Survey Execution Condition:
    - **Always** (default): Every caller is directed to the Call Survey campaign.
    - **Optional**: If you have a reporting call variable with data type boolean, it is available as one of the Survey Execution Condition options. If the variable is set to 1 (true) for the call, the call is transferred to the call survey campaign. If the variable is set to 0 (false), no post-call survey follows. The most likely use case for using this option would be to ask the caller (either

in the original campaign's IVR or manually by an agent) whether or not he or she would like to participate in a call survey at the end of the call.

Click **Apply** or **Save** to save your changes, then right-click on the campaign name to ensure that the survey campaign is running.



For more information about scripts for surveys, see Interactive Voice Response (IVR) Administrator's Guide.

To report metrics gathered from post-call surveys, use reports. In a custom report, the **CALL SURVEY RESULT** contains the disposition set in your campaign.

Managing IVR Script Schedules for Autodial and Inbound Campaigns

IVR schedules associate IVR and Visual IVR scripts with one or more campaigns. These scripts are required for inbound campaigns. Scripts contain custom greetings and prompts that provide instructions to callers and route calls.

Default Schedule

When you create a campaign, it contains a default IVR schedule that is active seven days a week and 24 hours a day. By default, IVR scripts run from Sunday (day 1) to Saturday (day 7). You can add a script to the default schedule, but you cannot modify the days and time of activity, and you cannot delete it. The default schedule is used when the campaign is running unless a higher priority IVR script schedule exists. For example, you may assign to an off-hours script that is active when all other IVR schedules are inactive.

If pass-through parameters are utilized, shared schedule IVR scripts cannot be modified until the common parameter association is removed/updated.

Schedules are created in VCC Configuration > Schedules tab. For more information about shared schedules, see *Creating Schedules* in the Basic Configuration Administrator's Guide.

Creating IVR Schedule Rules

When you create an IVR schedule, you can select the days and hours of activity.

1. Click the **IVR** tab.

   To modify the default schedule, select it and click **Edit**.

2. Select your scheduling options:

   You can select different options for each schedule.

   Important

   To combine a date range with a time range, you must create a schedule for each day. Otherwise, the time range is used during each day of the date range.

   > **Example:** To set a schedule for a date-time range, such as January 2, starting at 5 PM, to January 3, ending at 8 AM, create two schedules:

   Schedule January 2 runs from 5 PM until 11:59 PM.

   Schedule January 3 runs from 12 AM until 8 AM.

   - **Name**: Name of the schedule.
   - **IVR Script**: Script to associate with the schedule.
   - **Parameters**: If the script contains variables, you may define parameters to be interpreted at run-time using a shared, pre-configured schedule.

     > **Note:** Parameters defined in the campaign properties override the same parameter used in shared schedule configurations only

when those parameters share the same name. This enables you to specify which parameters take precedence.

- **Apply Pre-Configured Schedule**: Select this option to use a shared schedule defined in VCC Configuration > Schedules.
- **Specify Days and Times**: Days and range when the schedule is active.
  - Days of week
  - Specific date
  - Date range
  - All day long
  - Time interval
- **Channels**: See Interactive Voice Response (IVR) Administrator's Guide, *Securing Your Visual IVR Pages*.

  Select the media channels to receive interactions from this campaign. Channels options include:

  - Five9 VCC Channels:
    - Voice
    - Visual
  - Five9 SCC Channels:
    - Chat (for SCC and SFDC chats)
    - Email
    - Case (for SFDC Cases). IVR REST API supports Case media type for Five9 Engagement Workflow when you select Case check box. This option is available for Five9 domains with Five9 External Routing enabled.

3 Click **OK**.

4 In the list of schedules, move the schedule up or down to the correct priority.

In cases of overlapping times or days, schedules located higher in the list have a higher priority than those below. If no custom schedule exist for a specific time, the default schedule is used for that time.

5 Click **Save** or **Apply**.

Editing IVR Schedule Rules

You can edit custom schedules as needed, but for the default schedule you may only select the IVR script.

1. Select a schedule.
2. Click **Edit**, or double-click the schedule.
3. Make your changes.
4. Click **OK**, and **Save** or **Apply**.

Deleting IVR Schedule Rules

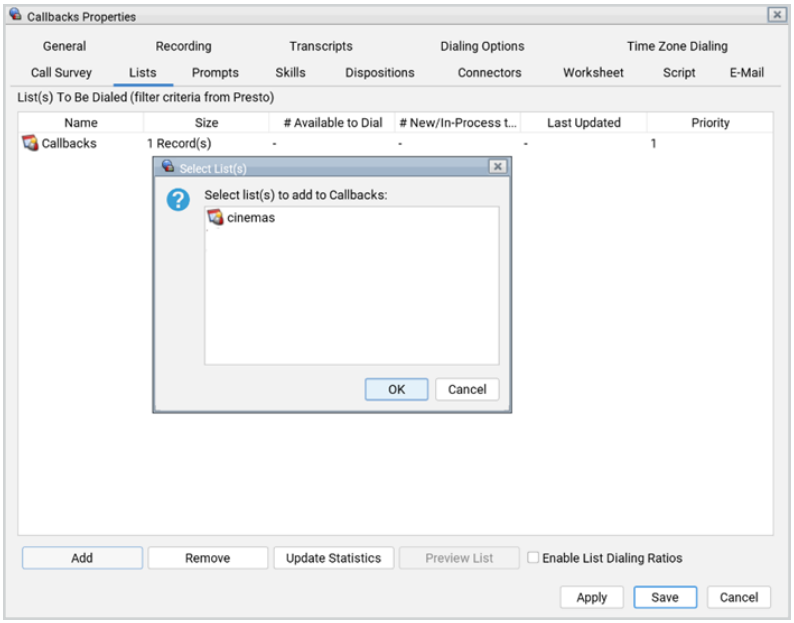
The Default schedule cannot be deleted.

1. Select one or more schedules.
2. Click **Remove**.
3. Click **OK**, and **Save** or **Apply**.

Configuring Lists for Outbound and Autodial Campaigns

In the Lists window, click **Add** to add one or multiple lists to be dialed by this campaign. The lists are dialed in the order displayed on the screen. You can set the order to your needs.

Removing Lists from Campaigns
Defining List Priority
Changing the Dialing Order of List Records in a List
Resetting the Dial Position to the Top of the List
Setting Dialing Ratios
Viewing Dialing List Statistics
Contact Records in the Dialing Process
Previewing and Exporting Dialing Lists



Campaigns keep track of the position of a call within a list, which phone numbers have been assigned a disposition, which numbers are flagged to be dialed again, and which numbers have yet to be dialed. When a campaign is started, it continues dialing from where it previously left off, unless you changed the order of the lists or reset the list position; in such cases, it starts with the new list first and continues with the second list. Numbers previously assigned a disposition are skipped. A campaign must be stopped to add a new list. See *Call Lists* in the Basic Configuration Administrator's Guide for more information about lists.

Removing Lists from Campaigns

1. In the Lists tab, click **Remove**.
2. Select one or more lists.
3. Click **OK**.
4. Click **Yes To All**.
5. Click **Apply** or **Save**.

Defining List Priority

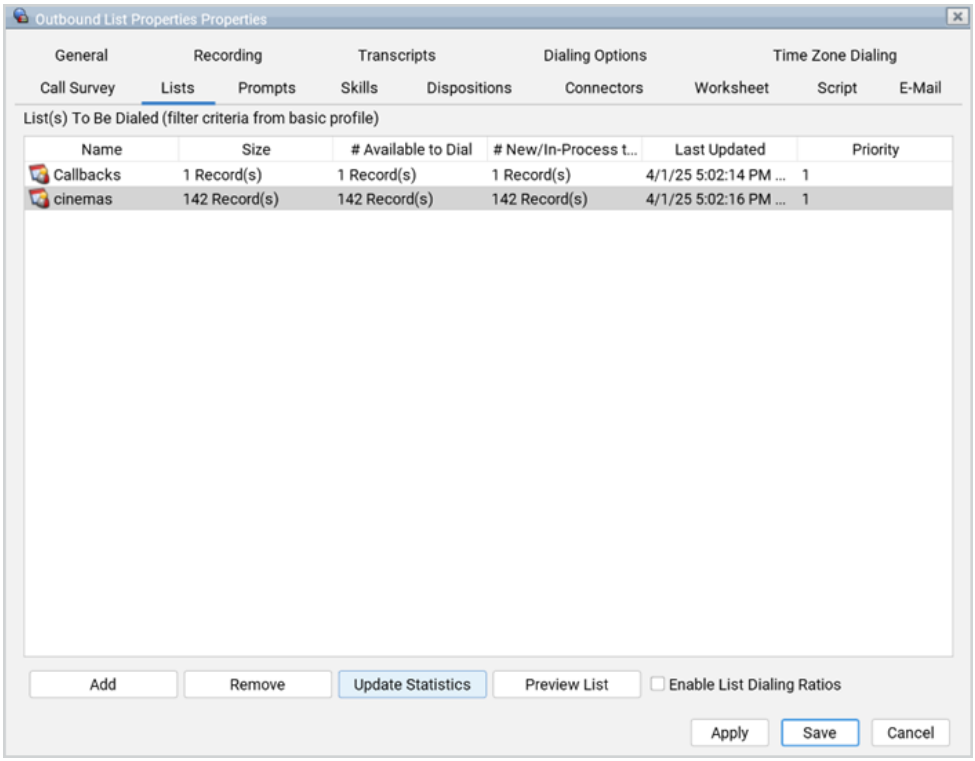
The lists are dialed according to the priorities set on the Lists tab. List priorities give you the ability to adjust the order in which calling lists are dialed in a campaign.

Lists with lower priority numbers (that is, higher priorities) are dialed before the lists with greater priority values. Setting equal priorities enables multiple lists to be considered as one sortable, virtual list, without the need to combine the lists. If you use a Campaign Profile to specify a list sort order, setting two lists to the same priority sorts contact records from both lists together as one list.

If List Dialing Ratios are enabled, the ratios apply only to lists that have the same Priority.

Setting a list priority of 0 disables the campaign's ability to dial that list. You may use a priority of 0 if you would like to leave an old list associated with a campaign for reporting purposes, but not dial it. You may also use Workflow Rules to set a list priority of 0 to temporarily disable dialing of a list, based on certain condition, such as time of day.

1 In the Lists tab, click the priority value of a list.



2 Adjust the priority of the list with the arrows on the right, or type the number.

3 Click **Apply** or **Save**.

Changing the Dialing Order of List Records in a List

The dialing order can be set on the basis of any contact fields or by several variables and functions, such as Last Disposition Date/Time. Note that contact field sorting is done on the basis of contact field data types. For example, for the string data type, 21 is considered a higher value than 111 while the number data type is sorted such values correctly. The number data type does not correctly sort negative number values to sort campaign profile.

Example

No sorting: The list is sorted by the order that it was added to the list.

Upload order	RANK	ZIP	Balance
1	SECOND	94588	1000
2	SECOND	34256	10
3	FIRST	10325	95
4	FIRST	94678	2
5	THIRD	23453	356
6	SECOND	55456	2134

Example

Sorted by first name: The dial order can be provided by sorting one or multiple contact fields, functions, or variables.

Upload order	RANK	ZIP	Balance
4	FIRST	94678	2
3	FIRST	10325	95
2	SECOND	34256	10
1	SECOND	94588	1000
6	SECOND	55456	2134
5	THIRD	23453	356

Example

Sorted by other fields, such as ZIP code.

Upload order	RANK	ZIP	Balance
3	FIRST	10325	95
5	THIRD	23453	356
2	SECOND	34256	10
6	SECOND	55456	2134
1	SECOND	94588	1000
4	FIRST	94678	2

Example

Balance is a contact field with the string data type. Using the number or currency data type for this field would result in proper sorting.

Upload order	RANK	ZIP	Balance
2	SECOND	34256	10
1	SECOND	94588	1000
4	FIRST	94678	2
6	SECOND	55456	2134
5	THIRD	23453	356
3	FIRST	10325	95

Resetting the Dial Position to the Top of the List

You can use workflow rules to reset dial position to the top of the list if certain events occur.

See *Creating Workflow Rules* in the Basic Configuration Administrator's Guide. To reset the list position manually, see *Resetting List Position*.

Setting Dialing Ratios

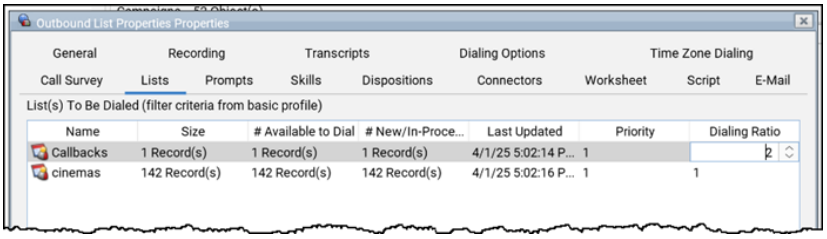
Dialing ratios provide the ability to call records from multiple lists at specified frequencies. For example, if your campaign has separate lists with hot and cold leads, you may dial hot leads more often than cold ones, without excluding any leads. Dialing Ratios apply only to lists that have the same priority.

1 Check **Enable List Dialing Ratios** at the bottom part of the window.



2 Specify the necessary ratios for each list.

Click the field, use the arrow buttons to increase or decrease the value. Alternatively, you can type in a number to the field from your keyboard. Ensure that lists that should be dialed at the specified ratios have the same Priority. Lists with higher priority levels are dialed first, at the corresponding ratios with lists that have the same priority level.

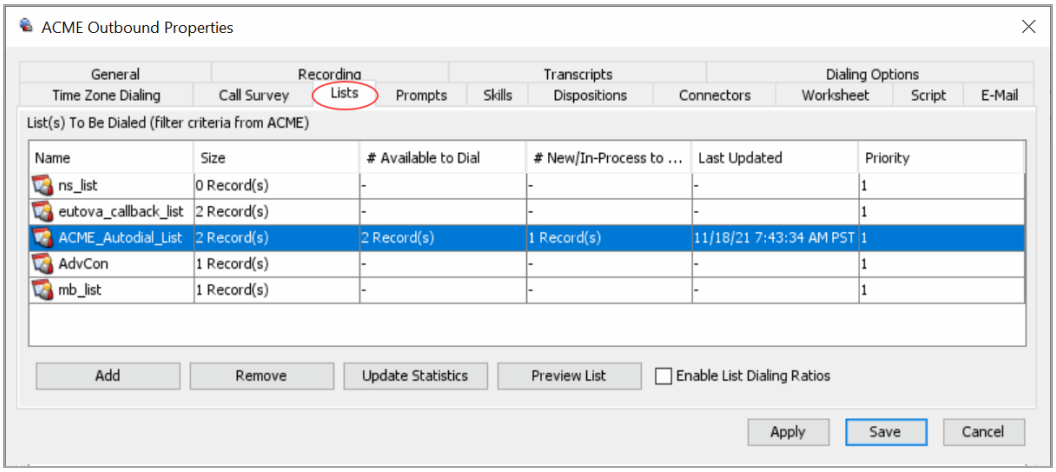


In our example, two records from the first list are dialed for every one record in the second list.

3 Click **Apply** or **Save**.

Viewing Dialing List Statistics

As an aid to planning your outbound campaigns, you can view the dialing statistics to determine the effects of campaign profile filters during configuration.



To view the dialing list statistics for your campaign, select a dialing list and click **Update Statistics**. A list-based summary is displayed. This view excludes any finalized records. These filter results can be viewed and adjusted while configuring the campaign, before applying the changes to your campaign.

List summary statistics include the following information:

- Name of the list.
- Number of records in the list.
- Number of records available to dial, based on current dialing list filter results and redial rules.
- New records and **Contact Records in the Dialing Process**.
- Date and time of the most recent statistical update to this list.
- List priority. For additional information, see **Defining List Priority**.
- Dialing ratio. For more information, see **Setting Dialing Ratios**.

To refresh the statistics once the campaign is running, select a list and click **Update Statistics**. This enables you to modify the campaign profile filters, or other list attributes and determine the effects of those changes before applying the settings to your campaign.

> **Note**
> For very large lists, the update statistics and preview list queries may take time to complete and display updated results. The date and time of the last refresh is displayed to indicate the most recent update for each list.

Contact Records in the Dialing Process

Contact records that are currently in the dialing process include:

- Contact record numbers that are in the buffer to get dialed
- New **Dial ASAP** record numbers that have been added
- Dialed records that are available for redial

Previewing and Exporting Dialing Lists

You can preview, adjust priority, and export a dialing list from your campaign in the campaign **Lists** tab.

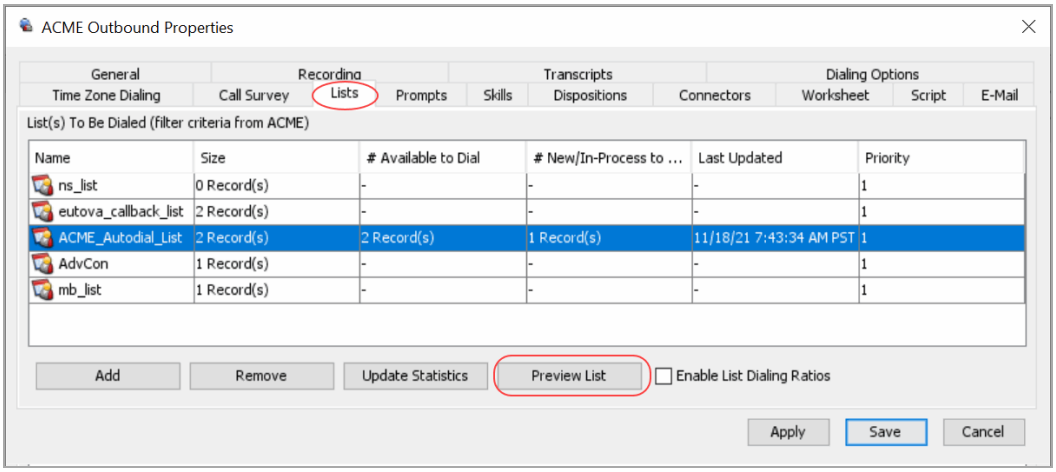
Previewing a Campaign Dialing List

To preview any dialing list associated with your campaign, select a list and click **Preview List**. The preview list shows the first 300 records that are available to dial as a result of active campaign profile filters. This includes newly added records, records coming from the Dial ASAP queue, and any new records introduced with a list update.

This list specifically excludes:

- Records in the **Final** state.
- Records for which the maximum number of allowed attempts is exhausted for every allowable number.
- Records in the do not call (DNC) list.

To refresh the statistics, select any list and click **Refresh**.



Dialing List Details

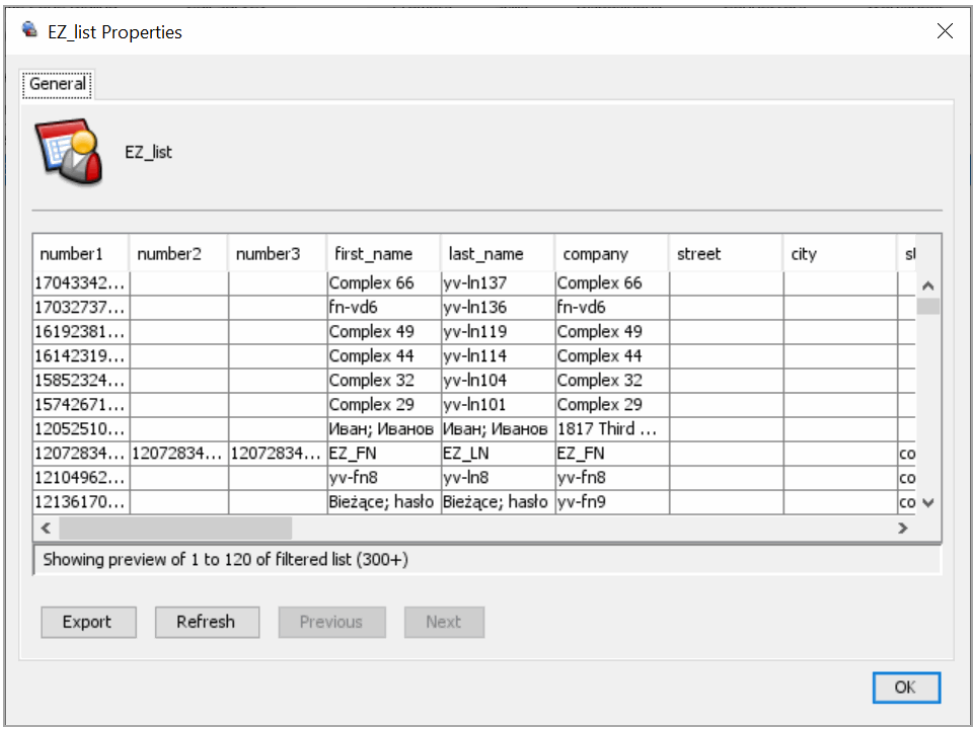
Column Name	Description
Name	Name of the list.
Size	Total number of records in the list. This changes only when records are added or removed from the list.
# Available to Dial	List size minus the number of records that are filtered out in the Campaign profile.
# New/In-progress	The numbers in this list that remain available to dial. Defined in **Previewing a Campaign Dialing List**.
Last Updated	Date and time that this list was updated by data from the server.
Priority	Priority of this list in the campaign.

Exporting a Campaign Dialing list

You can export a campaign dialing list in CSV, PDF, or TXT format.

To export a dialing list, follow these steps.

1 In the Lists tab, select a list and click **Preview List**.



> **Note**
>
> The **Previous** and **Next** buttons are not functional.

2 In the list properties view, click **Export**.

3 In the list export view, select a storage location, file type, and provide a file name.

4 Select and arrange the columns that you want to export.

> **Note**
>
> PDF exports are limited to five columns.

5 Click **Save**.

Configuring Skills for Campaigns

Skills apply to all types of campaigns.

Skill Groups for Outbound Campaigns
Outbound Skills for Inbound and Autodial Campaigns
Assigning Skill Groups to Campaigns
Removing Skill Groups from Campaigns

Important

If no skills are added to a campaign the interactions are assigned to any available agent.

Skill Groups for Outbound Campaigns

If an outbound campaign is configured with no outbound skill, it is configured as an outbound campaign for the default skill. When this campaign is running, this outbound campaign initiates calls for each available agent, resulting in numerous outbound calls, constrained only by the lines allocated to the campaign.

Select the **Skills** tab to add to add one or more skill groups to the campaign. The skill groups added here determines which agents receives calls from this campaign.

If multiple skill groups are loaded for the campaign, the agents in the skill group listed first receives the first calls. If they are on a call, the dialer sends calls to the agents in the next skill group. Move skill groups up or down in priority by using the **Up** and **Down** buttons.

For routing calls to available agents, the order of the skill groups in this tab takes the highest priority, followed by skill levels that are configured per agent in User Properties, and then followed by the Distribution Algorithm configured in the General tab of Campaign Properties.

To add skill groups, see Basic Configuration Administrator's Guide , *Adding Skill Groups*.

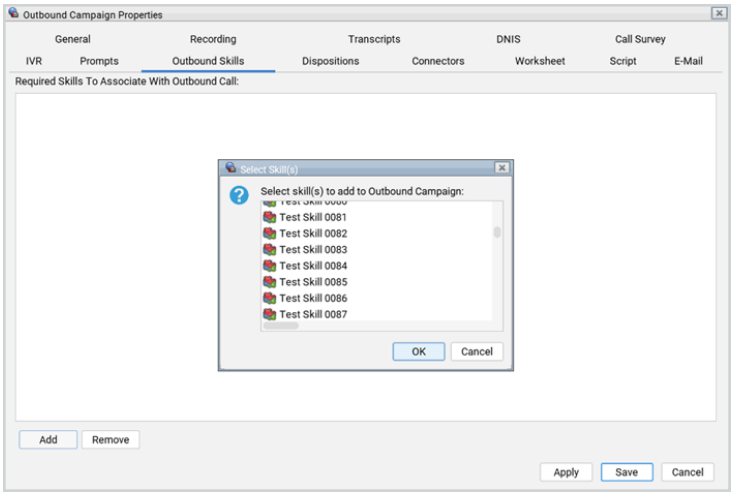
Outbound Skills for Inbound and Autodial Campaigns

When making a manual call (any call initiated by the agent), the Five9 agent is prompted to associate the call with a campaign. Doing so assigns all of the campaign properties to that call, including the script, worksheet, and dispositions.

If you would like to make this Inbound Campaign available in the list of campaigns that can be associated with manual calls, add a skill group in the Outbound Skills tab. Any agent who is a member of the selected skill group(s) can associate manual calls with this campaign.

Assigning Skill Groups to Campaigns

1 In the Skills or Outbound Skills tab, click **Add**.



2 Select one or more skill groups.

3 Click **OK**.

4 Move skill groups up or down in priority by using the Up or Down buttons.

5 Click **Apply** or **Save**.

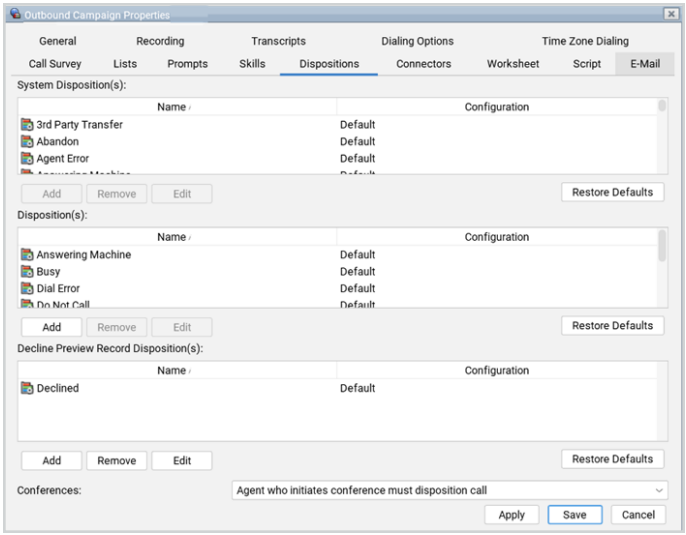
Removing Skill Groups from Campaigns

1. Select one or several items to remove.
2. Click **Remove**.
3. Confirm the skill group removal by clicking **Yes To All**.
4. Click **Apply** or **Save**.

Configuring Dispositions

This tab is used to add and view the dispositions you that may be set for calls associated to outbound, inbound, and autodial campaigns. The dispositions listed in the Call Dispositions table of this tab are available to agents when processing calls.

Disposition Categories
Assigning Dispositions to Campaigns
Removing Dispositions from Campaigns
Editing Dispositions for Each Campaign
Managing Campaign Dispositions



To configure dispositions see Basic Configuration Administrator's Guide, *Configuring Custom Dispositions*.

> **Note**
>
> You can also assign, and group, dispositions in campaign profiles. If a disposition is in a group in a campaign profile, and you assign the same disposition to a campaign that associated with that profile, the disposition still appears in the list of available dispositions in the agent application. However, it appears at the top of the list rather than in the group. Five9 recommends that you assign a given disposition either in the campaign profile or in a campaign, but not both.

Disposition Categories

- **System Call Disposition(s)**: The system dispositions are displayed in the System Call Disposition(s) area. You may edit the Properties of these dispositions to change the dialing behavior for this campaign. For example, one campaign may have a redial timer of 5 minutes for the Busy system disposition, while another campaign may use a 10 minute timer, depending on its requirements.

- **Call Disposition(s)**: These dispositions may be set by agents at the end of calls to determine its outcome.

  For outbound campaigns, you may need to create different dispositions for inbound calls if you do not want cross-campaign disposition types (such as, Final type with Apply to Campaigns Using This Disposition selected) to affect the same records in your outbound campaigns.

- **Decline Preview Record Disposition(s)**: Applies to only to outbound campaigns. Depending on your configuration, agents may have the option to decline records, without calling a number, when working on Preview Campaigns. For this case, you should define the Decline dispositions.

The following tasks can be performed for each list:

- **Add**: Opens the Select Disposition(s) window where you can choose one or several existing dispositions to add.

- **Remove**: Removes the selected dispositions from the list.

- **Edit**: Opens the Disposition properties window where you can change the disposition settings. If you change default settings, the Configuration field in the dispositions table changes from Standard to Custom.

- **Restore Defaults**: Reverts any changes made to dispositions for this campaign to their global (default) configurations.

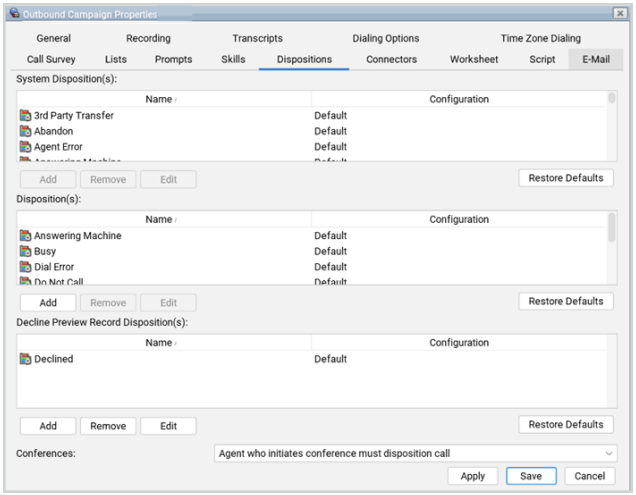
On the Dispositions tab, you can select one of these options for Conference calls:

- **Agent who initiates conference must disposition call**: Requires that the first agent in a conference that contains at least one other agent to set a disposition when leaving the conference.
- **Last Agent to leave conference must disposition call**: Requires that the last agent who is left in a conference that contained at least one other agent to set a disposition when leaving the conference.
- **Conference initiator decides who must disposition call**: Provides the ability for the first agent in a conference that contains at least one other agent to either set a disposition when leaving the conference, or to pass on the disposition-setting responsibility to another agent who is on the call.

Assigning Dispositions to Campaigns

Depending on your configuration, agents may have the option to decline records when working with preview campaigns. For this case, you should define the Decline Preview Record dispositions.

1. In the Dispositions tab, for each section, click **Add**.



   For the Preview Campaign Dialing Mode, the Decline Preview Record Dispositions area include the Declined system disposition. If you want to use only custom Declined dispositions, you may remove.

2. Select one or more dispositions, and click **OK**.

3 Repeat the steps for the other sections.

4 Click **Apply** or **Save**.

Removing Dispositions from Campaigns

You cannot remove system dispositions.

1 In a section, select one or more dispositions.

2 Click **Remove**.

3 Click **Yes To All**.

4 Repeat the steps for the other section.

5 Click **Apply** or **Save**.

Editing Dispositions for Each Campaign

You can use the Edit button to open a Disposition Properties for Campaign window for any system disposition or custom dispositions that are added to a campaign.

For example, you may wish to change the Redial timer for the Busy disposition to be 5 minutes for one campaign, and 10 minutes for another campaign.

Any changes made to dispositions in this manner do not apply to other campaigns in which the Disposition is used, or to the global disposition settings. If any changes are made to dispositions for a campaign, the Configuration column in the Dispositions tab display Custom, instead of Default.

You can use the Restore Defaults button to undo the custom disposition configurations for the campaign, and restore the System, Call, or Decline dispositions to their default, global configurations. On the Dispositions tab, you can define which party (conference initiating Agent or last Agent) must define the Disposition after the Conference call.

You can also allow the conference initiator to decide who must disposition the call. In this case, the initial agent may either set a disposition when leaving the conference, or instead select another agent in the conference who becomes responsible for setting a disposition or passing the ability to another agent.

Managing Campaign Dispositions

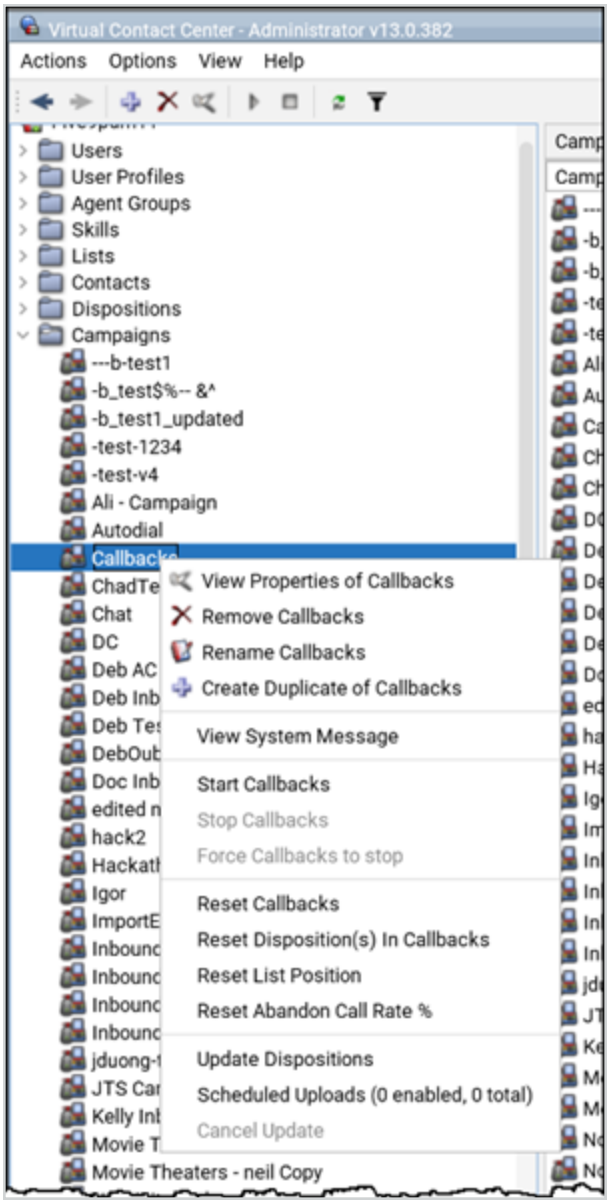
Scheduling or canceling a campaign dispositions update is similar to the same operation with call lists.

See Basic Configuration Administrator's Guide, *Importing and Updating Call Lists*.

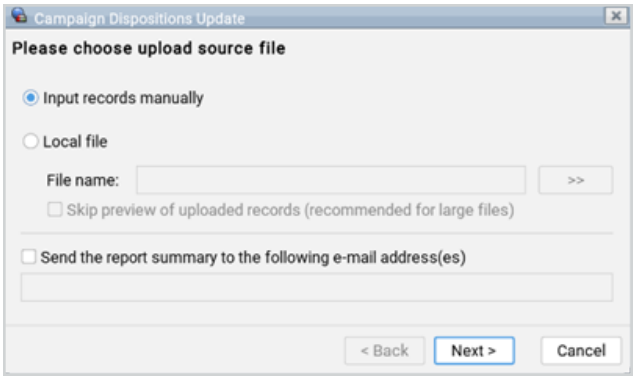
Updating Campaign Dispositions

You can update dispositions in a batch mode.

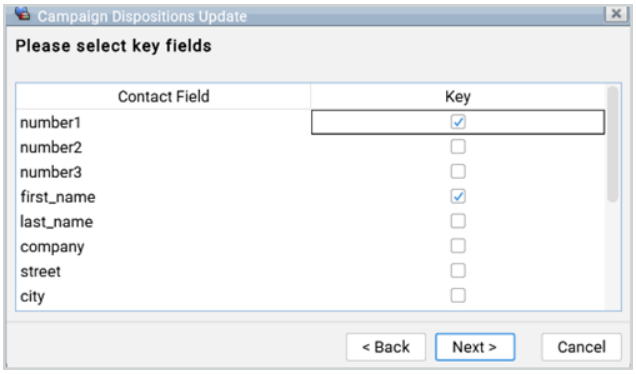
1. Click **Campaigns**.
2. Right-click a campaign name, and select **Update Dispositions**.



3 Choose a source for the dispositions upload and click **Next.**

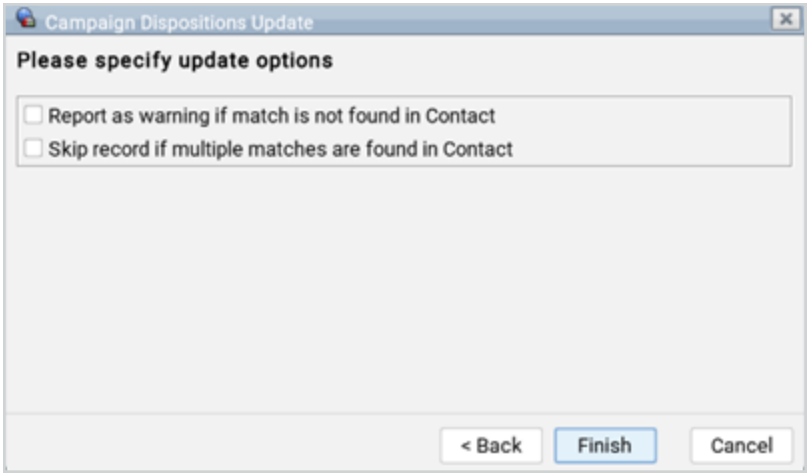


4 To input records manually, select the Key fields to be used for identifying unique contact records, and click **Next**.



See also, [Configuring Lists for Outbound and Autodial Campaigns](#).

5 Check an update option.



6 Click **Finish**.

Resetting Dispositions in Outbound Campaigns

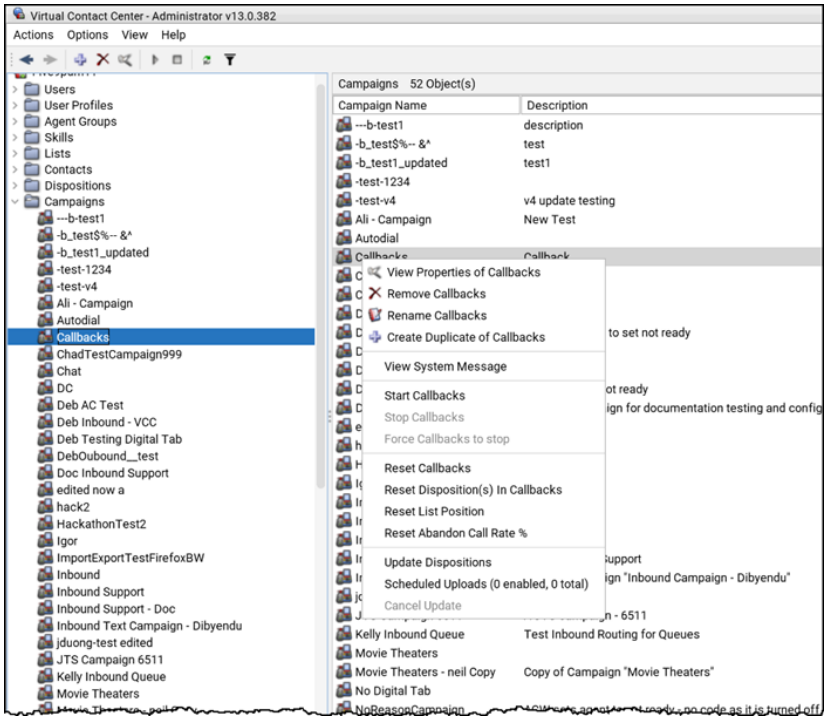
Reset only the dispositions you know are safe to redial. Resetting dispositions for a campaign applies only to the lists currently loaded in the campaign.

After processing an outbound campaign for a period of time, you may want to redial some numbers that have previously stopped being dialed, due to their assigned dispositions. Use the Reset Disposition option to instruct the campaign to redial numbers based on the dispositions you select. For example, if you have a disposition called Contact Not Available, you may want to retry these contacts after a week.

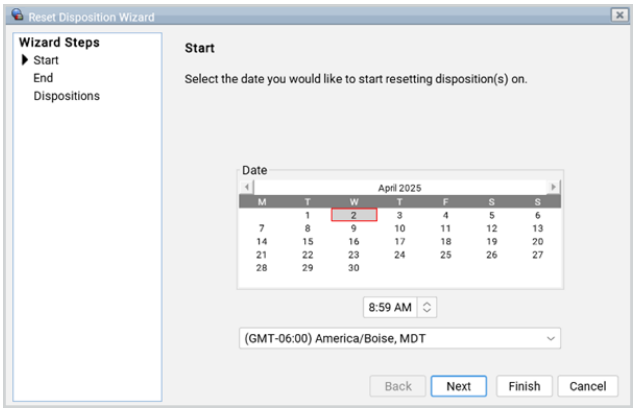
You can also reset calls that were assigned a disposition by the system. Many system dispositions are redialed five times (if using the default redial count). You can use Reset Disposition to try these numbers again and start the redial count over.

1 Click **Campaigns**.

2 Right-click a campaign name, and select **Reset Disposition(s) in <name_of_campaign>**.

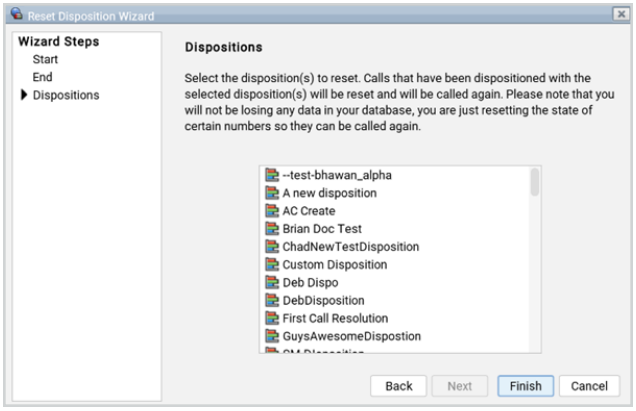


3 Choose the starting date and time and click **Next**.



4 Choose the ending date and time and click **Next**.

5 Select the dispositions you want to reset, and click **Finish**.



6 Click **OK**.

Adding Connectors

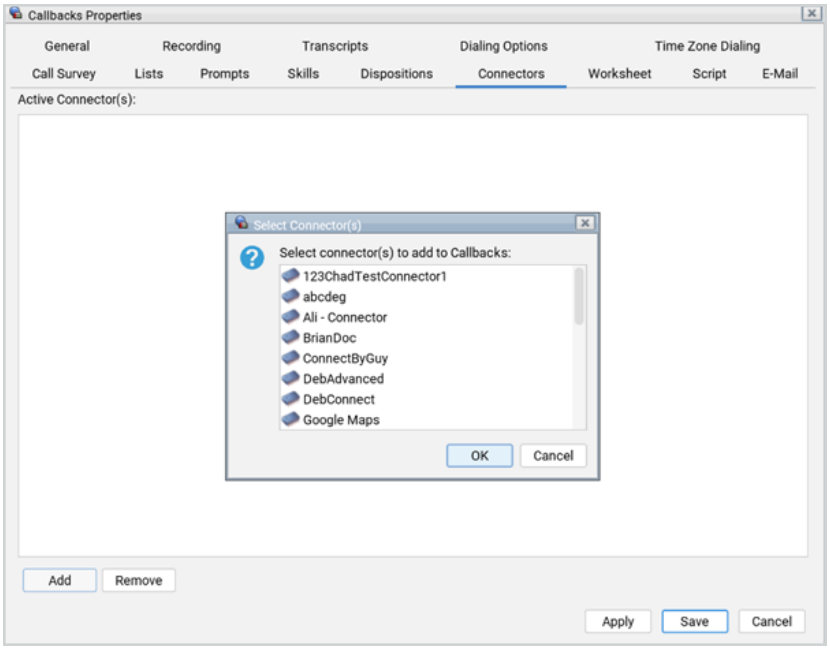
To add a connector to a campaign, click the Connectors tab. Connectors apply to all outbound, inbound, and autodial campaigns. Connectors may be used to pass information about a call or contact record to an external Web server. Connectors are executed according to trigger configured in Connector Properties. For example, they may be used when calls are accepted or when calls are disconnected.

For more information about connectors, see Connectors in the Basic Configuration.

Assigning Connectors to Campaigns
Removing Connectors from Campaigns

Assigning Connectors to Campaigns

1 In the Connectors tab, click **Add**.



2 Select one or more connectors.

3 Click **OK**.

4 Click **Apply** or **Save**.

Removing Connectors from Campaigns

1 In the Connectors tab, select the connectors to remove.

2 Click **Remove**.

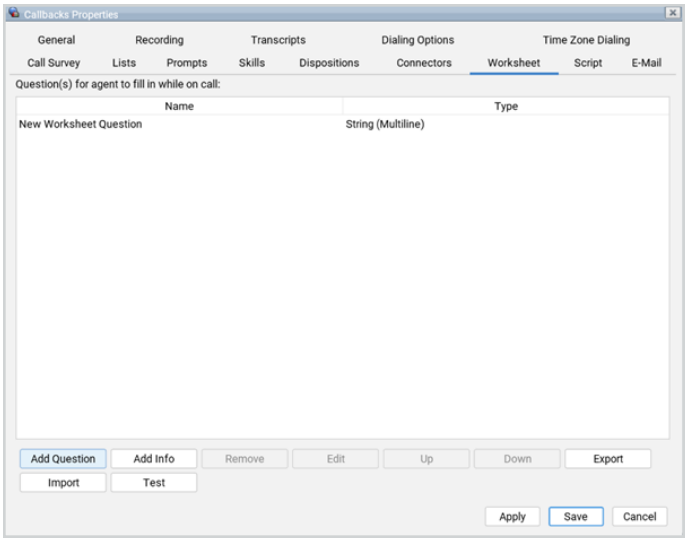
3 Click **Yes To All**.

4 Click **Apply** or **Save**.

Configuring Worksheets

Use a worksheet to create a form in question-and-answer format, to be filled out by an agent while on a call. The worksheet is used to gather information from the contact, without saving this data to a contact field. Data entered in a worksheet is stored in the database and can be accessed through the various Worksheet Reports on the online Reports portal. Worksheet questions may be assigned to any Campaign types.

Adding Worksheet Questions
Exporting Worksheets
Importing Worksheets
Removing Worksheet Questions
Using Contact Record Field Values in Worksheets



You create the worksheet by adding questions, one at a time. The questions appear to the agent in the order displayed in the worksheet, after an agent presses on the Start Worksheet button. You can change the question order with the Up and Down buttons. You can click **Export** to export the worksheet for use in other campaigns. By clicking **Import** you can import the saved worksheet to use it in the current campaign. By clicking Test you can test the created worksheet. You can view the worksheet in the way the agent views it. Here you can also go through all the questions listed in the worksheet.

Email notifications for dispositions can include worksheet information (see **Configuring Email Notifications**). To access the worksheet information in reporting, use the Worksheet Data Source.

In addition to the information below, you can add HTML to worksheet fields.

Adding Worksheet Questions

1. In the Worksheet tab, click **Add Question**.

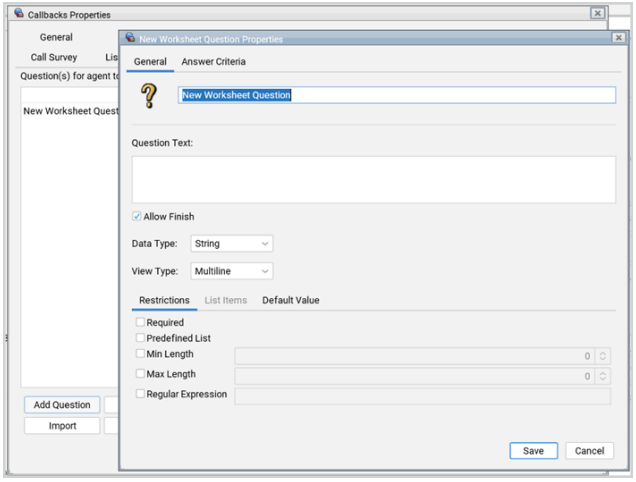
   You can click Add Info to add a Worksheet page that gives instructions to agents without asking for input.

2. In the text box, enter a name for this question.

   The name of the question is not the actual question. For example, if the question is *What is your current interest rate?*, the name of the question may be *Interest Rate*. The name that you enter creates the field name displayed in reports.

3. Type the question in the question field.

   The question text does not have to be a question for the contact. It may be instructions for the agent, such as *Enter the contact's interest rate*.



4. Define the following options:

   Configuring a question is similar to configuring call variables and contact fields.

   - Allow Finish: If not selected, the agent cannot click the Finish button for that question. Use this option to ensure that agents cannot prematurely

close the Worksheet without answering all required questions.

- Data Type: Define the format of the answers. The Date/Time format enables agents to pick a date and time from the calendar, for example when setting appointments.
- View Type: Define the format of the answers. Options are different if the Predefined List option is selected and a List Item is added. See Basic Configuration Administrator's Guide, *Data Types*.

5 Define options in the Restrictions tab.

- Required: You cannot finish the worksheet without answering all questions.
- Predefined List: Not Available for Date, Time, Date/Time, Boolean, and Duration data types. If you select this option, the agent does not need to enter the answer but has to select one or several answers that you define. You can define the possible answers the List Items tab. For each data type, the View Types to be selected are as follows:
  - Combo Box: Create possible answers that are displayed to the agent in a drop-down menu. Good for yes/no questions or when you know all possible answers. You must define the list of possible answers. This option enables agents to select values.
  - List: This option shows all values in the area.
  - Buttons: The check boxes appear in front of each value.
  - Text Field: Gives the agent a text box to enter the answer.
  - Check Box: Allows the agent to mark the answer. The check box question type allows multiple selections using check boxes.
  - Date: Allows the agent to pick a date from the calendar and also choose the time. Good for setting appointments.
  - Text Area: A large text field for entering the answer. Use this if the answer needs multiple lines of text.
  - Info: The agent does not enter the answer. It displays information to the agent such as *Don't forget to confirm the contact's first and last name*.
- Min Length/Min Value: Limits the values to be entered by agents. Not available for predefined list. Not available for Phone and Boolean data types.

- Max Length/Max Value: Limits the values to be entered by agents. Not available for predefined list. Not available for Phone and Boolean data types.
- Regular Expression: Not available for predefined lists and Date, Time, Date/Time, Boolean, and Duration data types. Regular expressions are an option to use for input validation to ensure consistent data entry. For instance, a regular expression could be used to validate that a record locator in a travel reservation conformed to a specific pattern or combination of alphanumeric symbols (for example, ABC123). Patterns are defined using POSIX, Perl, or ASCII regex syntaxes. For example, using the ASCII syntax, a pattern with three upper-case letters, followed by three digits, can be configured as follows:

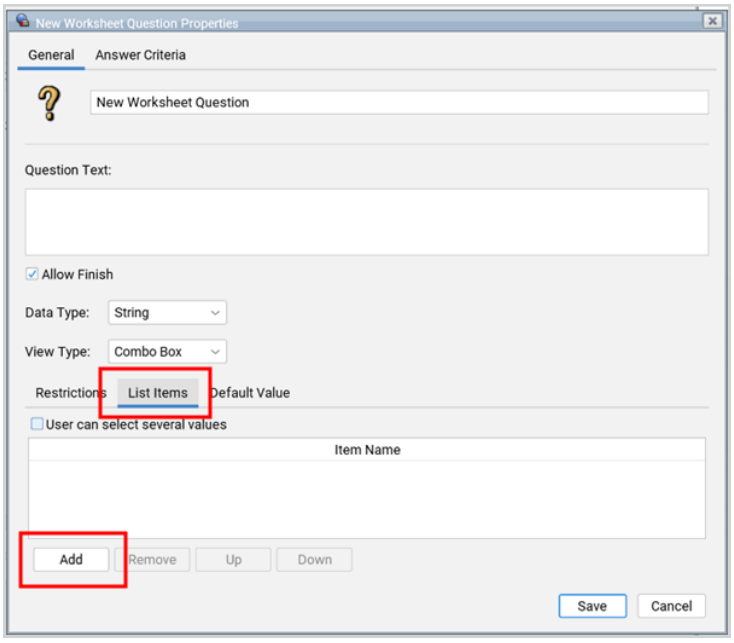
  [A-Z][A-Z][A-Z][0-9][0-9][0-9]

If the Predefined List option is activated, the List Items tab is available.

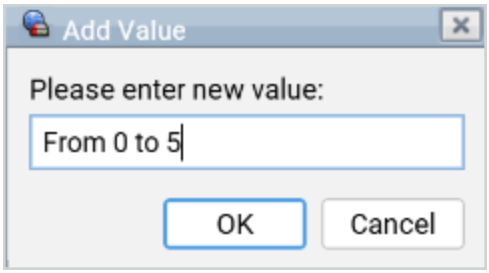
6 Define options in the **List Items** tab.

You create the possible answers that are displayed to the agent in a menu. Good for yes/no questions or when you know all possible answers.

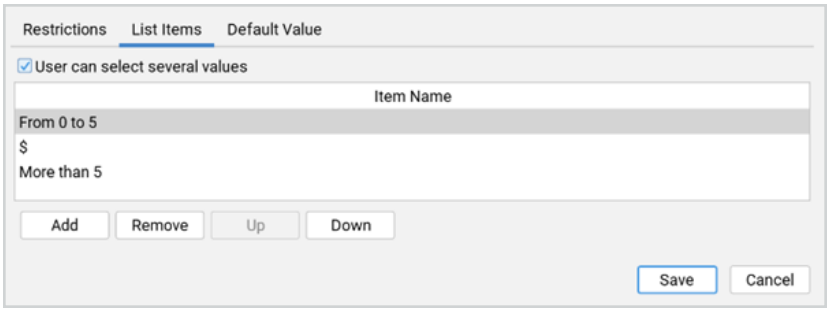
7 Click **Add** to create an answer.



8 In the **Add Value** field, enter a value, and click **OK**.



9 Configure possible answers and answer criteria.



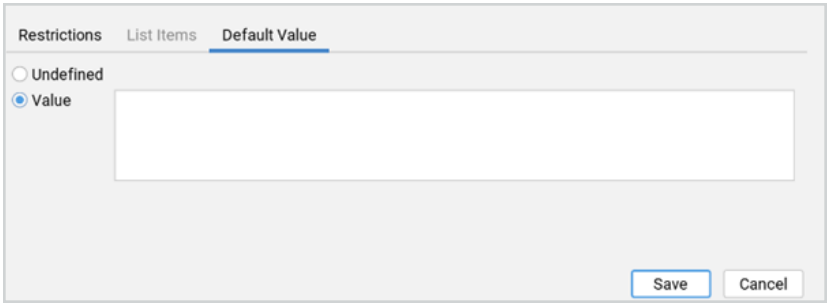
10 Optionally, check **User can select several values**.

11 Use **Up** and **Down** buttons to arrange the answers.

12 Optionally, in the **Default Value** tab, add the default value.

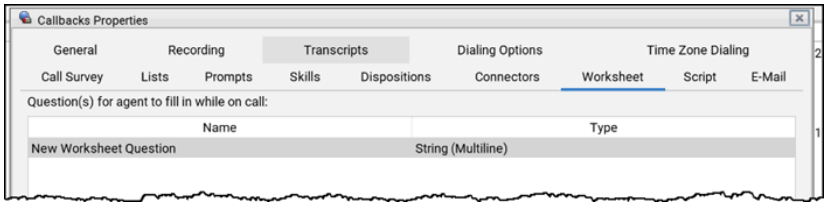
If you use a predefined list, the **Default Value** tab displays all predefined values.

You can select one in the list. If you do not use the **Predefined List**, the **Default Value** tab enables you to select the **Undefined** option or define a value depending on data type.



13 Click **Save**.

The question appears in the Worksheet tab.

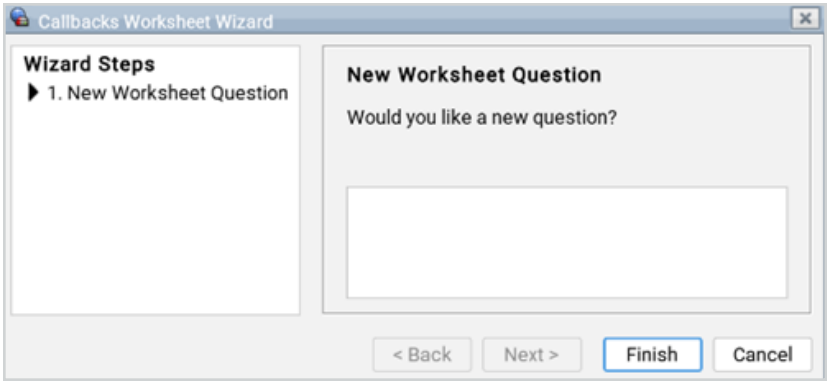


14 When you have several questions, change the order as needed with the Up and Down buttons.

If you use the Predefined List question, arrange the possible answers in the List Items tab while creating the question.

15 To view the worksheet, click **Test**.

You can click Wizard Steps to preview each question or click Next.



16 Click **Apply** or **Save**.

Exporting Worksheets

You can export the worksheet to use it in another campaign.

1 Click **Export**, and save the file to your computer.

2 Click **OK**.

Importing Worksheets

You can import a previously exported worksheet.

1. Click **Import**.
2. Locate the worksheet file on your computer, and click **Open**.

   The questions appear in the Worksheet tab.
3. Click **Apply** or **Save**.

Removing Worksheet Questions

1. Select one or more items in the list.
2. Click **Remove**.
3. Click **Yes**.
4. Click **Apply** or **Save**.

Using Contact Record Field Values in Worksheets

You to add contact field values in worksheet questions. Worksheets support specifically formatted text, called replacement parameters, which are replaced by contact data at runtime. To replace text in the question text area of a worksheet, add a replacement parameter tag that pulls contact data for the connected call. Any contact field may be used in this format: `@Customer.<field_name>@`

For example, if you want the text to read: *Dear Mr./Mrs. Johnson*, add this to your call script: `Dear Mr./Mrs. @Customer.last_name@`

When the worksheet is loaded with the contact record for the call, the text `@Customer.last_name@` is replaced with the data in the `last_name` field of the contact record.

Instead of creating a worksheet question that reads *Hello Mr / Mrs LAST NAME*, the system adds the name of the customer who is on the phone, making worksheets more dynamic. All variable names are case sensitive.

To determine which variables are available in your domain, go to **Contacts > Fields**. Below are the Five9 default (system) contact fields: `number1`, `number2`, `number3`, `first_name`, `last_name`, `company`, `street`, `city`, `state`, and `zip`. Any contact field, including your custom fields, can be put into a worksheet. You only need to determine the exact field (variable) name, such as `@Customer.last_name@`

You can also use `@Worksheet.questionname@` for previous worksheet values, where `questionname` is the name of a previous question. If you are using a test worksheet in Campaign Properties, the replacement parameters are not populated because it is not associated with a specific record. You cannot use a replacement parameter in the first question of the worksheet.

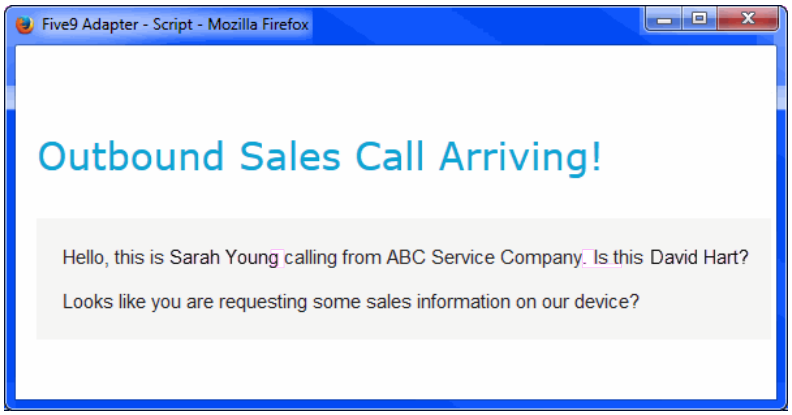
Configuring Scripts

The script is the first screen displayed to the agent when a call is presented. The script is the sales pitch the agent reads when a call is connected or notes to help the agent while on a call. In this tab, you can write or edit the script, in HTML, or import/export HTML files. This section describes outbound, inbound, and autodial campaign scripts.

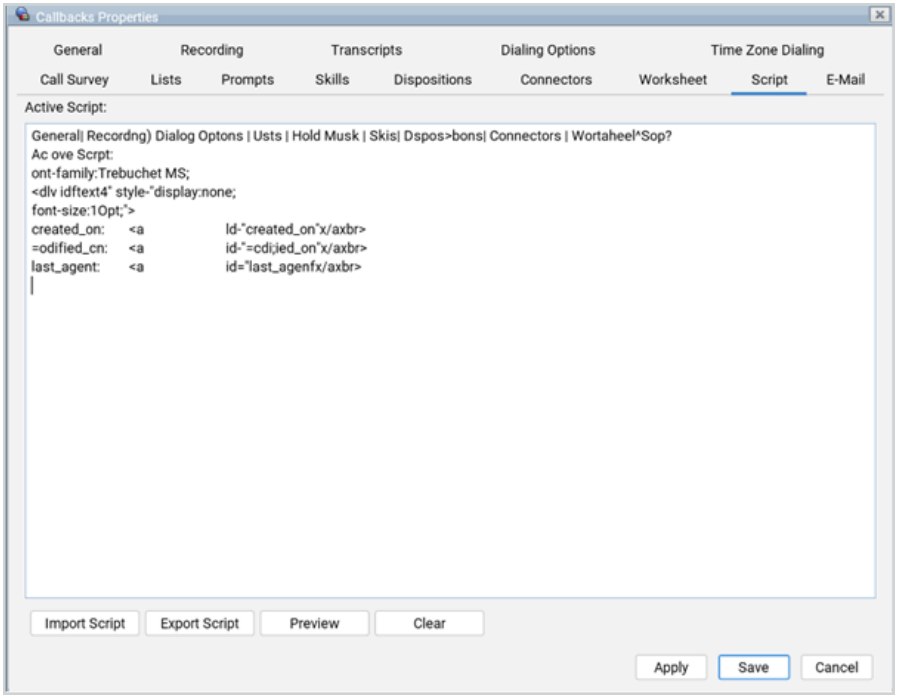
Creating Scripts
Importing Scripts
Exporting Scripts
Using Contact Data in Scripts

Agent scripts can handle JavaScript code and have advanced HTML handling capabilities. This feature allows for more advanced and dynamic scripts to be created, potentially improving agent productivity and efficiency by defining a clear workflow for talking with clients and handling various situations.

This example shows a Web page that contains the script text that agents must read. Script text can include menus and fields in which the agent can enter the customer's information.



Aside from popup information, another example where JavaScript may be used is to show and hide script question text to save space on the page. Such a setup allows agents to click on a button or link to expand questions as needed.



Creating Scripts

To add a script to the campaign, you need to import an HTML file or type HTML code into the text box in the Script tab.

1. Open a text editor.
2. Type your script.
3. To view the script, click **Preview**.
4. Save the file as HTML. Web page, or Web Page Filtered.

Importing Scripts

To import a script, follow these steps.

1. Click **Import Script**.
2. Locate the file, and click **Open**.
3. Click **Apply** or **Save**.

Exporting Scripts

To use a script in other campaigns, follow these steps.

1. Click **Export Script**.
2. Locate the file on your computer, and click **Open**.

Using Contact Data in Scripts

Below you can find the steps for using contact data fields to personalize scripts. Instead of writing a script that says hello FIRST NAME, the script adds the name of the contact, for example: Mr. Thomas, thank you for taking my call. Do you have a few minutes?

To use contact fields in a script, you must save the script as HTML and edit the HTML code. You can edit the code in a text editor or an HTML editor before importing it into the campaign, or you can edit the code after importing.

1. For a list of fields available to use in your script, click **Contacts > Fields**.

   The default contact fields, number1, number2, number3, first_name, last_name, company, street, city, state, and zip, and any custom contact fields are available.

2. Be sure that the field names to be used are populated in the contact database from one or more lists.

3. Save your script as an HTML file or as a Web page or Web Page Filtered.

4. Edit the HTML file in a text or HTML editor.

   Add text in the code for the contact fields you want to insert in the script. Field names are replaced with the contact data from the contact record. Any contact field may be used in this format: `@Customer.<field_name>@`

   For example, if you want the text to read: *Dear Mr./Mrs. Johnson*, add this to your call script: `Dear Mr./Mrs. @Customer.last_name@`

When the worksheet is loaded with the contact record for the call, the text `@Customer.last_name@` is replaced with the data in the `last_name` field of the contact record.

Instead of creating a worksheet question that reads *Hello Mr / Mrs LAST NAME*, the system adds the name of the customer who is on the phone, making worksheets more dynamic. All variable names are case sensitive.

5 Save the HTML file.

6 Add the script to the campaign.

7 To view the script, click **Preview**.

This view does not have the contact data populated in the script because there is no active contact record. Use the Agent application to fully test the script.

An alternative to use the `@Customer.<field_name>@` for automatically replaced contact field values is using custom HTML tags. Below are the HTML tags for the default contact fields. Note that the uppercase text can be different from what is shown here. This text is shown when the script is being tested.

```
<a id=number>PHONE NUMBER</a>
<a id=first_name>FIRST NAME</a>
<a id=last_name>LAST NAME</a>
<a id=company>COMPANY NAME</a>
<a id=street>ADDRESS</a>
<a id=city>CITY</a>
<a id=state>STATE</a>
<a id=zip>ZIP CODE</a>
```

Example

HTML tag for a custom field called `rate`:

```
<a id=rate>INTEREST RATE</a>
```

Below is a section of HTML code with tags for adding contact data and an example of the resulting text.

```
<p class="style2">Hello. I am calling about your mortgage with <a
id=lender_name>LENDER NAME</a>.

Am I talking to <a id=first_name>BORROWER FISRT NAME</a>

<a id=last_name>BORROWER LAST NAME</a>?</p>
```

Hello. I am calling about your mortgage with ABC Lending Company. Am I talking to Joe Smith?

In this case a custom field called `lender_name` was populated with ABC Lending Company, the `first_name` field with Joe and the `last_name` field with Smith.

Managing Prompts

Use this tab to set up prompts to be played to the agent on call connection and when the caller is on hold. Whisper prompts replace standard beeps and ring tones and provide agents with the context they need to respond appropriately to the caller. You must restart the campaign to activate the new hold music. If the hold time for a call exceeds the length of the configured hold music prompt, the music is repeated.

Call Whisper
Hold Music
Adding a Prompt
Removing the Prompt

Call Whisper

This feature allows the agent to hear a custom prompt (for example, saying the name of the campaign or skill) instead of standard beeps and ring tones. Prompts provide agents with the information they need to respond appropriately to the caller. If the Call Whisper feature is set up, the agent should hear a specific campaign or skill whisper as the call is connected. See *Managing Voice Prompts* in the Basic Configuration Administrator's Guide.

Note

A whisper prompt set for a skill overrides a whisper prompt set for a campaign.

Hold Music

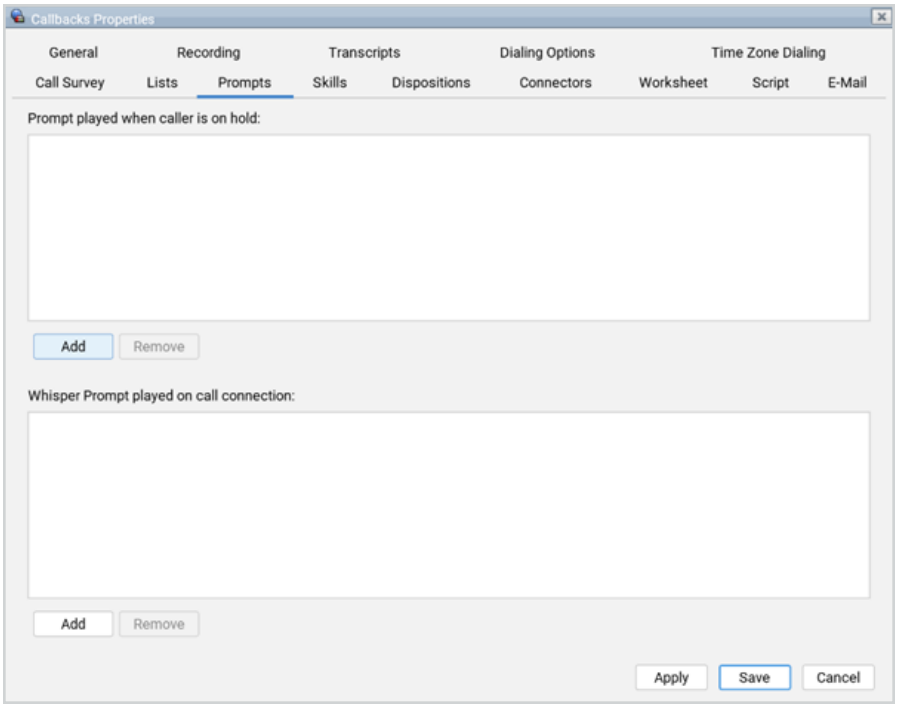
Hold music is one or several audio files which are played to the callers when they go on hold. For example, if you use the Agent/Voice mail Transfer or Skill Transfer IVR

module, the connected party hears hold music while waiting for an agent. When the agent uses the Place Call On Hold function, the caller hears the hold music until this call is retrieved.

Your custom hold music can include music in addition to a recorded message such as a marketing message. For example, you may want to provide information about your company or product.

The custom hold music must be saved as a prompt. Five9 recommends keeping the length of hold music files to less than 3 minutes. The file continues to play in a loop as long as the caller is on hold. You must restart the campaign to activate new hold music.

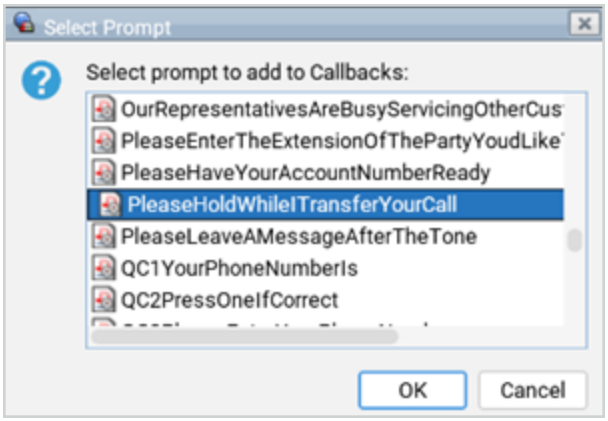
The Five9 VCC provides default hold music. You can override the default hold music by adding a new recording. You can select from either custom or default prompts. Recordings used for hold music must be uploaded under the Prompts folder in the Administrator application.



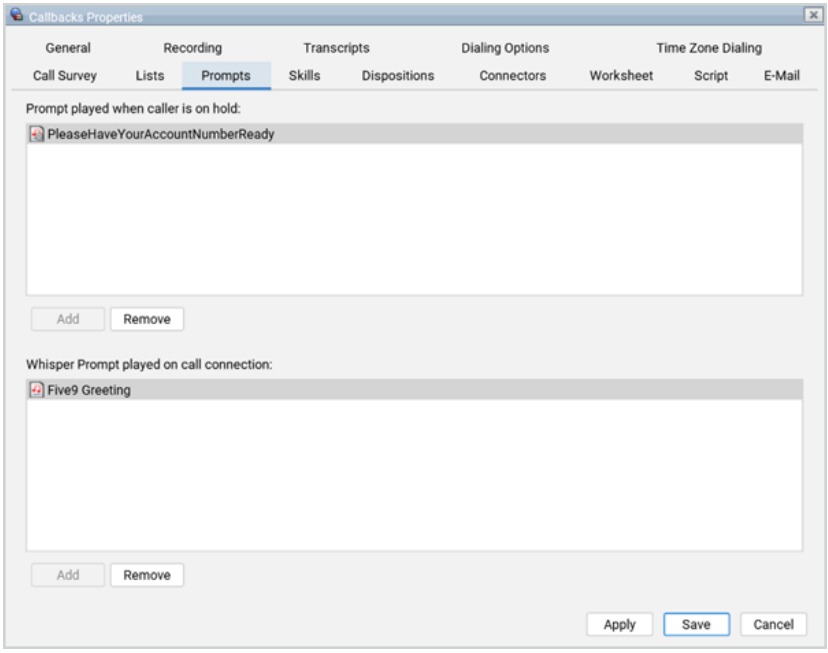
Adding a Prompt

1 In the Prompts tab, click the appropriate **Add** button.

2 Select the prompt you want to add, and click **OK**.



3 Click **Apply** or **Save**. The prompt you selected appears.



Removing the Prompt

1. In the Prompts tab, select the prompt to remove.
2. Click **Remove**.
3. Click **Yes**.
4. Click **Apply** or **Save**.

Configuring Autodial Agent Linkback Campaigns

Agent *Linkback* is a type of autodial IVR campaign flow that plays a message to answering machines and gives the option to talk to an agent. These are described in Autodial IVR Flow Types.

Defining the Maximum Number of Lines
Setting Agent Availability
Providing a Message When Agents are Unavailable
Using the Priority Setting in IVR Modules
Dedicating Skill Groups to Campaigns
Setting the Fast Voice Detection Level

Defining the Maximum Number of Lines

The maximum number of lines that you set for inbound campaigns determines how many people can call your campaign at one time. This includes talking to an agent, on hold, conference calls, or if the call is still being routed by an IVR script. Use this option to set the number of inbound lines allocated to a campaign. In the General tab, set the Max Number of Lines to be dialed by the campaign. When defining an autodial campaign to deliver calls to an agent, limit the number of lines to the number of agents that are available during the call time, plus the number of contacts to be placed on hold. The campaign can stop dialing based on agent availability and when all the configured lines are in use. See also **Autodial Campaigns General Properties**.

The default value is 0. After opening the campaign properties for the first time, you must change this value to a number greater than 0 before saving the campaign. If the number of calls to the campaign exceeds the maximum, subsequent callers hear a busy

or fast busy signal or sometimes a voice announcement. The actual experience depends on your telecom provider.

You may want to dedicate specific numbers of inbound lines to each campaign. Alternately, you can set all inbound campaigns to the total number of lines available. Therefore, to prevent callers from receiving a busy signal, be sure to order enough inbound lines to cover your peak usage. Your Five9 domain is provided with a fixed number of lines. To add inbound lines, contact your Five9 account manager.

Setting Agent Availability

In the Dialing Options, if your call flow includes the potential to deliver calls to agents, you must consider starting and stopping the campaign based on the availability of agents. You can use the Agent Availability option for the Autodial Campaign to automatically start dialing only when there are agents available. See **Autodial Campaigns General Properties** for option descriptions.

Agent availability enabled. If the option is enabled, you can select any agent or a skill group in Dial Only if Agents Are Available in the Following Skill Group. The campaign stops dialing if no agents available in the selected skill group. You must define the conditions under which the agents are considered available:

- Ready to Receive Calls
- Ready to Receive Calls or Busy
- Logged In

The campaign can stop dialing automatically if no agents available or the number of lines configured on the General tab is reached.

The Autodial Campaign dials the number of lines configured on the General tab even if only one available agent remains in the skill group. The remaining agents need to process the calls on all lines assigned to the Campaign. The number of lines does not change depending on number of available agents. For example, if you have 10 agents in the skill group and the autodial campaign has 10 lines, but only one agent is ready, the campaign dials 10 lines for that agent.

If an agent goes on break or logs out after autodial has placed a call, the contact reaches the IVR and is processed as if no agents are available.

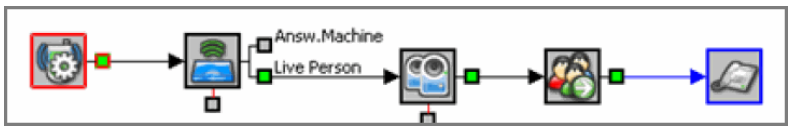
Agent availability disabled. If the option is disabled, the autodial campaign dials a list based on the number of lines available, regardless of the number of logged-in or available agents. The list is dialed continuously, regardless of agent availability.

Therefore, you need to start the campaign only when agents are available or to provide an option for voice mail when no agents are available.

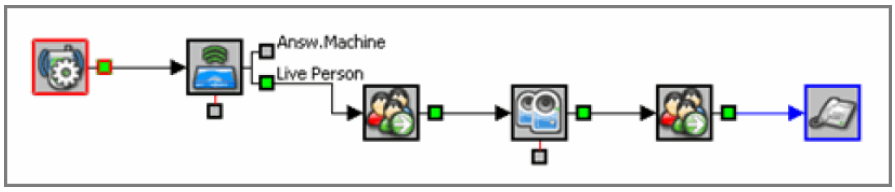
Providing a Message When Agents are Unavailable

Always provide a message if no agents are available even if you enable Agent Availability. For example, the autodial campaign sees that an agent is available and starts to dial for that agent. Before an answered call is delivered to the agent, the agent goes on break. The message can be played immediately after a call is answered or after checking a skill group first. Below are sections of an IVR flow demonstrating both options.

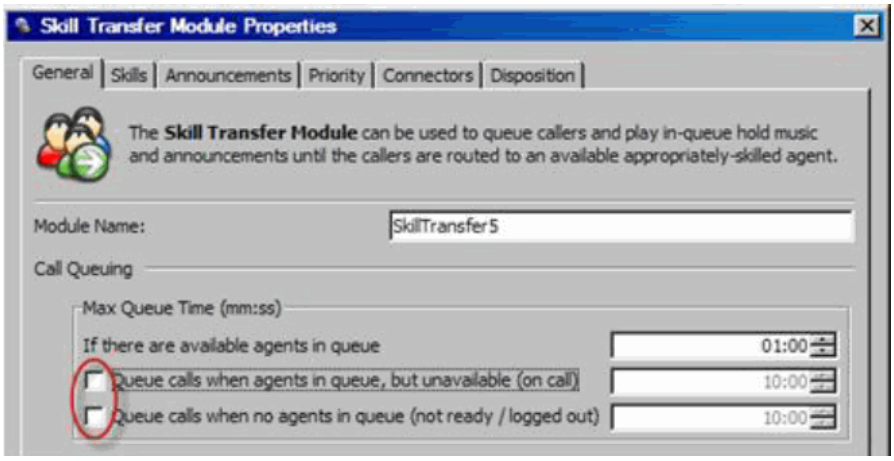
The Play module is first in line with a message stating the reason for the call and then uses a Skill Transfer module to check for agents.



The first Skill Transfer module checks for an agent, with no queue time. If no agents are available, it immediately plays a message using the Play module. After the message has been played, the call is sent to a second Skill Transfer module.



The first Skill Transfer module should be set up with no queue time. If no agents are available, the person hears the message in the Play module before being put on hold. The settings for the first Skill Transfer module are displayed below.



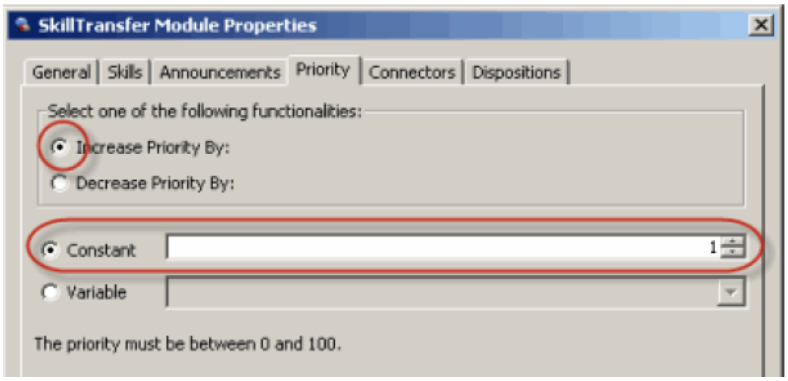
If a call is answered but there are no agents available to immediately take the call, play a message informing the person why you are calling. In other words, do not put the call on hold before stating the reason for the call.

After the Play module, there is a second Skill Transfer module to transfer the call to one or more skill groups. If the call is transferred to an agent in a skill group, the IVR Script is complete. You can set a hold time if no agents are available. The caller hears hold music while waiting for an agent.

Using the Priority Setting in IVR Modules

In the second example above you want to ensure that the calls waiting on hold are answered before any new calls. The people on hold are obviously interested in talking to an agent. You can accomplish this by using the Priority setting in the second Skill Transfer module. Calls with a higher priority are answered before other calls.

In the properties of the second Skill Transfer module select the Priority tab, click Increase Priority By, and set the value to 1.

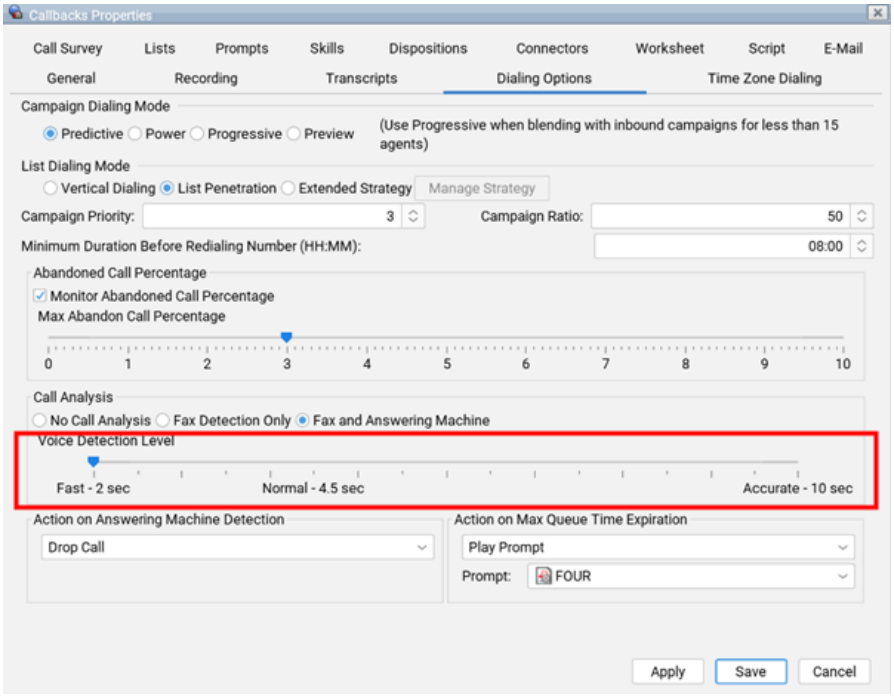


Dedicating Skill Groups to Campaigns

Dedicate a group of agents to the Autodial Campaign. Use a Skill Group to assign your agents to the campaign. Agents working in an Autodial Campaign should not participate in other campaigns at the same time. Stop the Autodial Campaign when you want to switch the agents to another campaign.

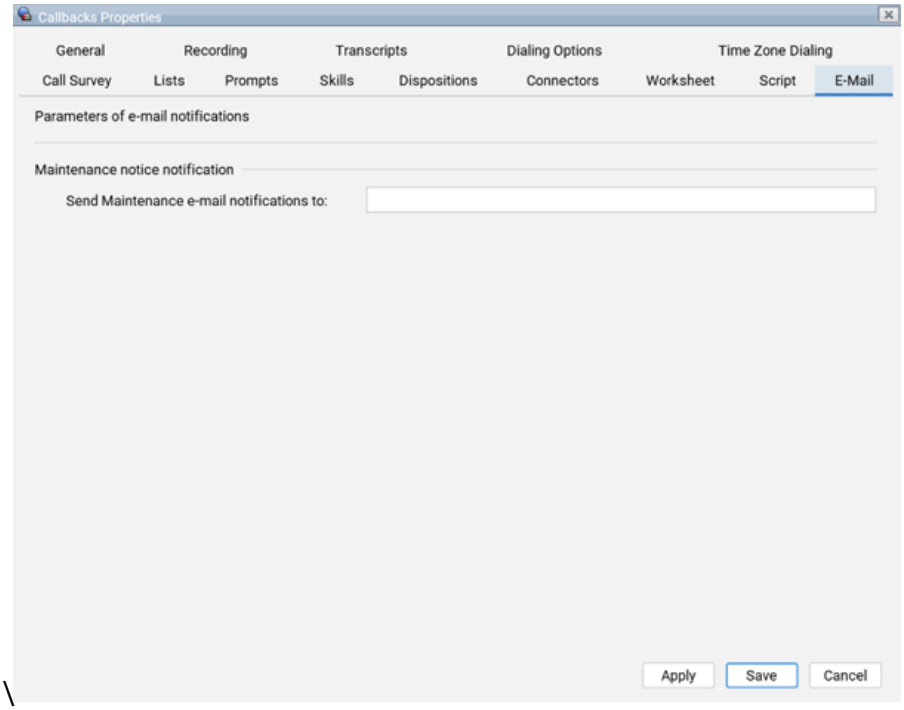
Setting the Fast Voice Detection Level

Use the Fast Voice Detection Level setting (the Dialing Options tab in the Autodial Campaign Properties window). Agents are connected to calls with more answering machines, but the setting decreases the delay in connecting the calls after saying hello.



Configuring Email Notifications

In the E-Mail tab, you can set for each campaign an email address for maintenance notifications that can affect your campaign. You can use a different email address for each campaign or type of campaign.



\

Configuring Voice Mail Notifications

You can send an email notification when an agent or other user receives a message. Depending on the configuration, the email message can be an attachment.

When a message is delivered to a user account, the system sends a message to the email address configured in the user account properties. The user account can be any account that receives messages, such as agent accounts or accounts selected to receive messages in an inbound IVR. An IVR script can be configured to send calls to a specific voice mailbox outside of business hours. In this case an email notification can be sent to an on-call or after hours email address. The messages can be managed even if there are no users currently online. Messages attached to emails can be reviewed without user access or without logging in to the VCC.

Agents can receive messages when a call is transferred from another agent, from an IVR script, or from an extension transfer in an IVR script. For each user account, you can select if an email message is sent when a message is received. You must enter a valid email address in the User Properties window. You may also configure an error handling

email address in **Actions > Configure**, which is used as the Reply To address. See *Managing Voicemail* (Users) in the Basic Configuration Administrator's Guide

The email message has a subject line of Five9 Voicemail Alert and includes the phone number of the caller and the time and date it was received. If the source number does not provide Caller ID, it appears as Unknown Caller.

Ensure that the recipient's email server accepts messages with attachments and that the file size limitation is configured to allow a WAV file larger than one megabyte. If the receiving email server imposes a limit on attachment size, and the message exceeds this limit, the email is delivered without the attachment. In this case, the message remains in the voice mail recording section of the user account properties.

If a message delivery fails (bounces), the failure notification message is sent to the error handling email address. A copy of the message remains in the User account properties and can be accessed from the agent, supervisor, or administrator applications.

A message can be transferred to another agent. When a message is transferred, an email is sent with this subject, Five9 Voice Mail Transfer Alert, which contains the name of the administrator that transferred the message, the date and time, and the source phone number of the message.

Voice mail notification enables users to check general or group messages for inbound campaigns. Many times an IVR branch ends with a caller leaving a message for a department or group rather than for an individual. For example, you may have an IVR branch that delivers calls to support agents. If an agent does not pick up the call after the specified hold time, the caller can leave a message for a fake user account, used primarily as a general voice mailbox. With email notification, this message can be distributed:

- Sent to an email distribution list for all support staff
- Sent to a shared email box where support staff pick up the messages
- Sent to a support manager who distributes the messages based on the content

Resetting List Position in Outbound and Autodial Campaigns

By default, the dialer attempts dialing all the records in the lists before starting over from the top of the list order. Resetting the list position forces the dialer to start from the top of the list at the desired moment of time. The dialing is started over from either the first records that were added to the list, or from the beginning of a specified sort order. See also, **List Order for Outbound Campaigns**. You can also reset list position automatically on the scheduled time by using workflow rules (see **Dialing Rules**.

In some cases, you may need to make the dialer start dialing from the beginning. You and supervisors can manually reset the dialing list position. Resetting the list position is logged in the Event Log.

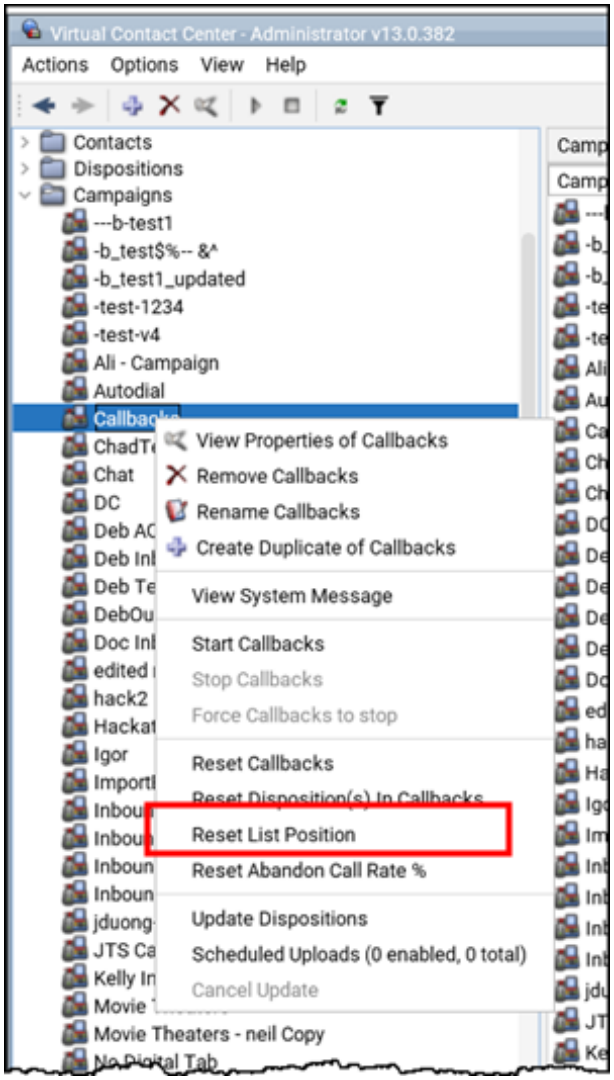
The dialer remembers the list position even after stopping the campaign. If a campaign is and restarted, the dialer returns to that position. Unless the list position is reset, it completes the entire list or lists before returning to the top and starting to dial numbers marked for redial without a timer.

The list position is maintained for each campaign. If you move a list to a different campaign, that campaign starts dialing from the top even if another campaign has partially dialed it.

If you partially dial one list, stop the campaign and add a second list with higher priority, then the dialer will start at the top of the new list. After completing the new list, it will continue with the original list at the position where it left off.

There are several exceptions that would cause a record to be dialed seemingly out of order. Usually, this would happen because of a Redial-type Disposition with a timer.

1. Click the **Campaigns** folder.
2. Right-click a campaign name, and select **Reset List Position**.


Virtual Contact Center - Administrator v13.0.382
Actions
Options
View
Help
Contacts
Dispositions
Campaigns
---b-test1
-b_test$%-- &^
-b_test1_updated
-test-1234
-test-v4
Ali - Campaign
Autodial
Chat
DC
View Properties of Callbacks
Remove Callbacks
Rename Callbacks
Create Duplicate of Callbacks
View System Message
Start Callbacks
Stop Callbacks
Force Callbacks to stop
Reset Callbacks
Reset List Position
Reset Abandon Call Rate %
Update Dispositions
Scheduled Uploads (0 enabled, 0 total)
Cancel Update
Igor
Movie Theaters - neil Copy

Five9
The Intelligent Cloud Contact Center

Interactive Voice Response (IVR)

Administrator's Guide

December 2025

Learn how to configure Interactive Voice Response (IVR) scripts, which are visual devices for routing calls in inbound and autodial campaigns.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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What's New

Release	Change	Topic
Nov 2025	Added error response note.	Third Party Transfer Module
Sep 2025	Updated the Disposition tab image in the Hangup Module.	IVR Modules Creating the IVR Script
Jun 2025	Updated navigation and text in introduction paragraph.	Scheduling IVR Scripts in Campaign Properties
May 2025	Added Module option and updated screenshot.	General Tab
	Updated screenshot to reflect Studio.	Collecting Data for IVA (to Studio)
Apr 2025	Updated recording number. Updated character number in Branch Name.	Announcements Tab Case Module
	Updated Event Actions branch.	Menu Module
Feb 2025	Added a note: If you need speech recognition features, contact your Five9 account director.	Speech Recognition Grammars
	Updated the description of CONCAT.	CONCAT
	Added new *Transfer to Voicemail > Voicemail Box* option, **Variable**.	Skill Transfer Module - General Tab
Oct 2024	Updated Max Time of 3rd Party Call (seconds) to 3600 seconds.	Third Party Transfer Module - General Tab

Interactive Voice Response

Interactive Voice Response (IVR) enables human-computer interaction for inbound (required) and autodial (optional) campaign calls. IVR scripts can range from simple announcements to complex multi-prompt customer service menus that can perform many functions, such as these:

- Route incoming calls according to the availability of agents or skill groups
- Transfer calls to a third party or voicemail when agents are not available
- Provide instructions to callers
- Search for contact records
- Assign data to variables

Interactive Voice Response is available in these options:

- Visual mode: Visual IVR is an optional feature in your Virtual Contact Center. For more information, contact your Five9 representative.

  The Visual IVR feature is an self-service interface that enables you to provide on your Web site a visual interface on any device, such as a smartphone. This interface enables your callers to click or touch menu items without having to listen and respond verbally to each option. To interact with an agent, callers can choose among the contact options that you offer, such as phone, Five9 Email, and Five9 Chat. To integrate Visual IVR in your workflow, see **Visual IVR Scripts**.

- Voice mode: The conventional voice mode enables you to use recorded messages as prompts and to create prompts specific to your needs. You can use a text-to-speech builder and speech recognition. For more information, see **Adding Prompts** and **Speech Recognition Grammars**.

- Touch-tone keypad mode: The default mode enables customers to use a touch-tone phone to interact with your company.

You can use a script in several campaigns, you can link small scripts to create a large one, and you can use several scripts in the same campaign. You can export and import IVR scripts to create a customized version for a different campaign. You can access IVR information in reports. IVR scripts can contain diverse components, such as speech recognition, linked modules, and variables.

Visual IVR Scripts

Five9 Visual IVR is an optional feature of your Virtual Contact Center that provides to your mobile customers an alternative to voice-only IVR flows. For more information, contact your Five9 representative.

Benefits
Implementation
Reports
Use Cases
Planning Your Implementation
Preparing Your Inbound Campaigns
Integrating a Visual IVR Script in Your Web Site
Preparing Visual IVR Scripts

With Visual IVR, you can convert complex voice IVR prompts into a convenient visual flow that improves customer experience. You can use Visual IVR scripts in many cases, such as these:

- Viewing and paying a bill.
- Obtaining information, such as searching an FAQ.
- Requesting customer support.
- Changing hotel or restaurant reservations.
- Associating skill groups with campaigns to transfer Visual IVR transactions to the chat sessions available to the skill groups.
- Pass data, such as location, customer's information, and product information

Benefits

When callers use a mobile device, the convenience of navigating through such a visual IVR flow results in these many benefits:

- For your business:
  - Self service results in fewer calls when you implement Visual IVR on Web pages that customers reach to obtain support, such as billing and FAQ pages.
  - Fewer calls are abandoned when compared to traditional voice IVR flows.

    - Fewer calls are transferred to agents because callers can provide precise context due to the choices available in the IVR flow.
    - First-call resolution is increased because agents can communicate rapidly and efficiently with customers by callback, Five9 Chat, or Five9 Email.
    - Style and language in the Visual IVR are consistent with your brand and customer satisfaction criteria.
- For callers:
    - Self service is available at all times regardless of the device and location.
    - Callers can choose the contact method by your agents without waiting on hold when the voice option is not convenient.

Implementation

Visual IVR is simple to implement and manage by using the same drag-and-drop tools that you are already using for voice IVRs. Depending on your configuration, Visual IVR may include estimated wait time, callbacks, Five9 Chat, Five9 Email, and Five9 Visual Customer Feedback. At the end of the Visual IVR flow, Five9 Visual Customer Feedback helps you to measure customer satisfaction when the customer's sentiment is most relevant and accurate.

Reports

Easy-to-use survey options and out-of-the-box reports enables you to monitor how your customers feel and resolve problems. With real-time and historical reports, administrators and supervisors can easily monitor the results and refine the Visual IVR flows.

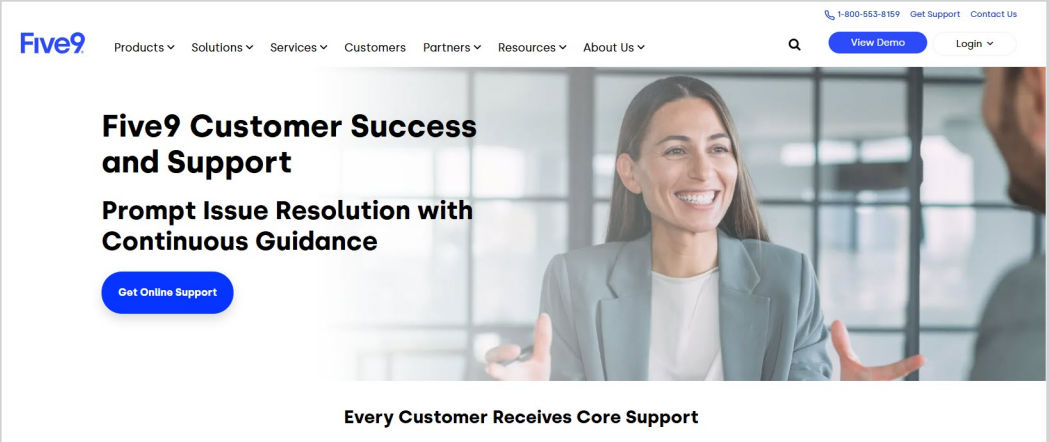
Use Cases

- **Planning Your Implementation**
- **Preparing Your Inbound Campaigns**

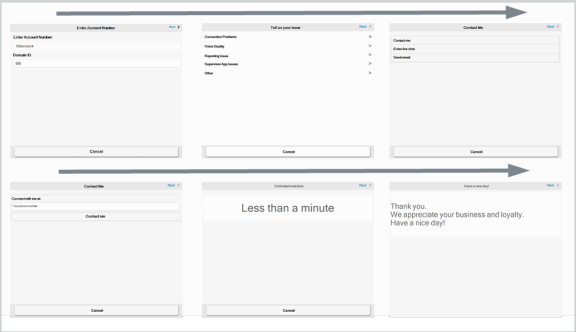
- Preparing Visual IVR Scripts
- Preparing Visual IVR Scripts

Contacting Customer Support

This example shows a typical Visual IVR flow in which a customer contacts Five9 to discuss an issue with an agent. In this case, the caller choose to be contacted by phone by an agent.



After clicking the contact button, the caller is led through a series of visual prompts. Each figure below shows how the caller progresses rapidly through the Visual IVR. When the caller closes the window, an agent who has the appropriate skill will return the call within one minute. Each IVR page is displayed on the entire screen of the customer's device.



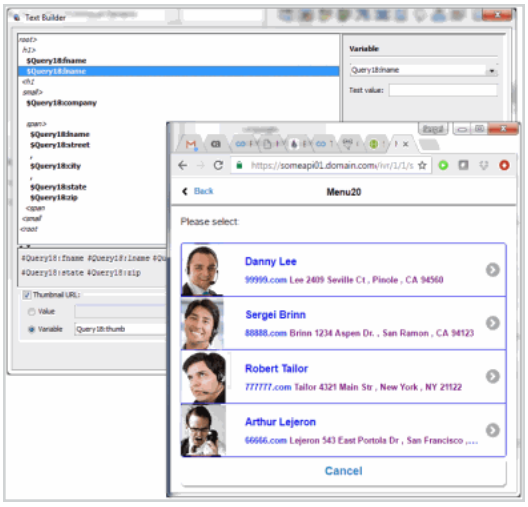
For the IVR modules used to create this flow, see Creating Visual IVR Scripts.

Creating Multilingual Elements

You can combine elements to offer dynamic menu options, such as language preference or a custom list of routing options based on skill preference or customer status. A custom tag enable you to render your desired look and feel based on the JSON response received from these Visual IVR modules:

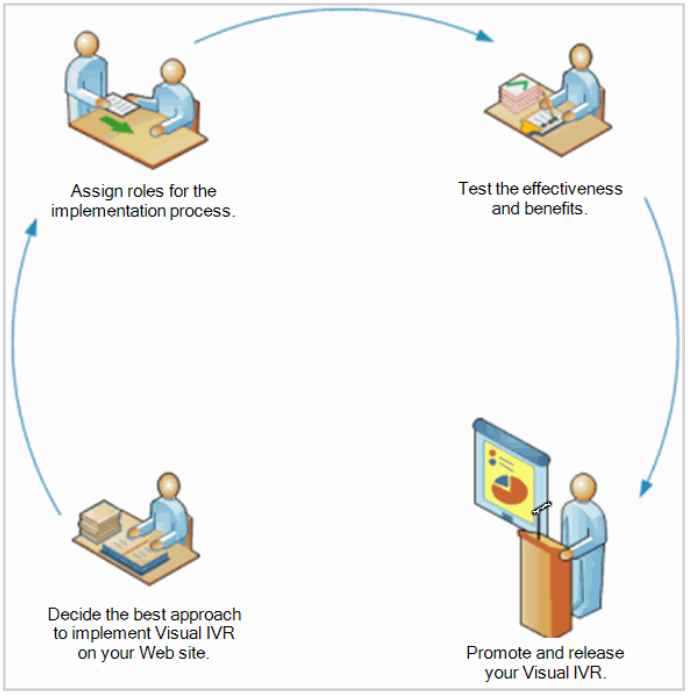
- Get Digits
- Input
- Lookup Contact Record
- Menu
- Play
- System Info
- Voice Input

The graphic below lists the process flow for creating and using these Visual IVR features to create multilingual elements and the dynamic menu options listed above for your Visual IVR routing solutions.



Planning Your Implementation

Before creating IVR scripts, you need to evaluate your strategy so that you can maximize the benefits of Visual IVR. This figure shows the steps, starting from the lower left.



Evaluating Your Current Strategy

To decide the best approach to implement Visual IVR on your Web site, you need to review your current self-service and mobile strategy. Start by answering these questions, but be sure to add any others that are important to your brand and customer satisfaction criteria:

- What are your goals?
- Do you use a self-service voice IVR?
- Do you have usage data about customer visits to your Web site?

- Do multiple groups in your company use or are considering using a Web self-service IVR?

Once you know the answers, you can create an overall plan.

Assigning Implementation Roles

Visual IVR is hosted by Five9. You only need to enable campaigns and configure your Web site. Several members of your organization need to collaborate in the implementation:

- VCC administrator:
  - Creates scripts specifically for Visual IVR or modifying existing voice IVR scripts. For more information, see **Preparing Visual IVR Scripts**.
  - Enable new or existing campaigns for Visual IVR as follows:
    - Associate the IVR script in the campaign.
    - Set the nuber of ports available for the Visual IVR.
    - Configures one or more schedules. For more information, see **Preparing Your Inbound Campaigns**.
- Branding and Marketing:

  These teams decide the look and feel of the Visual IVR and its location in your Web site. You may choose among several themes and modify these themes if needed.
- Product Development:

  This team integrates the Visual IVR in your Web site. For more information, see **Integrating a Visual IVR Script in Your Web Site**.

Testing the Visual IVR

Before releasing the Visual IVR, you need to test its effectiveness. On the Internet, you can find tools that can help you to understand the value of a Visual IVR and how to optimize it for your business.

1. Add access points, such as a links or buttons, in multiple locations on your Web site.

2 Compare the results of the access points.

Start by using these criteria, but be sure to add any others that are important to you, for example:

- Most clicks, which indicates the highest number of started self-service flows.
- Most completed self-service flows.
- Most agent callback, chat, or email requests.
- Most positive feedback.

3 Use the results to set one or more access points for the production release.

Releasing the Visual IVR

When you are ready to release the Visual IVR into production, promote, release, and monitor the results.

1 Promote the new self-service feature.

2 Capture feedback and analyze reports.

3 Use the feedback that you obtain:

- Target specific customers.
- Refine your business processes, Web site design, and Visual IVR scripts.
- Train your employees to interact effectively with callers who are using a visual flow.

Preparing Your Inbound Campaigns

This section describes the required campaign configuration. To set these options, see *Creating IVR Schedule Rules* in the Campaign Administrator's Guide.

Enabling the Visual Mode

To enable an inbound campaign, check Visual Mode in the IVR schedule of the campaign properties. Depending on your campaign configuration, your customers may be able to choose between voice or Visual IVR paths. When a campaign is configured to use voice and visual prompts, visual prompts take precedence over voice prompts as follows:

- If you enable Visual IVR, the HTML text entered in the Visual IVR Page tab of a module that supports visual prompts overrides all other prompts.
- If Visual IVR scripts do not exist, standard prompts are rendered visually in HTML unless the campaign contains only recorded prompts files, which cannot be rendered visually.

Enabling National and International Callbacks

To enable your agents to return calls associated with a Visual IVR, you must enable at least the first feature.

1. To enable the callback option in Visual IVR sessions, check **Visual Mode** in the IVR schedule of the campaign properties.

   By default, the Callback option is enabled. You may now return only in-country calls.

2. To return international calls associated with IVR and Visual IVR sessions, check **Allow collection and callback of international numbers** in the Queue Callback Tab of the Skill Transfer module (see Queue Callback Tab).

   Depending on your business, callers may request a callback to an international number. To reduce phone charges, this option enables you to select whether to include or exclude international phone numbers from callback options. If you do not enable this option, you cannot return international calls.

Securing Your Visual IVR Pages

A Cross-Site Request Forgery (CSRF) attack occurs when a link or script is added to a page in a Web site where the user has been authenticated. Because the user is trusted, the attack is insidious. The element or page contains a link or script that, if clicked, redirects your customers away from your site. For more information about this subject,

see Clickjacking Defense Cheat Sheet. For information about the supported browsers, see *Application Notes* in the Technical Requirements Reference Guide.

The Five9 Web Page Security feature prevents malicious pages from being embedded in a frame in your Web site. By restricting access to your Web pages, you can prevent unauthorized commands, which protects your customers and your business.

Important

To prevent malicious framing of a Web page, you must use the `X-Frame-Options` HTTP header with the value appropriate for your business. The command is ignored if you place it in an `http-equiv meta` element of the page.

Example

Sarah is starting a Visual IVR session at your Web site. She enters required information in text fields. In another browser tab, Sarah opens a page at another Web site. She does not know that this page is harmful. On that page, she clicks a fake element, which sends a request to cancel the Visual IVR session. The session is canceled. Sarah cannot receive the service that she expected from your company.

In the IVR schedule properties, select an X-Frame-Options header option to allow the correct page to be displayed in a frame:

- DENY: Cannot be displayed even if the frame is located in the same domain as the page. You cannot start a Visual IVR script with this value in the iframe. Use this value if you do not need to place a Visual IVR link in an iframe. This option provides the most security from attacks.
- SAME_ORIGIN: Can be displayed only if the frame is located in the same domain as the page. This option is mostly for internal uses because customers cannot access internal Web pages.

  Example

  The HTTP header of `http://shop.example.com/confirm.asp` contains `X-FRAME-OPTIONS: SAME_ORIGIN`. Any frame in the `http://shop.example.com` domain can be displayed.

- ALLOW_FROM: Can be displayed only if the frame is located in the domain that you specify in the field.

Example

The HTTP header of `http://shop.example.com/confirm.asp` contains `X-FRAME-OPTIONS: ALLOW_FROM https://partner.affiliate.com`. The page may be framed only by pages in the `https://partner.affiliate.com` domain.

Using the Visual IVR URL

You can test and customize the link at the bottom of the DNIS tab of the campaign properties. This link enables you to create a Visual IVR session, which opens a Visual IVR flow in your browser. You can test the flow of any script associated with the campaign. The URL is generated specifically for each campaign. The link is in this format:

`<base_url>/<domain_id>/campaigns/<campaign_id>/new_ivr_session`

base_url: http://api.five9.com/ivr/<Visual IVR API version>

domain_id: ID of your domain

campaing_id: ID of your campaign

Example

`http://api.five9.com/ivr/1/12345/campaigns/123/new_ivr_session`

Terminating the Visual IVR

At the end of the Visual IVR flow, you may add the `CALLBACK_URL` parameter if you want your customers to see a specific page. The optional parameter does not refer to callbacks or callback reminders but to any of the possible available methods to contact the customer, such as a specific Web page at your site, an email form, or a chat session.

Example

```
http://api.five9.com/ivr/1/12345/campaigns/123/new_ivr_session?__
CALLBACK_URL__=http://www.myEmailForm.com
```

Integrating a Visual IVR Script in Your Web Site

To use a Visual IVR script, you need to customize the script to start Visual IVR and a button or link to a Web page so that the customer can access the Visual IVR. Start by copying the code from these files:

IVRLaunch.js
vivrContainer.html

Customizing the Script

Follow these steps to add the script to your Web site and to customize it.

1. Include the IVRLaunch.js script in your Web page by using a script tag.

```
<script src="/<PathToFile>/IVRLaunch.js"
type="text/javascript"></script>
```

2. Customize the file with your domain, campaign, and `messageError` properties:

```
var IVRLaunch = {
    host: "api.five9.com",
    version: "ivr",
    domain: "<My_Domain>",
    campaign: "<My_VIVR_Campaign>",
    layout: null,
    messageError: "<div style='height: 49px; display: table-cell;
    vertical-align: middle; font-weight: bold; font-size:
    30px;'><Please call us at +1 888.888.8888></div>"
};
```

3. At the bottom of the file, locate `vivrContainer.html` in the method named `IVRLaunch.init()`.

4. The script uses `vivrContainer.html` to present the VIVR content to your customers. You can modify the CSS as needed.

5. Add the path to the file in your Web site:

```
/** Load the Visual IVR container */
```

```
$.get("/<Path_To_File>/vivrContainer.html" + "?seconds=" +
    (new Date()).getMilliseconds(),
    function(data) {IVRLaunch.layout = data;}
);
```

Adding a Button or Link to a Web Page

Place a button or link on your Web site to check if Visual IVR is available and, if so, to start a session. The script looks for `checkVIVR`, which is case sensitive. For example, this button uses Bootstrap CSS classes:

```
<a id="checkVIVR" class="btn btn-large btn-primary">Contact Customer
Support</a>
```

Customizing the Visual IVR Page

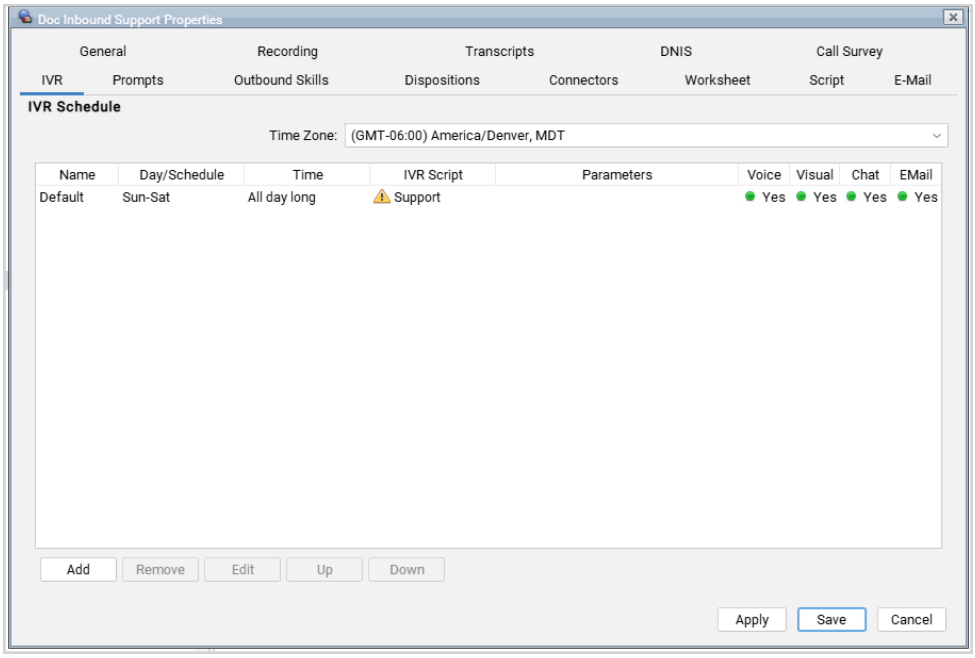
Follow these steps to customize the presentation of your Visual IVR page:

Note

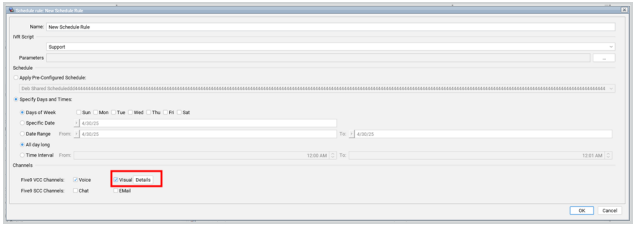
You must be a developer to modify the CSS.

1. In VCC administrator application, open the campaign properties for the VIVR campaign that you want to modify.

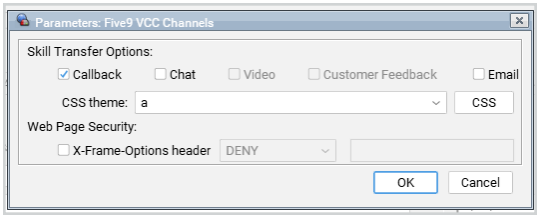
2 Click the **IVR** tab, then double-click the schedule rule.



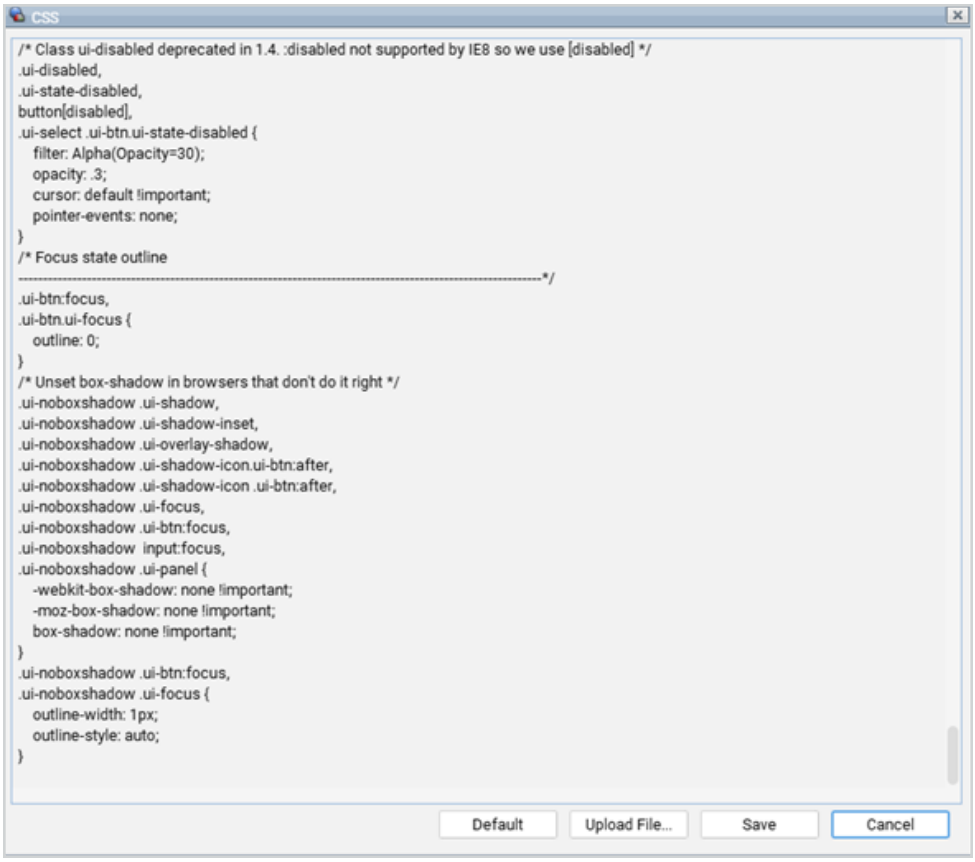
3 In the **Channels** section, click **Details** next to **Visual**.



4 Click **CSS** next to the **CSS theme** drop-down list, and edit the CSS as needed.



You may use the default settings or upload a file.



5 When done, click **Save**, and **OK**.

Preparing Visual IVR Scripts

You use IVR scripts for voice, visual, or both types of flows that contain voice and visual prompts. You can create specific Visual IVR scripts and convert existing voice- and digit-based scripts to Visual IVR scripts.

Choosing Modules

With Visual IVR flows, you can use most modules, and you need to understand the differences between voice and visual flows.

Available Modules

This table contains the modules that can be used in Visual IVR scripts.

Customer Interaction[1]	General IVR Flow[2]
• Get Digits • Input • Lookup Contact • Menu • Play • Query • System Info • Voice Input	• Case • Contact Update • Foreign script • Hang up • If/else • Iterator • Set DNC • Set Variable • Skill Transfer • Update system info

[1]These modules contain a Page tab where you can add prompts that are rendered visually in HTML.

[2]These modules can be connected and branched, and obtain or update information.

Modules with Collapsible Prompts

A few modules have an option named Collapsible that is used to concatenate all the prompts in the module whether they are played (voice) or displayed (Visual IVR).

When this option is enabled, callers see at once all the prompts in the same window. When this option is disabled, callers hear or see each prompt after performing the requested action.

You may add these prompts in the Prompts and Page tabs of these modules:

- Input
- Menu
- Play
- Voice Input

Modules that Accept Images

Full-size and thumbnail images added to Visual IVR scripts can improve your branding or help to describe a service or product. You can add images to these modules:

- Get Digits
- Input
- Lookup Contact Record
- Menu
- Play
- Query
- System Info
- Voice Input

You may add image files to the Page tab by specifying a URL or by adding the images as variables. When using variables, you can add the image to any variable group, and the name of the variable is arbitrary. The value of the variable must be the valid URL of an image. However, you cannot add links to images.

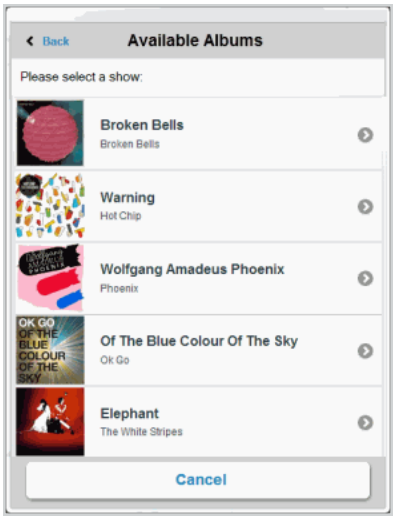
Example

You may use this functional URL to test your variable in a Visual IVR script:

```
var = MyCav.str
value = http://www.joelonsoftware.com/pictures/unicode/ascii.png
```

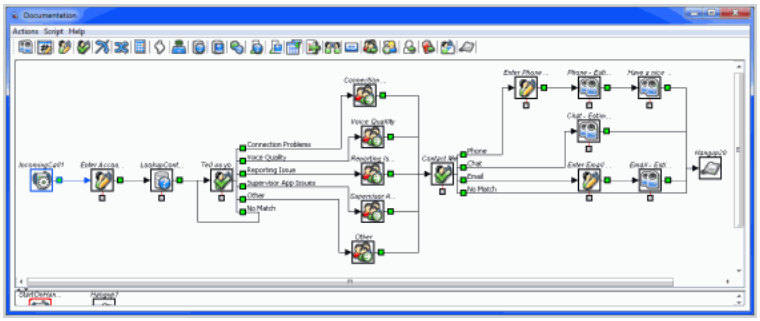
Example

This menu enables the customer to see a preview of an event, which facilitates the customer's decision. Each image is added to the Menu module.



Creating Visual IVR Scripts

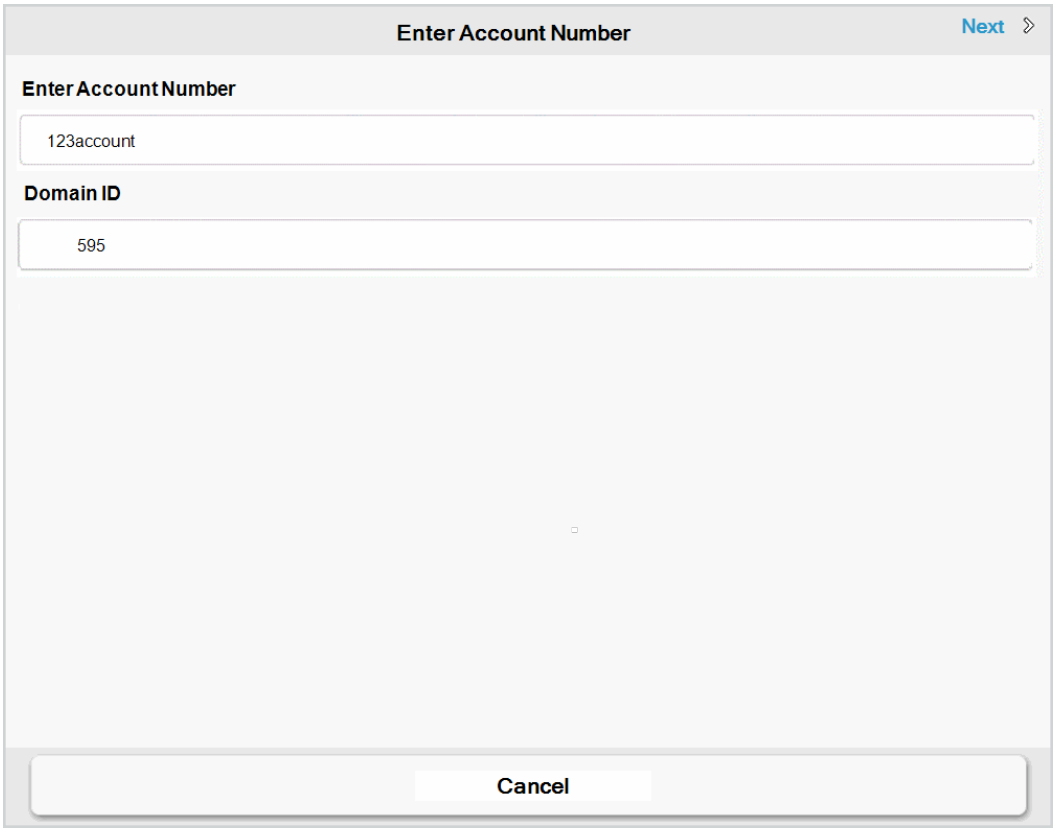
This section contains the modules used to display the HTML pages shown in the example at the beginning of **Visual IVR Scripts**.



Input Module
Lookup Contact Record Module
First Menu Module
Skill Transfer Modules
Second Menu Module
Phone Branch
Chat Branch
Email Branch

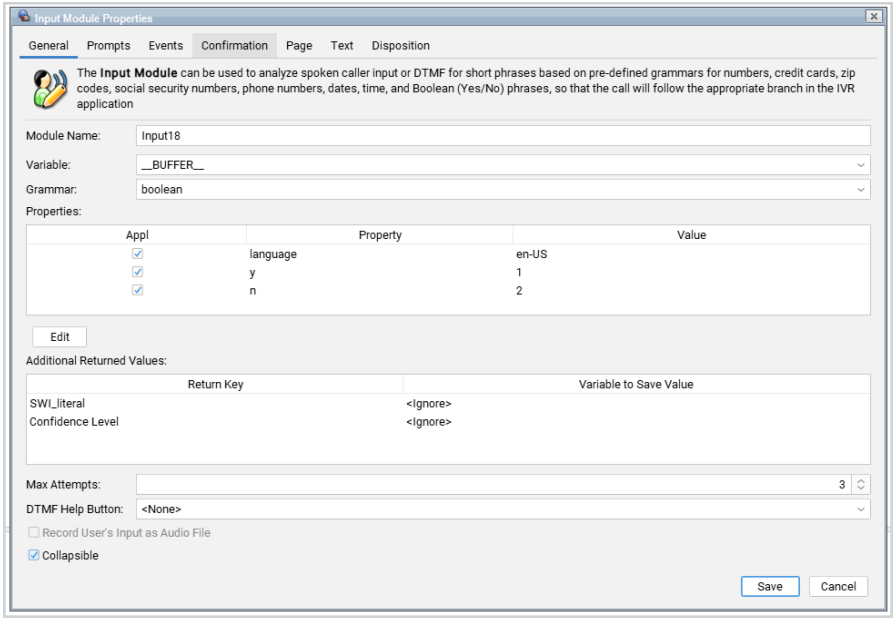
Input Module

This module is used to show two prompts (account number and domain ID) on the same HTML page instead of sequentially as they would in a conventional voice prompt. For more information, see the **Input Module**.



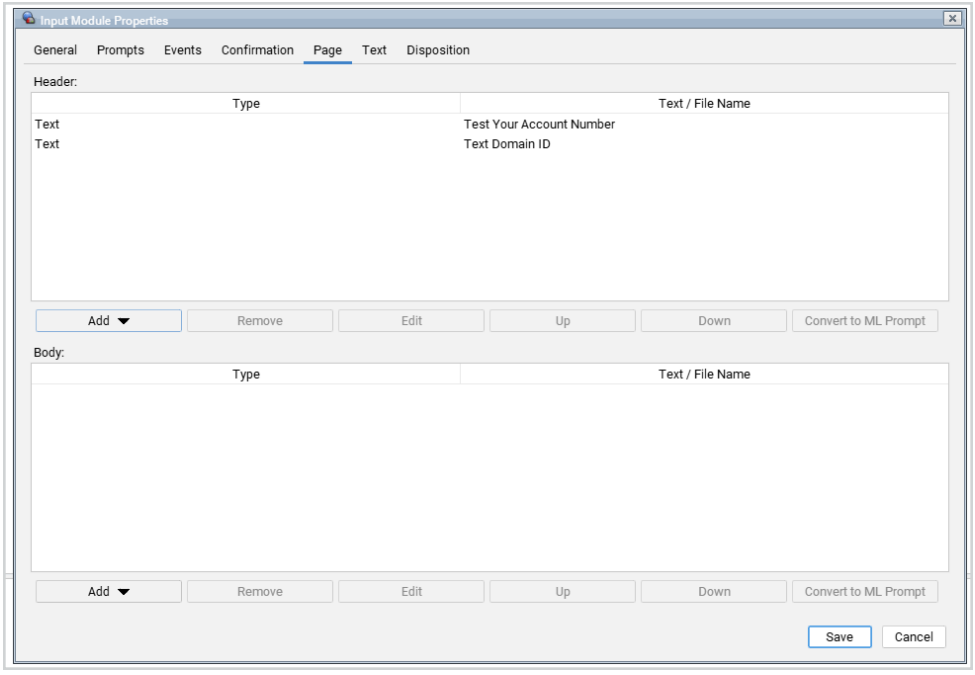
1 On the **General** tab, enter this information:
   - Module Name: Enter the text that you want your callers to see in the heading of the IVR window, for example: *Enter account Number*.
   - Collapsible: Enable this option so that both prompts appear to callers the

same HTML page.

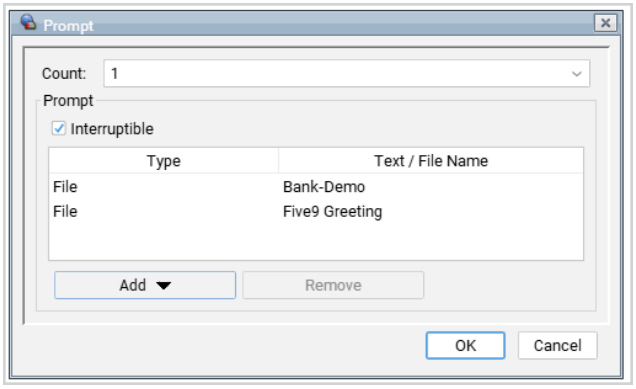


2 On the **Page** tab, add and configure as HTML the options that appear to callers on the same HTML page in the Visual IVR script.

Both prompts appear in the list of prompts.



3 On the **Prompts** tab, add voice prompts that are similar to the visual prompts for callers who are not using a mobile device.

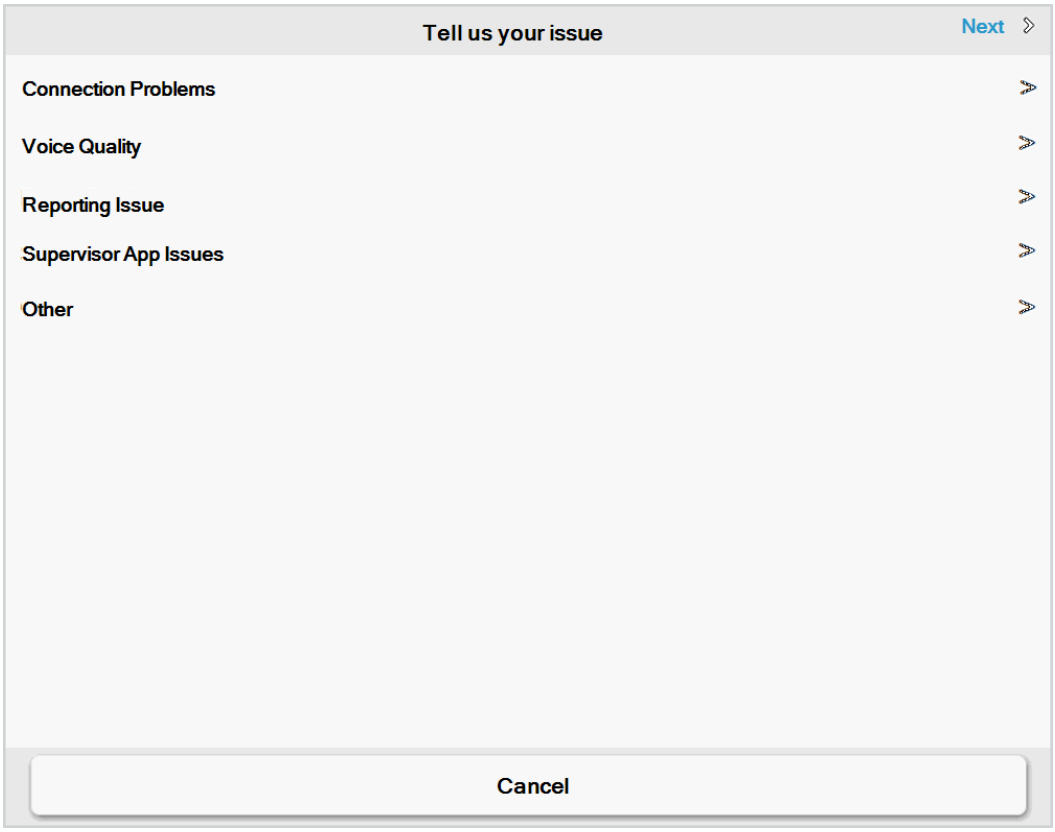


Lookup Contact Record Module

This module is used to search the database for the callers' information to present the most appropriate prompts. Use the most appropriate search method, such as **Use Call Attached Contact Record**. This module is not visible as HTML prompts to callers.

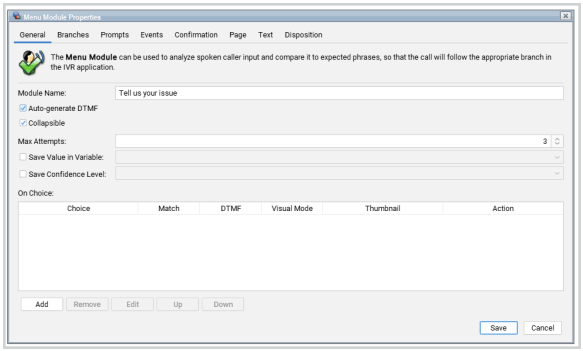
First Menu Module

This module is used to list the options available to callers. Each option is a branch in the Visual IVR script. If you have more than one level of options, you can link multiple **Menu** modules. For more information, see the **Menu Module**.

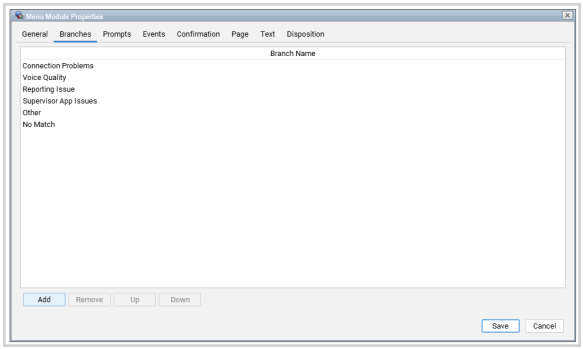


1 On the **General** tab, enter this information:

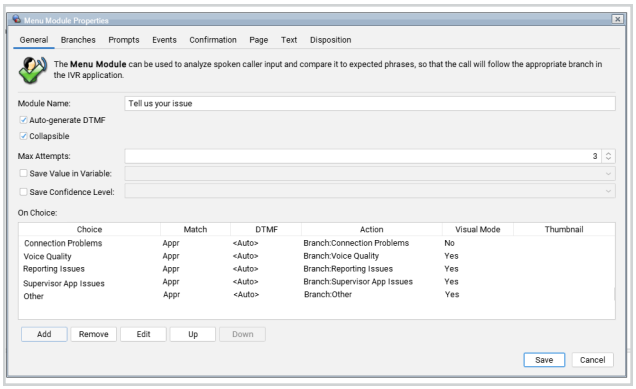
- Module Name: Enter the text that you want your callers to see in the heading of the IVR window, for example: *Tell us your issue*.
- Collapsible: Enable this option so that all choices appear to callers on the same HTML page.



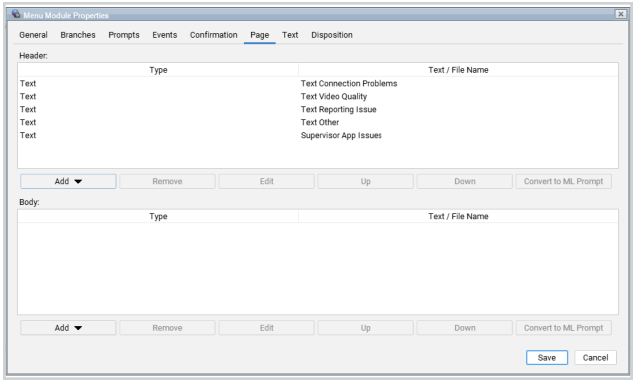
2 On the **Branches** tab, create a branch for each choice, in this case:
   - Connection Problems
   - Voice Quality
   - Reporting Issues
   - Supervisor App Issues
   - Other



3 On the **General** tab, add an exit option for each branch.



4 On the **Page** tab, add and configure as HTML the options that appear to customers.



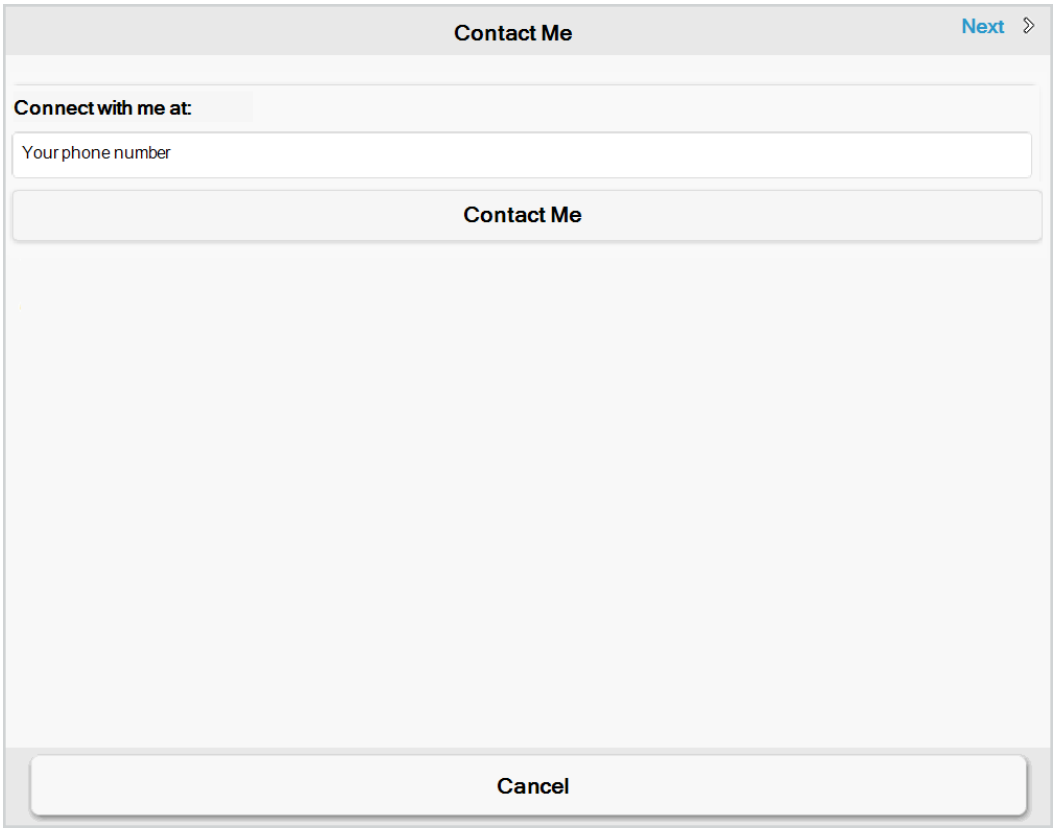
5 On the Prompts tab, add voice prompts that are similar to the visual prompts for callers who are not using a mobile device.

Skill Transfer Modules

This module is the only transfer module that you can use in Visual IVR scripts. You need to transfer the callers' requests to skill groups. Each branch is connected to a skill group. The configuration of each skill transfer module is not specific to Visual IVR scripts. This module is not visible as HTML prompts. For more information, see **Skill Transfer Module**.

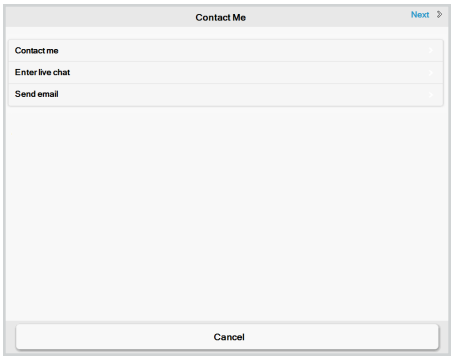
Second Menu Module

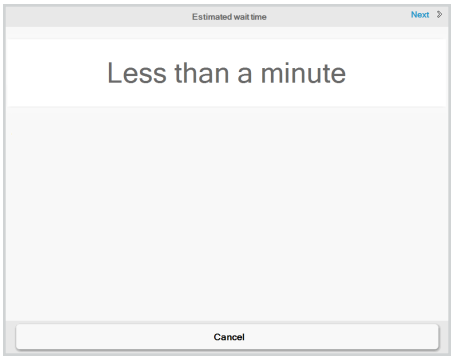
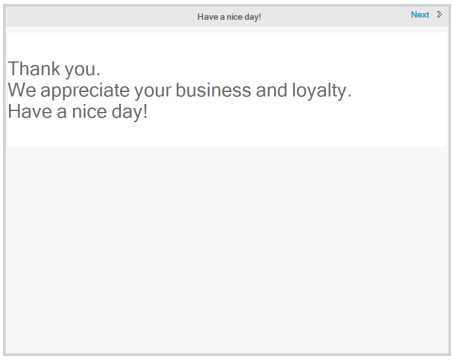
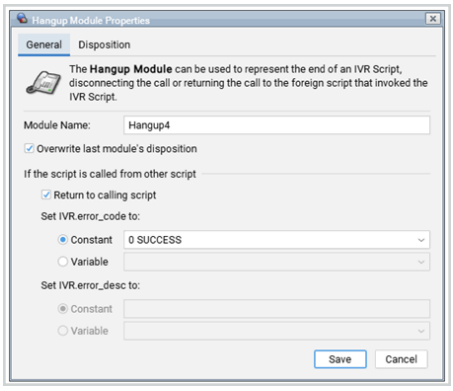
If the contact options, such as phone, chat, and email, are the same for all the possible issues, you can connect all Skill Transfer modules to a single Menu module with three branches.



Phone Branch

This branch contains four modules.

Visual IVR	Module
	**Input Module** This module enables the customer to enter a callback phone number.

Visual IVR	Module
	**Play Module** This module shows the estimated wait time obtained from a call variable such as Call.hold_time.
	**Play Module** This module contains a message in HTML format for callers. You could also also add the message as HTML text below the estimated wait time and omitting this module.
	**Hang Up Module** When the customer closes the window, this module terminates the IVR session and assigns a disposition to it.

Chat Branch

This branch contains a Play module with an estimated wait time and a message, such as *Please wait for an agent*.

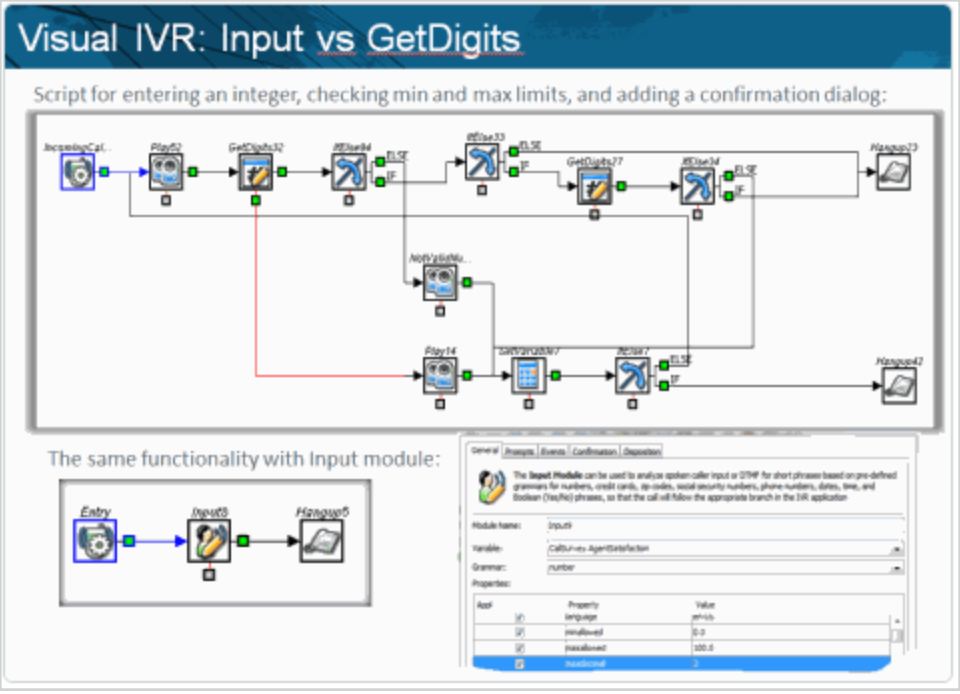
Email Branch

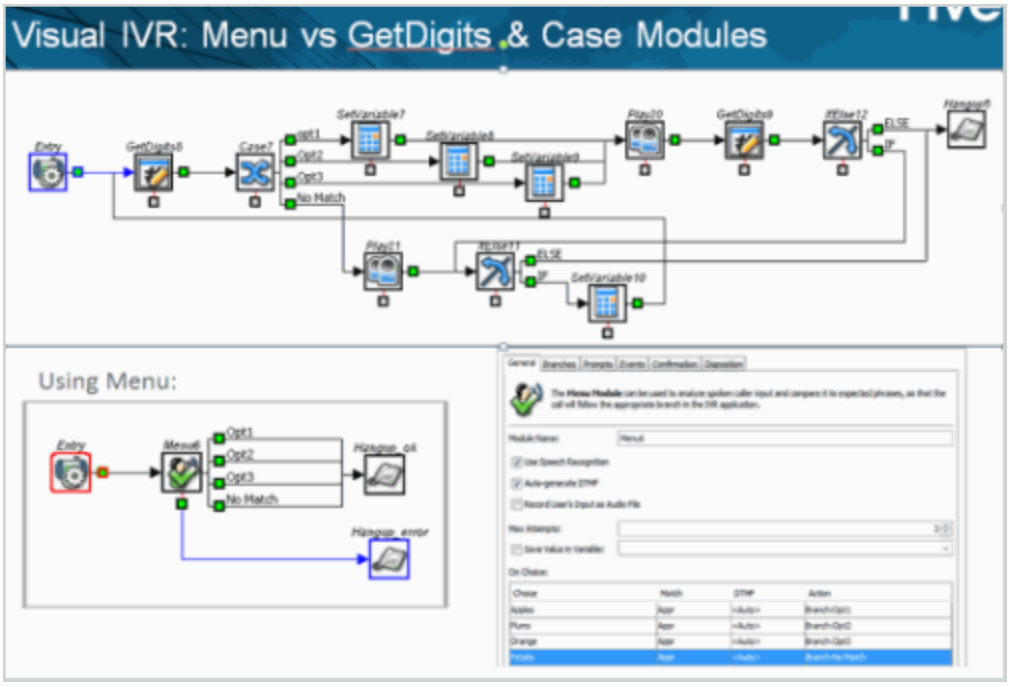
This branch is similar to the Phone branch. An Input module enables the customer to enter an email address. A Play module shows an HTML message with an estimated wait time. The Hang Up module ends the session and assigns a disposition.

Converting Voice- and Digit-Based Scripts into Visual IVR Scripts

By combining several of these modules in your existing IVR scripts, you can simplify your IVR scripts:

- Play
- Get Digits
- Input
- Menu
- Voice Input
- Skill Transfer




Visual IVR: Menu vs GetDigits & Case Modules
Entry
GetDigits8
Case7
Opt1
Opt2
Opt3
No Match
SetVariable7
SetVariable8
SetVariable9
Play10
GetDigits9
IfElse12
ELSE
IF
Hangup9
Play11
IfElse11
ELSE
IF
SetVariable10
Using Menu:
Entry
Menu6
Opt1
Opt2
Opt3
No Match
Hangup_ok
Hangup_error

Five9 Engagement Workflow

Five9 Engagement Workflow enables you to harness the power of either or all of the **Five9 Rules Engine Module** and Natural Language Processing (NLP), **Query Module** JSON responses for parsing, or **SFDC Einstein Module** capabilities to enhance your email interaction routing. More information about Five9 Engagement Workflow can be found in the Digital Engagement Administrator's Guide.

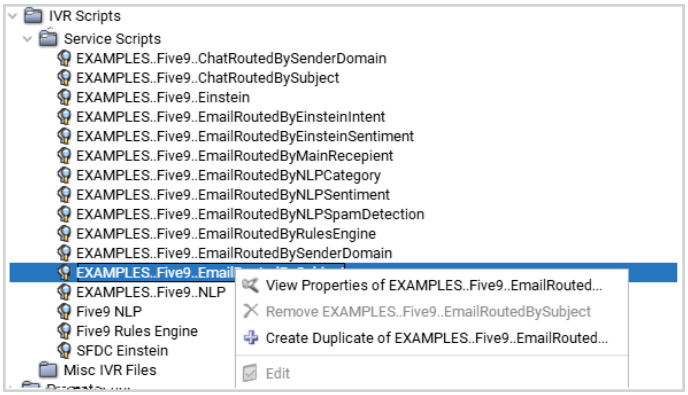
Five9 Engagement Workflow begins with your IVR script. In the simplest form, you can enhance email routing with such things as: call attached variables, contact profile information, disparate database lookups, or SFDC Einstein engine functions.

You can augment your routing decisions further by using NLP to determine such things as customer sentiment and urgency. Beyond this, you can filter spam from your distributed email interactions while recommending a next best action for relevant email interactions by scouring the email body.

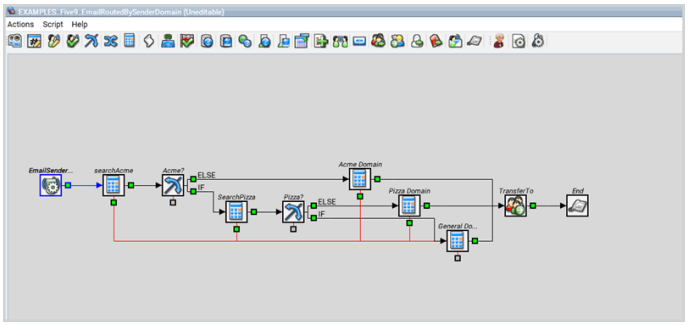
Configuring Engagement Workflow Templates

Five9 provides many templates to help with your IVR design. You can find these templates in the Five9 VCC Administrator application in the **IVR Scripts > Service Scripts** subfolder.

You can open example IVR scripts, as view only, or copy as a basis for your new script generation. Example IVR scripts are to be used for text (chat and email) interactions only.



Your copy of an example template enables you to easily populate your specific contact center details, such as data lookups, queues, and, in this example, email routed by subject.



To further categorize your engagement workflow routing and reporting, you can assign a custom disposition to your hangup module for engagement workflow interactions. You must have, or create, matching disposition values in your VCC and Text Channel Administrator (SCC) applications. Depending on your Unified Dispositions setting, the rule engine will use either your VCC or SCC disposition for these interactions. This enables your IVR script to recognize and assign the custom disposition value in the hangup module. For more information about creating and assigning disposition values, see the Basic Configuration Administrator's Guide.

You can find more detailed information about Five9 Engagement Workflow, NLP, Five9 Rules, Unified Dispositions, or SFDC Einstein in the Digital Engagement Administrator's Guide.

Implementing IVR Scripts

This section describes how to configure and use IVR scripts.

Managing IVR Scripts
Managing Variables
Adding Functions
Adding Prompts
Selecting Dispositions
Using Recorded Files
Importing Scripts

When creating your IVR scripts, be aware of these limits:

- Maximum number of times that a script may enter any module during a call = 1000.
- Unlimited number of sub-scripts may be contained in a script.
- Maximum number of times that a script may call another script = 100. Each time that a script calls another, the counter increases by 1. The system does not differentiate between the same or different scripts.
- Maximum execution time for each script = 1 hour.

Managing IVR Scripts

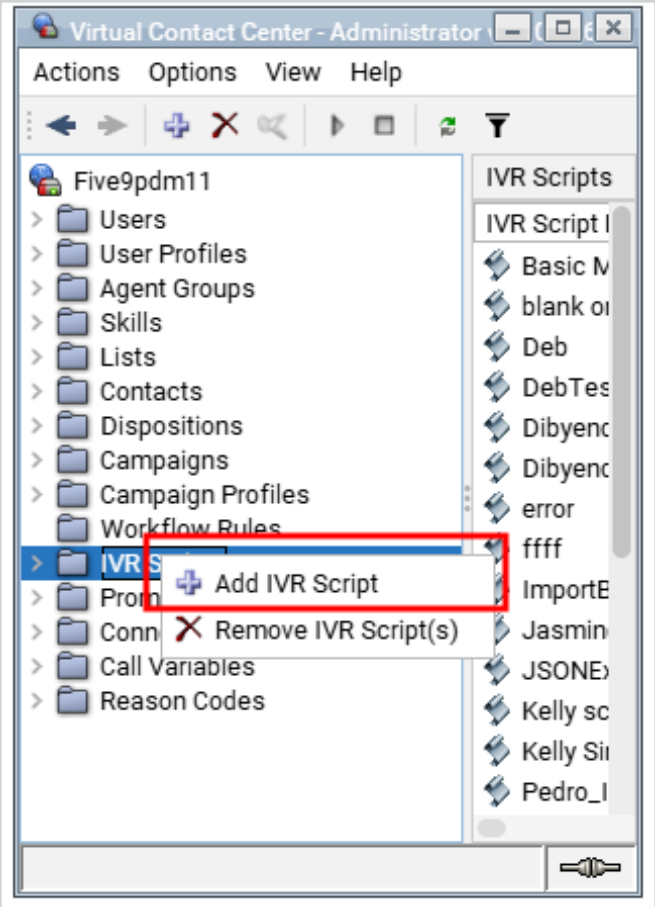
This section describes how to manage IVR scripts.

Creating IVR Scripts
Duplicating IVR Scripts
Creating IVR Templates
Configuring IVR Modules
Updating IVR Scripts
Exporting and Importing IVR Scripts
Scheduling IVR Scripts in Campaign Properties

Creating IVR Scripts

Before creating IVR scripts, plan your IVR flow, see the Flowcharts, to determine which modules to use and how to connect and configure them. You will now be ready to create the flow for a test campaign. After testing, use the export function and add it to your production campaign.

1 In the Navigation pane, right-click IVR Scripts, and select **Add IVR Script**.



2 Enter the name of the IVR Script.

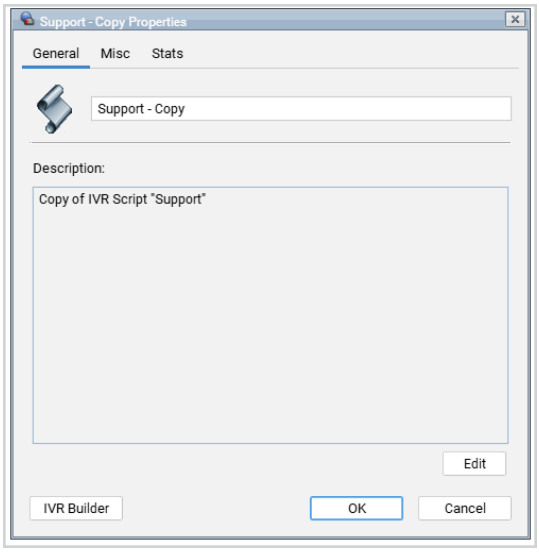
3 Click **OK**.

Duplicating IVR Scripts

If you duplicate the IVR Scripts, all modules and their relationships are copied.

1 In the navigation pane, right-click a script, and select **Create Duplicate of <name>** .

All properties are copied to a new object called **<original object name> - Copy**. The **Property** window of the duplicate object opens.



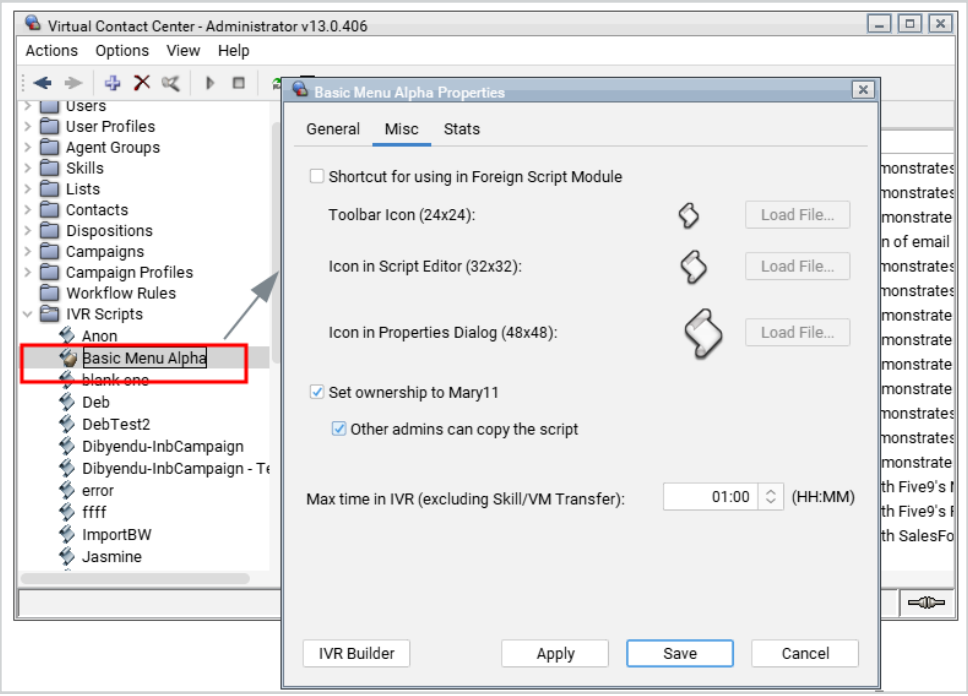
2 Fill in the required fields.

Creating IVR Templates

You can create a template from any IVR script to more efficiently copy and share repeatable processes or procedures. Template ownership is assigned to the administrator creating the template. You can choose to allow other administrators to copy the script or permit only yourself this privilege. Once the script has been assigned ownership it is stored in the Service Scripts folder of IVR Scripts to be identified among the other reusable scripts in your VCC.

To create an IVR template, follow these steps.

1 Right-click or double-click to access the properties of the IVR script from which this template will be made.



2 In the **Misc** tab, select icons to associate with this IVR template.

Icons must be PNG files. You must set the following three display icons:

- Toolbar icon: 24x24 pixels.
- Icon in IVR builder: 32x32 pixels.
- Icon in properties dialog: 48x48 pixels.

3 To convert this script into a reusable template, click **Set ownership to <your user name>**.

To make this template available to other administrators, enable **Other admins can copy the script**.

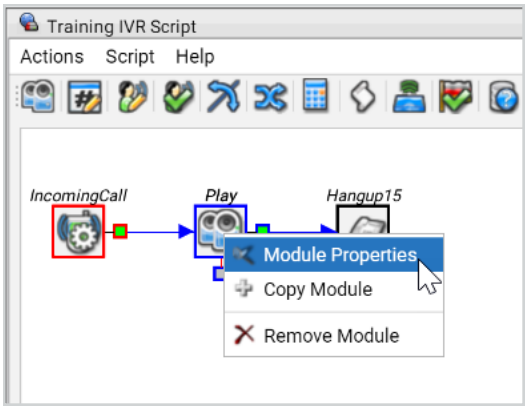
4 Click **Save**.

This IVR script is now a reusable IVR template stored in the **Service Scripts** subfolder of **IVR Scripts**.

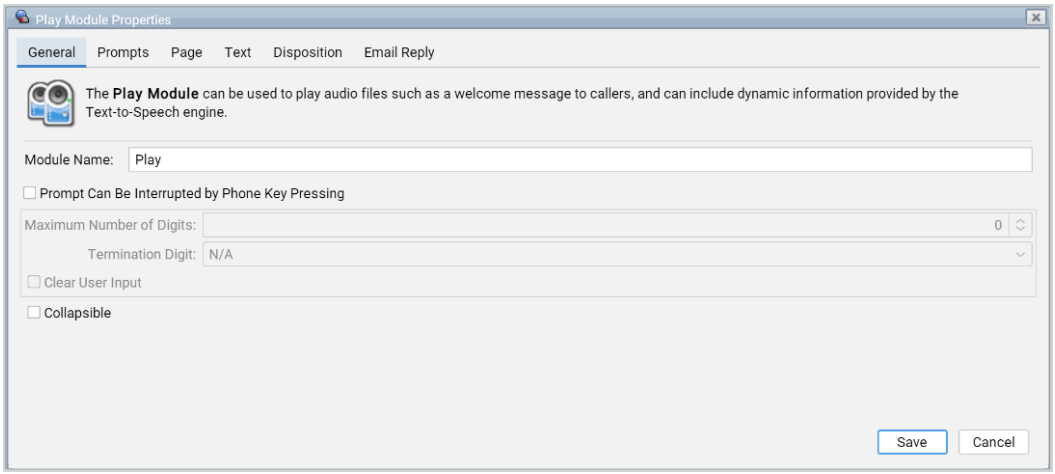
Configuring IVR Modules

Most IVR modules must be configured. Double-click an icon, or right-click the icon and select **Module Properties**.

Adding and Removing Modules
Selecting Icons
Connecting Icons
Removing Connections
Clearing the Work Area



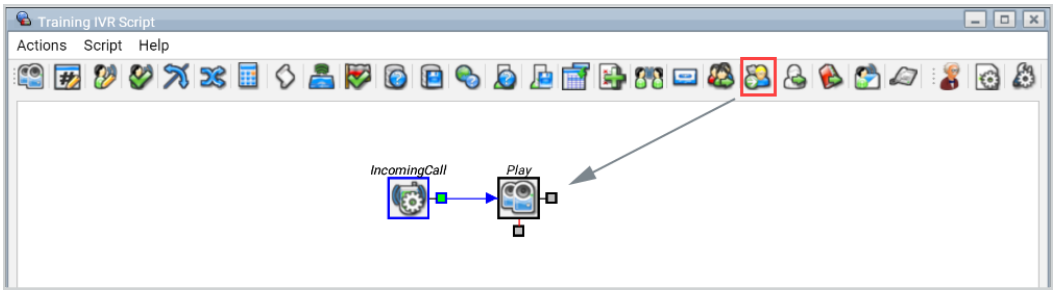
The **Module Properties** window may have one or more tabs. Define the necessary options in the tabs.



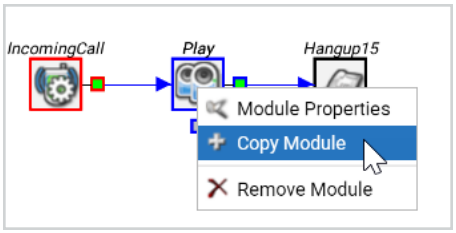
Name each IVR module when creating the script. The IVR module name is recorded in the IVR_PATH field in reports allowing you to view the IVR path for every call. For more information, see IVR Modules.

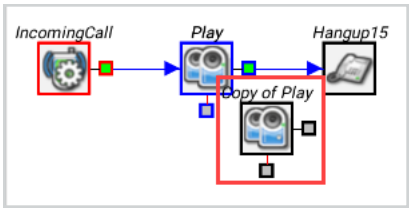
Adding and Removing Modules

IVR modules are represented by icons in the IVR toolbar. Place your cursor on an icon to view its name. You can drag and drop the icons from the toolbar to the workspace. The Incoming Call icon is in the workspace by default.



You can copy icons with their properties by right-clicking an icon and selecting **Copy Module**.

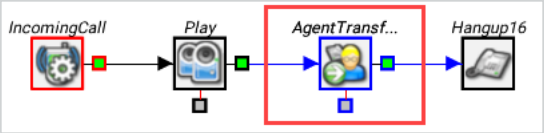




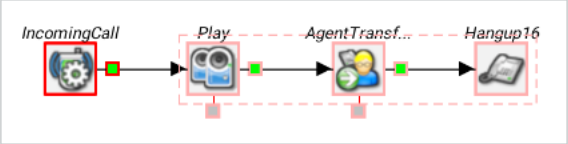
The new module is displayed in the working area. To remove a module, right-click the icon and select **Remove Module**, or press <DELETE>.

Selecting Icons

Click an icon. The selected icon has a blue border, and the connected modules are indicated by the blue connector lines.

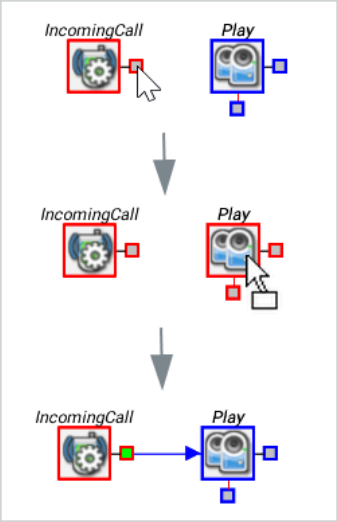


To select more than one module, click and drag over an area to include selected modules. You see a dotted box that indicates the selection. Once selected, these modules can be dragged to another location or deleted as a group.



Connecting Icons

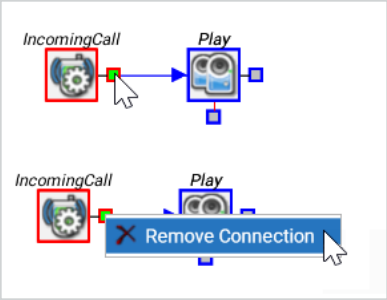
Each module has output ports so you can drag and drop some of them to the destination module. To connect one module to another, drag and drop the connector box to the following module icon. The connected module icons are now linked by an arrow:



Some IVR modules provide branching. For example, If/Else and Case. Each IVR branch must be created and terminated individually. You cannot link from one branch into another branch. You can form loops by connecting a module to a previous module. See also Creating an IVR Loop.

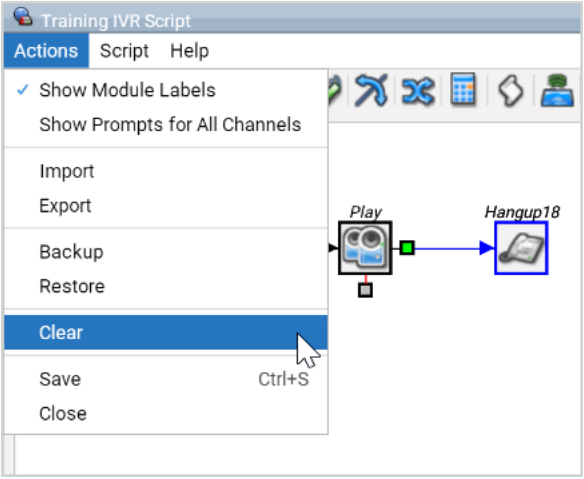
Removing Connections

To remove a link, right-click the connection box and select **Remove Connection**.



Clearing the Work Area

To clear the working area, select **Actions > Clear** in the menu. This action removes all modules except Incoming Call.



Updating IVR Scripts

You need to configure new IVR scripts and those with changed properties. If changes are saved while the associated campaigns are running, new calls use the updated script.

1. Open the IVR Scripts folder.
2. Right-click an IVR script, and select **Edit**, or double-click the IVR Script.

   In the IVR Script Designer, you can create a script, configure each module, define optional variables and properties, and import a script.
3. When done, select **Actions > Save**.

When saving a script, the system checks the IVR flow and displays an error message if a problem is found. All errors must be fixed before the script can be saved.

Exporting and Importing IVR Scripts

Exporting IVR Scripts
Importing IVR Scripts
Backing Up IVR Scripts
Restoring IVR Scripts

The IVR Script Designer includes options to export and import your IVR Scripts. Use this feature to make periodic backups of your IVR Scripts and to save IVR Scripts that are in progress. This feature can be utilized by call centers running multiple campaigns and or with multiple clients to import or export IVR scripts between campaigns.

You can export and import a complete or incomplete script. This function works with the flow chart, variables, and default properties. You can call this function from the Actions menu of the IVR Script Designer.

Autodial IVRs are not compatible with standard inbound campaign IVRs. If you are using a standard inbound campaigns, you cannot use autodial IVRs in an inbound campaign and you cannot use inbound IVRs in autodial.

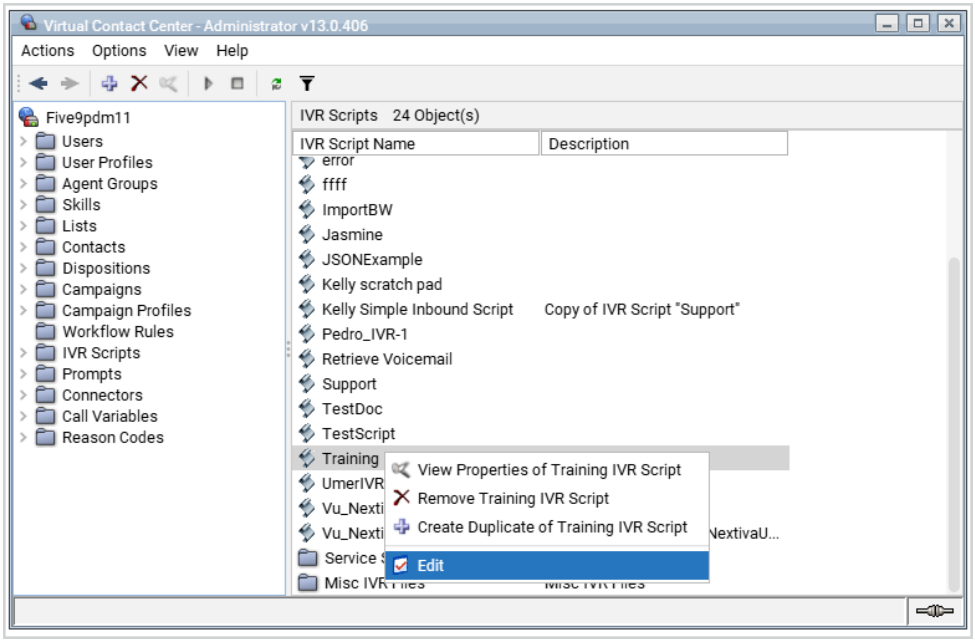
> **Note:** If you are using VCC Administrator Console as a Web Application, additional steps are required to save, import, export, and backup. See File Manipulation in Java Virtualization.

Exporting IVR Scripts

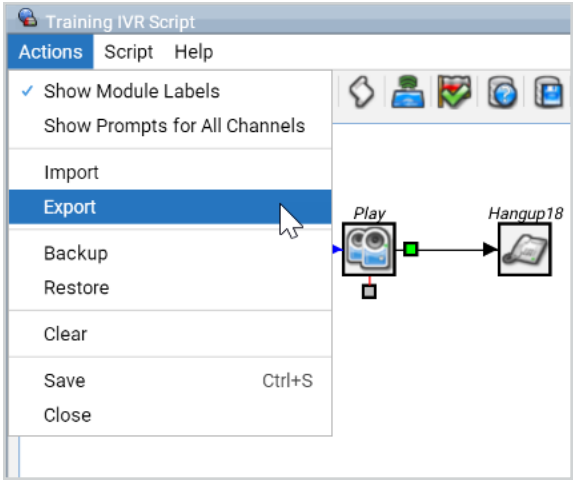
Follow these steps.

1 In the navigation pane, select **IVR Scripts**.

2 Right-click a script name and select **Edit**, or double-click the IVR Script.



3 Select **Actions** > **Export**.



4 Save the file on your computer.

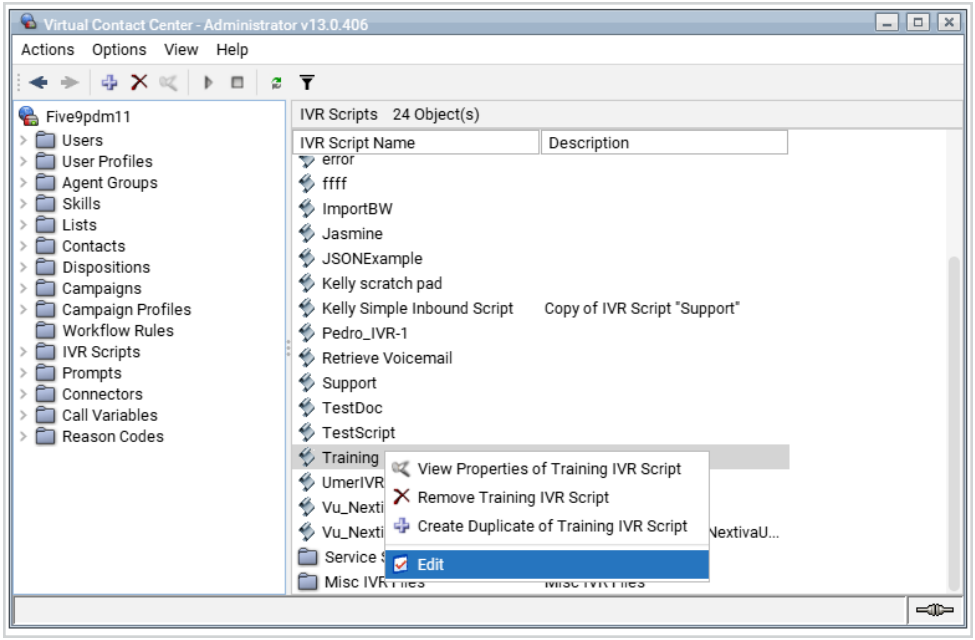
The file extension is `five9ivr`. If you try to save an unfinished IVR Script, you receive an error message. By clicking Export Script, you can export the call as a separate file on your computer.

Importing IVR Scripts

Follow these steps. The imported data overwrites the existing data.

1 In the navigation pane, select **IVR Scripts**.

2 Right-click a script name and select **Edit**, or double-click the IVR Script.

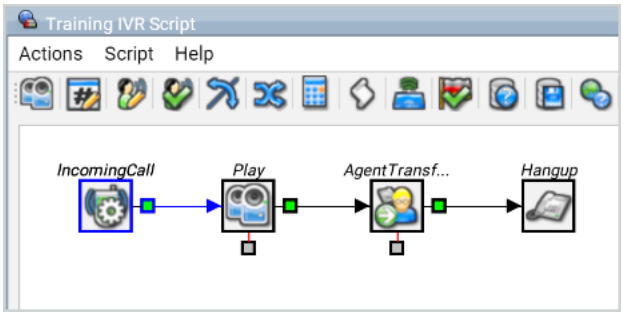


3 Select **Actions** > **Import**.

4 Locate a file with extension `five9ivr`.

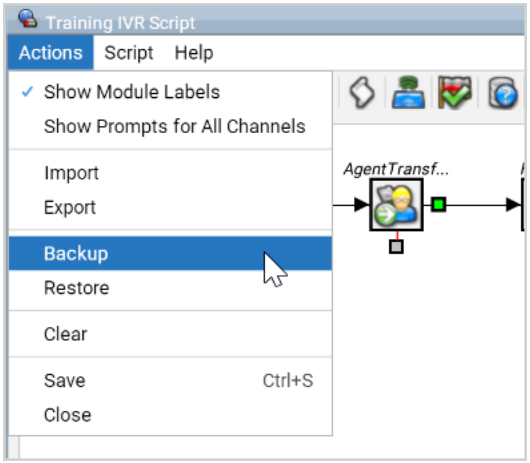
5 Click **Open**.

The script is displayed in the working area.



Backing Up IVR Scripts

You can export the IVR script, including all subscripts and users prompts. System prompts aren't included in the archive. This process applies to all supported languages. To create a backup of an IVR script, select **Actions** > **Backup** in the IVR script builder.



The following example shows the exported elements of an existing IVR script zip file.

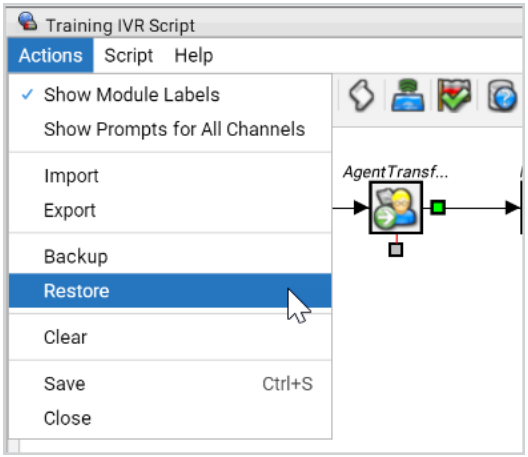
Example

```
<name = ScriptName>.zip --->
                    description.txt
                    description.xml
                    /SCRIPTS
                    IVRname.five9ivr
                    subscript_1.five9ivr
                    /PROMPTS
                    prompt1.wav
```

```
                prompt2.wav
                /en-GB
                prompt1.wav
                prompt2.wav
                /sp-MX
                prompt1.wav
                prompt2.wav
                /ru-RU
            prompt3.wav
```

Restoring IVR Scripts

To restore an IVR script with its subscripts and prompts, navigate to **Actions** > **Restore** from in the IVR script builder and select the appropriate zip file to restore.



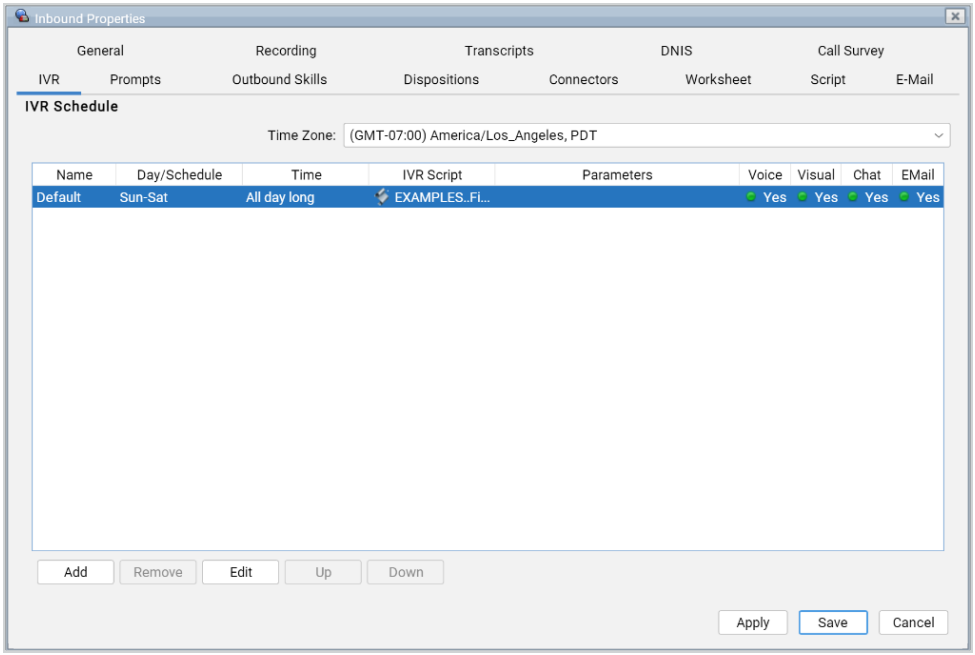
Scheduling IVR Scripts in Campaign Properties

You can schedule an IVR script in the the IVR tab of the campaign properties in inbound and autodial campaigns. The IVR tab enables you to schedule the scripts by days of week, holidays, time ranges, and date ranges.

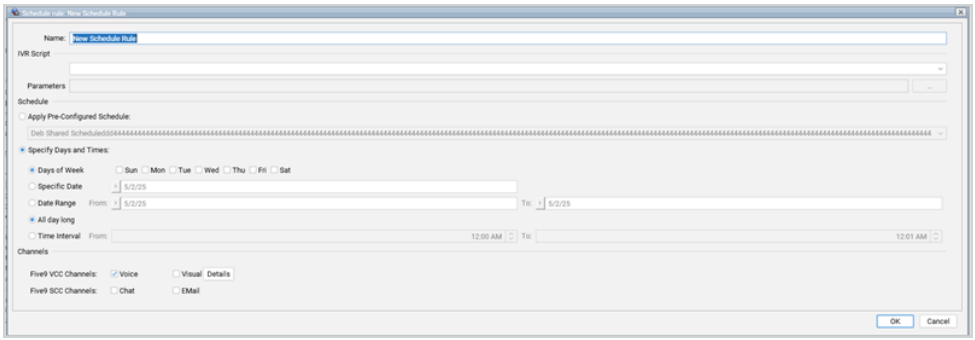
1. In the **Navigation** pane, right-click or double-click on a campaign to view the properties window.

   The **Inbound Properties** window displays. The default script is always enabled. Additional scripts override the default script.

2 Select the **IVR** tab.



3 Select **Add** to add an IVR schedule.



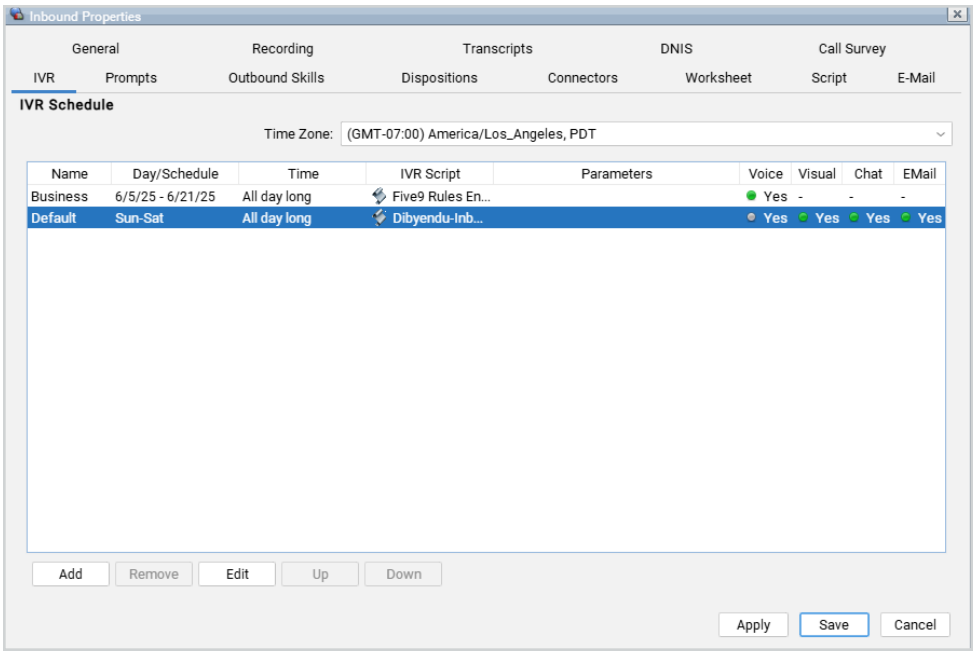
4 Enter a name for the new schedule rule.

5 Specify Days and Times.

- **Days of the Week** – Select a Day/Days when the IVR is applicable.
- **Specific Date** – Set a specific date to trigger the IVR schedule. In case of multiple dates, add different IVR schedules.

- **Date Range** – Set a date range when the schedule starts and stops.
- **All Day Long** – Enable for 24-hour schedule.
- **Time Interval** – Set a time when the IVR will use the schedule.

If the call is out of coverage of this schedule then it would follow the **Default Schedule** and its corresponding IVR script.



Managing Variables

You may use two types of variables:

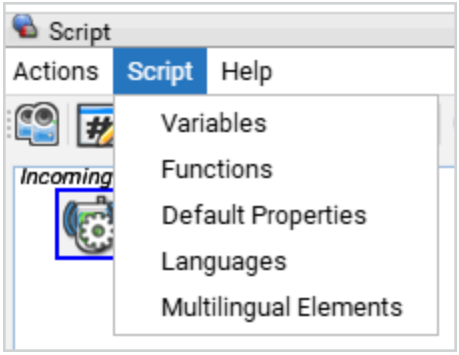
- Script variables that you create and use in each script.
- Call variables that you create and use in the VCC.

Script Variables

This section describes how to create and modify custom variables.

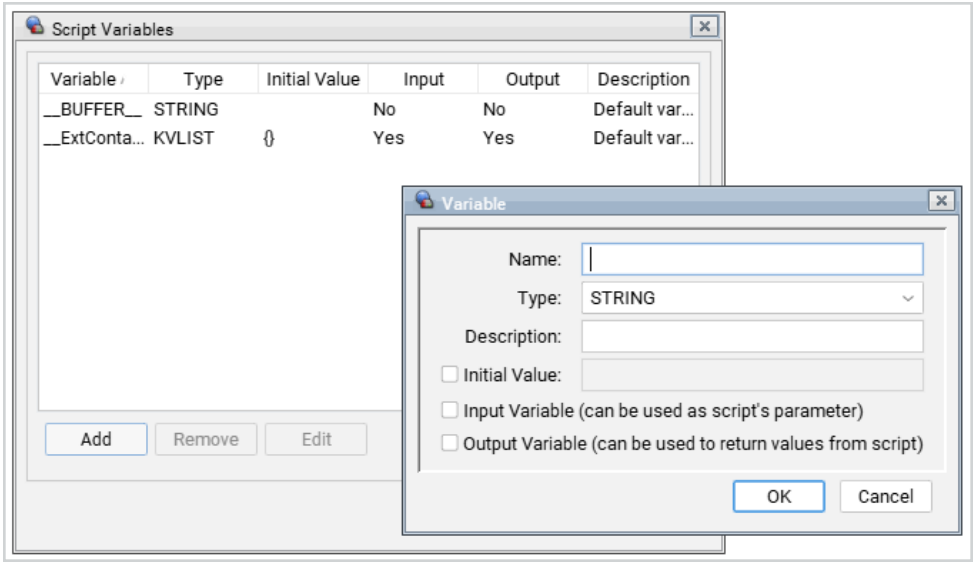
Adding Variables

1 In the IVR Script Designer, select **Script** > **Variables**



2 Click **Add**.

3 For each variable, specify these elements.



- **Name**: Strings with initial letter. Cannot contain spaces or start with two underscores (reserved for system variables).
- **Type**: Data type for the field:
  - **STRING**: Alphanumeric, maximum 250 characters>
  - **INTEGER**: Whole number

- **NUMERIC**: Number with decimal. Can be used for very large numbers.
- **CURRENCY**: Dollar, Euro, or British Pound
- **DATE**: y-m-d, d.m.y, m/d/y, ymd
- **TIME**: HHMM or HHMMp
- **KVList**: `{key1:value2, key2: value2 …}` where `key` and `value` is `"string"` or `'string'`
- `key` must be enclosed in double quotes. If you omit them, they are added.
  - Strings `value` must be enclosed in double quotes. If you omit them, they are added. Single quotes are changed to double quotes.
  - Quotes are optional for numbers.
  - Spaces before or after the colon or the comma are removed.
- **Description**: Your description is copied as a comment into generated scripts prepared for Web requests.
- **Initial value**: Whether to assign a default value to the variable. Variables that are not initialized are NULL (empty cells in the Variables tab). Empty strings have two double quotes.

  String values can be entered as text or text surrounded by quotes. Internally surrounding quotation marks should be omitted, but the Variable tab shows all string values in the quotes. A variable of CURRENCY data type can be entered with or without the dollar ($) sign. DATE and TIME can be entered in an arbitrary format, which can be interpreted correctly.

◦ Basic String Functions:

- **String Length** – returns the number of characters in the input string
- **String Left** – return the characters of the specified length starting from the left most character of the string
- **String Right** – return the characters of the specified length starting from the rightmost character of the string

– **External value** – Can be used as the script's parameter. If a variable is marked External, its initial value can be set from the script schedule or from a calling script (foreign script). If the external values are specified at the script start time, the initial values in the table are not taken into consideration. The updated values of external variables are available in the calling script after exiting from the called script by passing reference parameters.

> **Note:** The left and right functions only identify digits spaces, hyphens, and colons to split date/time components.

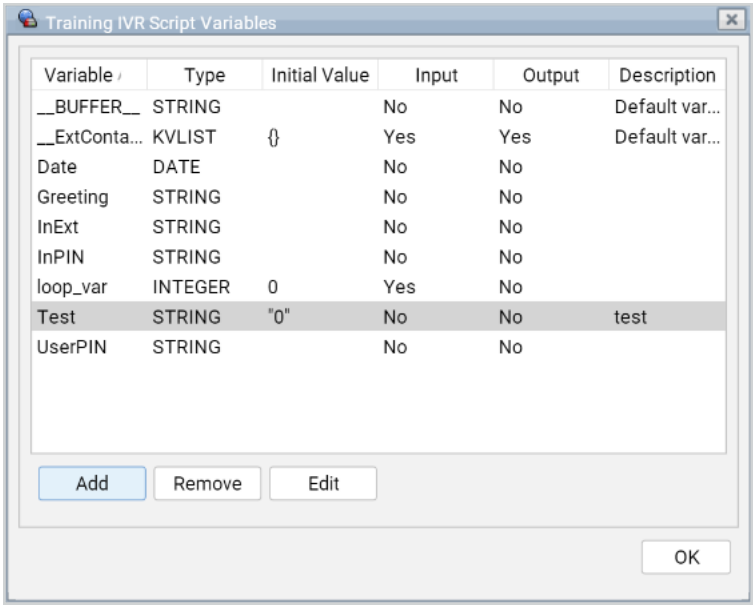
4 Click **OK**.

Editing and Deleting Variables

Before editing or removing variables, close all opened module properties menus.

1 In the IVR Script Designer, select **Script** > **Variables**.

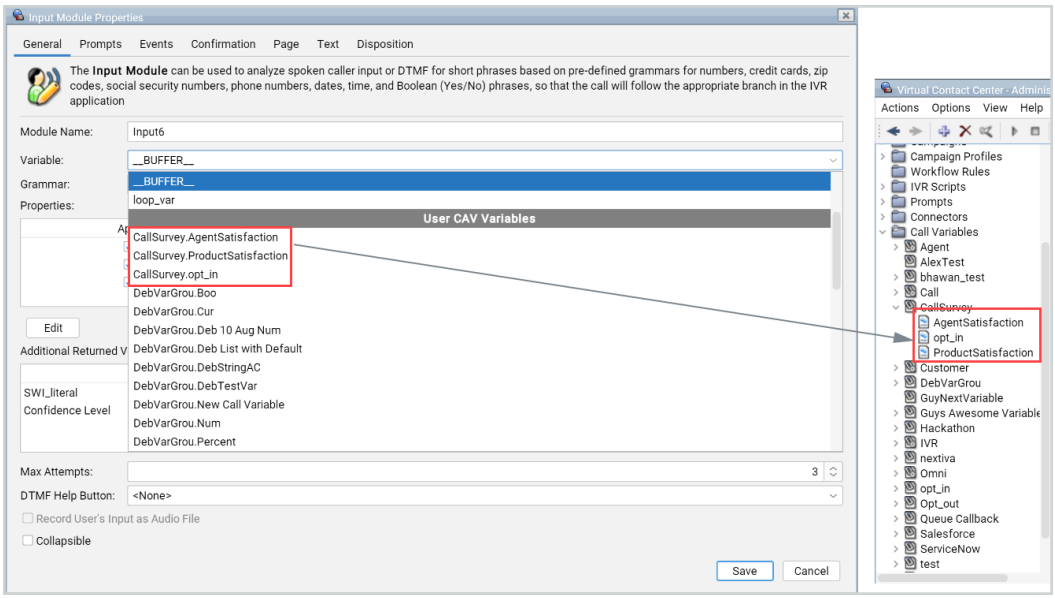
2 Double-click or select an item and select **Edit** or **Remove**.



3 If editing, make your changes, and click **OK.**

Call Variables

You can use call variables in IVR scripts. This figure shows the Input module properties window with the variables available for selection under the User CAV Variables title. In this case, these variables correspond to the group variable named VIVR in the Call Variables folder of the VCC. All IVR, system, and call variables support the UK and Euro currencies.



Although you may use variables in most modules, you may not use call variables that contain sensitive information in these modules:

- Agent/Voice Mail Transfer
- Foreign script
- Iterator
- Update system Info
- Voicemail transfer

For more information on managing and using variables, see **Variables**.

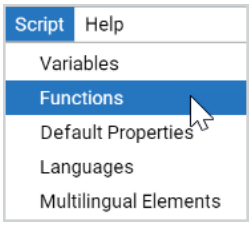
Adding Functions

You can apply JavaScript functions and arguments to parse the query response or to set variable values. You can add functions in these modules:

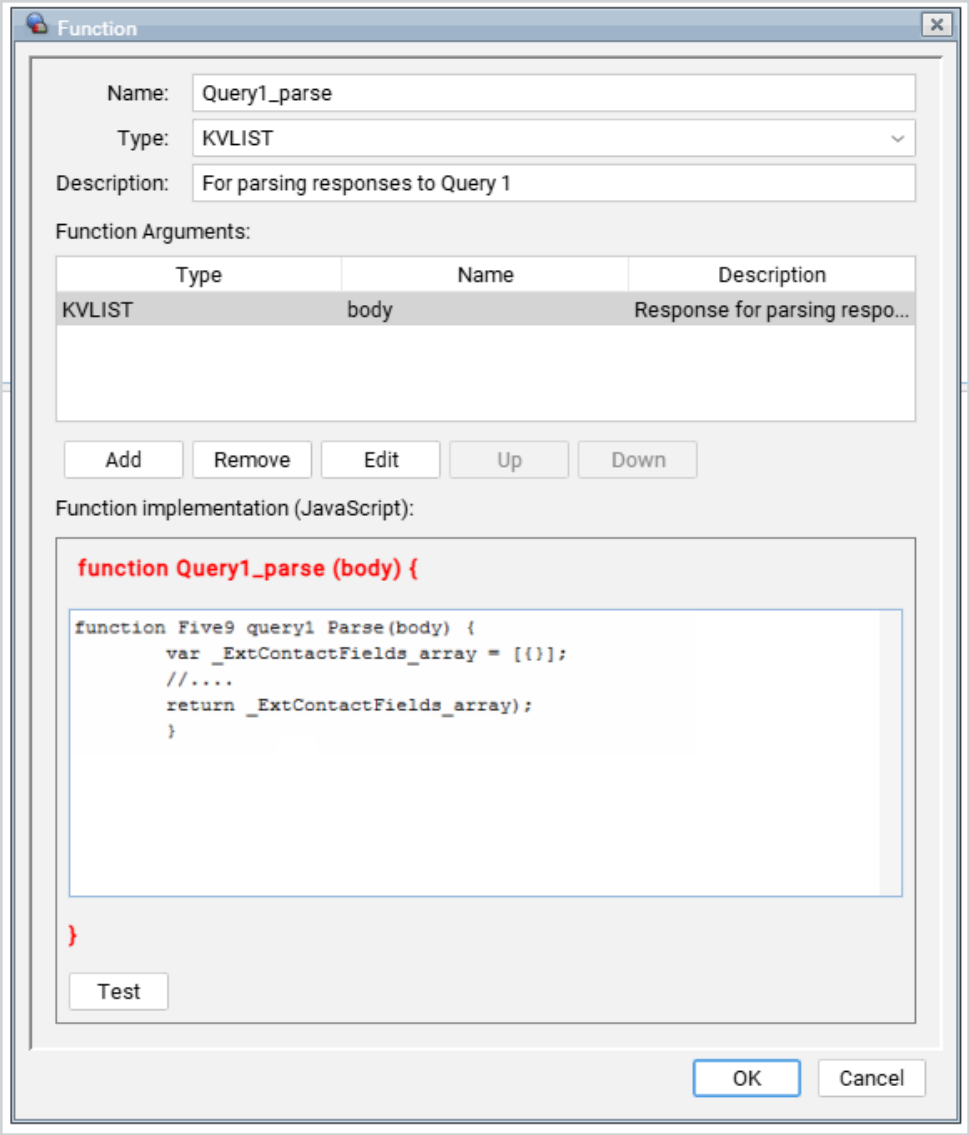
- Query:
  - You can define functions directly in the Query module **Response** tab, or select functions in the IVR builder **Script** menu.
  - Return values can be an array. Returned arrays can use a combination of Query and Iterator modules for greater flexibility.
- Set Variable:
  - You can use the Set Variable module with or without the Query module.
  - Returned arrays for the Set Variable module use only the first returned element. Other array elements are ignored.

To add a function, follow these steps.

1. In the IVR Script Designer, select **Script** > **Functions**.



2. Click **Add**.



3 For each variable, specify these elements.

- **Name**: Strings with initial letter. Cannot contain spaces or start with two underscores (reserved for system variables).
- **Description**: Description copied as a comment in generated scripts generated for Web requests.
- **Type**

- **STRING**: Alphanumeric, maximum 250 characters>
- **INTEGER**: Whole number
- **NUMERIC**: Number with decimal. Can be used for very large numbers.
- **CURRENCY**: Dollar, Euro, or British Pound
- **DATE**: y-m-d, d.m.y, m/d/y, ymd
- **TIME**: HHMM or HHMMp
- **KVList**: `{key1:value2, key2: value2 …}` where `key` and `value` is `"string"` or `'string'`
  - `key` must be enclosed in double quotes. If you omit them, they are added.
  - String `value` must be enclosed in double quotes. If you omit them, they are added. Single quotes are changed to double quotes.
  - Quotes are optional for numbers.

◦ **Function Arguments**: Define or select JavaScript functions. The Test button is enabled when all test values are specified.

◦ **Function Implementation**: Input values that contain the JavaScript function and corresponding arguments.

4 Click **OK**.

Adding Prompts

Several IVR modules have internally extended execution times. You can add prompts in these modules:

Module	Description
Agent/Voice Mail Transfer Module	A termination module that allows you to transfer calls to agents or to voicemail.
Conference Module	Enables you to add other parties to a conference call.

Module	Description
Get Digits Module	Enables you to route a call by using digits entered by the caller into a variable.
Input Module	Analyzes spoken words or DTMF input.
Lookup Contact Record Module	Enables you to retrieve information from the caller's contact record.
Menu Module	Enables you to configure multiple exit branches based on caller input.
Play Module	Enables you to play prompts or greetings anywhere in the script.
Query Module	Enables you to exchange database information with an external source.
Skill Transfer Module	Enables you to transfer calls to skill queues.
System Info Module	Enables you to retrieve properties and statistics.
Voice Input Module	Prompts the caller for information and saves the caller input.

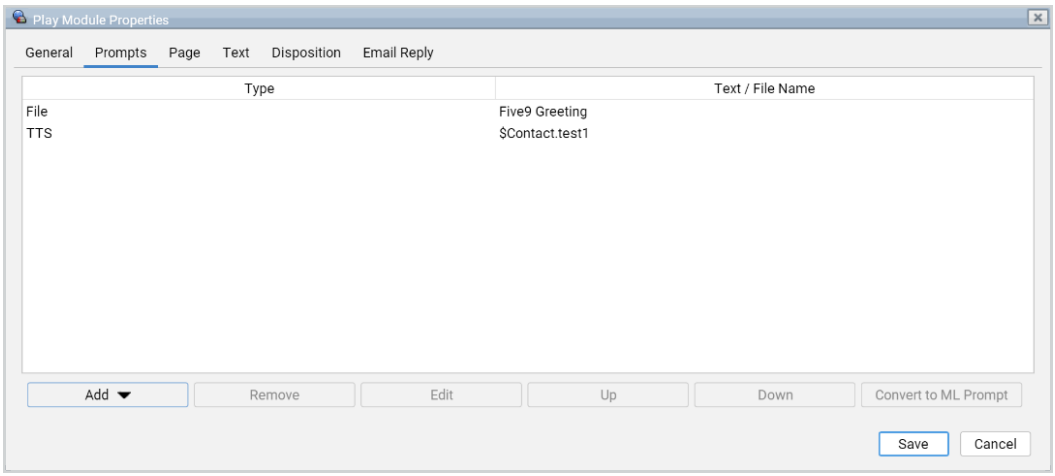
Adding Prompts

In the Prompts tab, click **Add** to select a prompt to be played by this module. The list of prompts includes the default prompts and the prompts that you uploaded in the Prompts folder. You can define one or several prompts to be played. You can indicate the sequence of prompts and how many times they should be used. Each prompt can be interruptible.

- Interruptible – Stops playing the prompt as soon as the background operation is completed, or the caller provides additional input.
- Exit the module in case of a prompt exception – indicates whether the IVR should move to the next module if there is an error in retrieving or playing a prompt.

TTS (enumerate) is a prompt element that opens a text-to-speech configuration window, with two additional variables: prompt and dtmf (if DTMF is enabled) available in Variable selection combo box. The Enumerate element is an automatically generated description of the available choices. It specifies a template that is applied to each choice in the order they appear in the menu. A default template is shown initially when

the Enumerate is added, but the user can change the text. If DTMF is enabled, the prompt generator prepares an appropriate prompt.



Selecting Dispositions

Dispositions are used only when calls are terminated or disconnected in these modules:

- **Extension Transfer Module**
- **Hangup Module**
- **Third Party Transfer Module**
- **Voicemail Transfer Module**

The **Dispositions** tab contains a default disposition that you can change to any system or custom disposition:

- Agent dispositions are used when a call is transferred to an agent.
- IVR dispositions are automatically used by the system when a call is disconnected during the IVR script. Any disposition, such as Send Email Notification and Add to DNC, can be assigned by the system. IVR dispositions enable you to see in reports where the caller was disconnected from the IVR script.

Using Recorded Files

Several IVR modules can collect audio information:

- Conference Module
- Input Module
- Menu Module
- Third Party Transfer Module
- Voice Input Module

The files can be processed by these modules:

- Agent/Voice Mail Transfer Module
- Hangup Module
- Skill Transfer Module
- Voicemail Transfer Module

These modules have the **Action for Recorded Files** menu. You can select these actions for the recorded files:

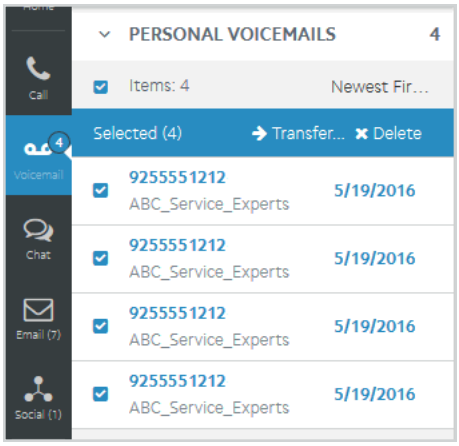
- **Keep as Recording** – Associates the recording with the call and makes it available for reporting.
- **Send to Agent** – Routes the recording to the agent that receives the call, as voicemail (not Hangup Module).
- **Delete** – Deletes the recording.

There are two purposes for using audio files:

- **Call post-processing** – When the information cannot be gathered using DTMF or speech recognition (name, street address, etc.), it can be recorded using the Voice Input module and delivered to the agents. The recordings are transformed into voicemail with an ability to be delivered as skill voicemail.
- **Regular recordings** – The callers input is saved as audio files. Agents will not have an access to the files in this case. This option can be used if you do not need to convert the recorded information into the written form. For example, regular recordings can be useful for surveys. The recordings can also help

administrators to debug their IVR scripts and fine-tune the choices configured in a Menu module.

If the **Send to Agent** option is selected in the IVR script, the recording is available to the agent who can access the recordings in the **Voicemail** tab. Recordings are labeled with the incoming skill queue.

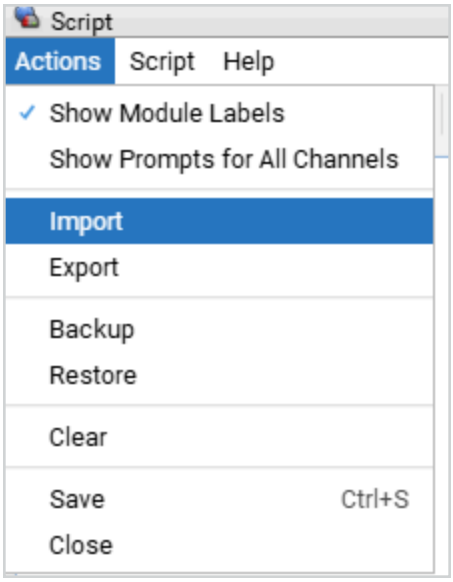


Assuming the IVR Script is set to **Keep as Recording** mode, recorded audio files gathered via IVR modules are transformed into recordings (not voicemail). They are available via Reports and saved on FTP server with a unique file name based on the campaign's applicable recording file naming convention, appended with _<Recording ID>. The **Voice Input** module name is a reference of the audio file that holds the recording.

Importing Scripts

IVR scripts are located in the navigation pane. You can import a script in an existing script, or in a new script. Double-click the script.

1 In the IVR workspace, select **Actions** > **Import**.



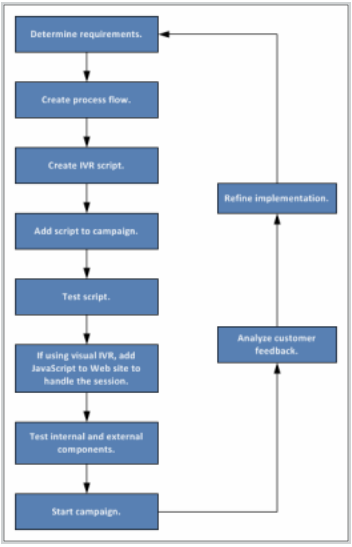
2 To see the configuration, double-click each module in the imported script.

Designing IVR Scripts

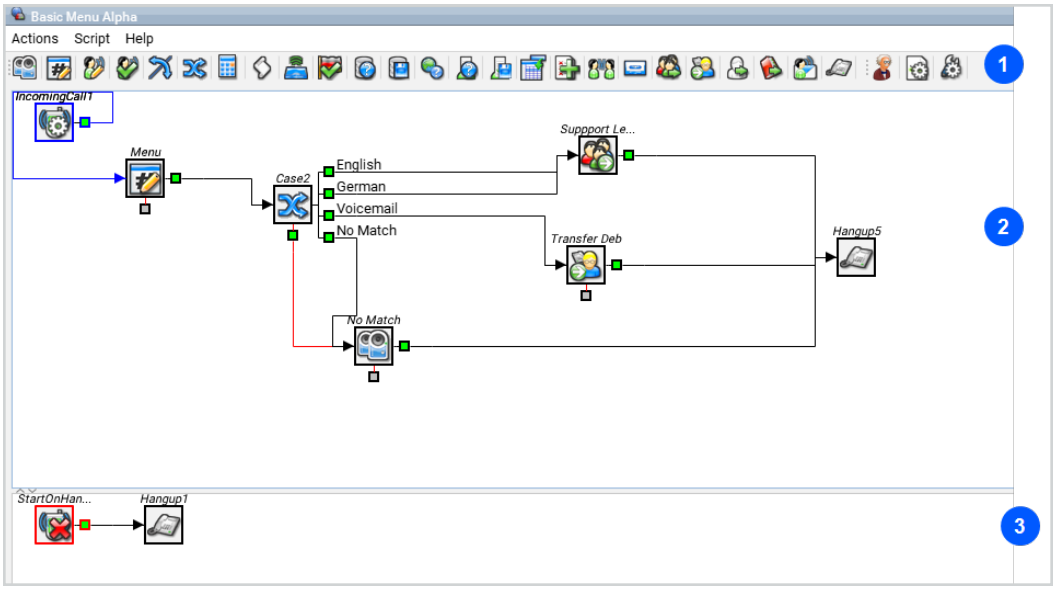
You create IVR scripts to contain diverse components, such as speech recognition, linked modules, and variables.

IVR Script Designer
Speech Recognition Grammars
IVR Modules

IVR Script Designer



To access the designer, select **IVR Scripts** > **Edit**.



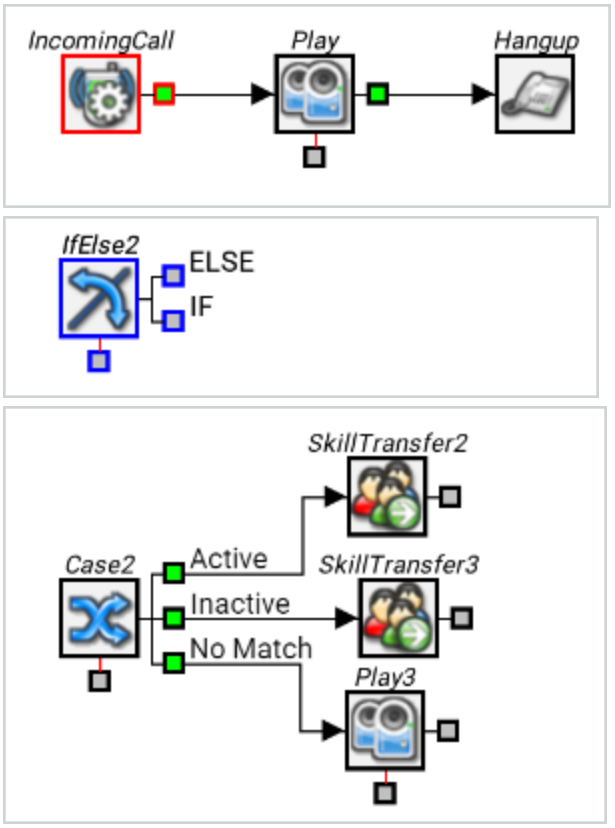
1 Modules toolbar –IVR module icons that you drag to the work area. Hover over the icon to view the module name.

2 Work area – Re-sizable window where you construct your script with modules and connectors.

3 Bottom pane – Post-disconnect handling. For example, with the Query Module and Web2Campaign, abandoned callers can be added to an outbound campaign for a callback. The fields of a contact record can be updated with Abandoned=TRUE, which would identify records to include in an outbound campaign (functions in reporting can automatically add these contacts to a list).

Each module contains an icon, label (can be hidden), and connector ports. Module relationships and order are presented as arrows which connect the icons. Each module has properties.

IVR modules are connected to each other by connector ports as shown in the figure below. Several modules can follow one module (IncomingCall module). Some modules have two output ports (If/Else and Answering Machine modules). Some modules have one output for each branch (Case module). Termination modules have no output ports.



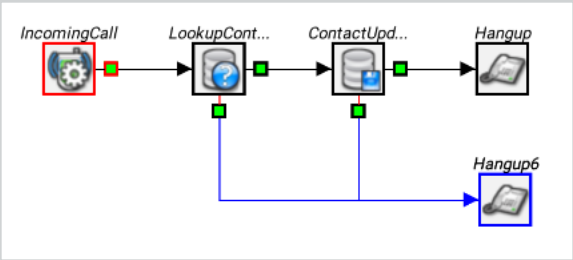
The module execution can cause errors and exceptional situations. For example, a request for external data may not be answered for a specified timeout, a contact record may not be found in the database, etc. For handling these exceptional conditions, there is an additional error exit from the modules. Most of the modules have an exception port.

For example, the Voicemail Transfer module can have these exceptions: Transfer to voicemail cannot be executed and Wrong agent or skill information in Variable (Agent/Skill can not be found). The Hang Up module does not have any exceptions.

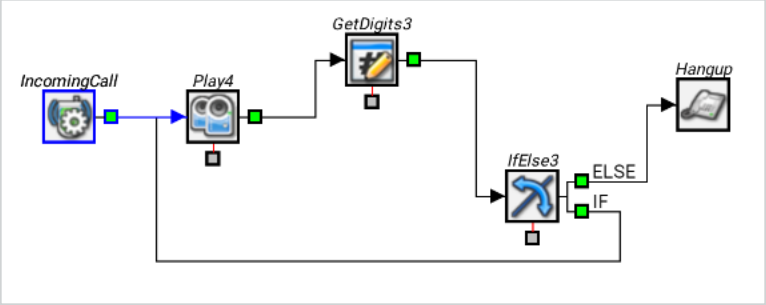
Using the exception port is optional. If no action is specified for the exception, it is ignored and the main exit is used.

ERR_CODE variable contains the value from the previous module. The error codes can differ for each IVR module. Error codes can be found in topics describing a particular IVR module.

You can link one branch into another branch in order not to repeat the same modules for each branch.



You can form loops by connecting a module to a previous module. A loop with exit by condition (like WHILE) looks like:

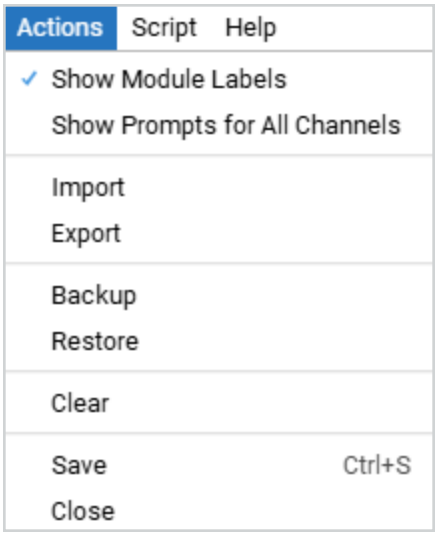


A loop, such as FOR, with a predefined number of iterations requires that you define a loop counter variable and use an expression in a Set Variable module to increase or decrease it. See also **Creating an IVR Loop**.



Actions Menu

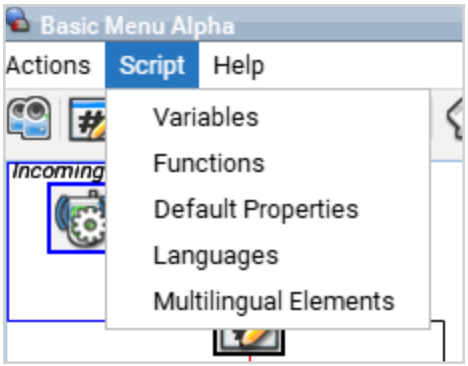
In the script, select **Actions** to see the available menu choices.



- Importing, exporting, restoring, and backing up: Your IVR Scripts can be exported to create backups of currently-running scripts or to save scripts that are not yet completely configured. IVR Scripts and all supporting subscripts and prompts can be backed up and restored. See **Exporting and Importing IVR Scripts**.
- Clear: Enables you to remove all elements from the working area except the Incoming Call icon.
- Save: Validates your script. If no errors exist, the script is saved and you can close the designer. If errors exist, you see an error message.

Script Menu

In the script, select **Script**.



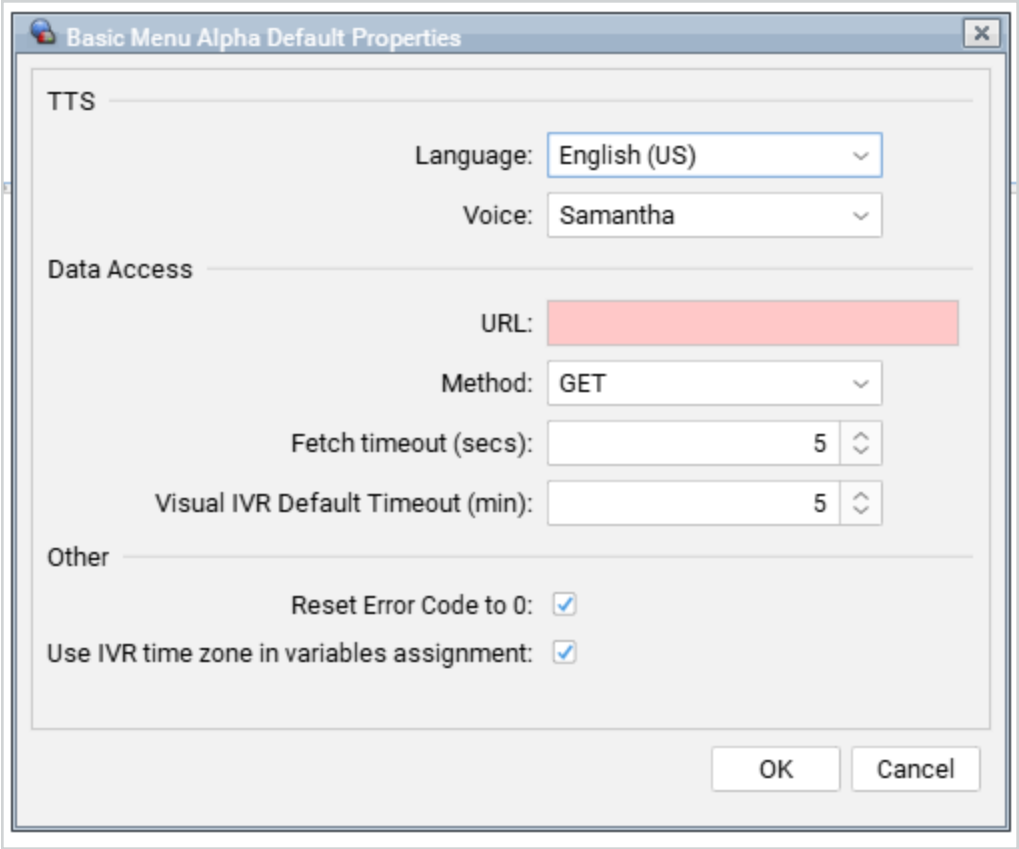
Default Properties
Variables
Languages
Multilingual Elements

Default Properties

The IVR Script properties window can be accessed by selecting the View Properties of option from the IVR script right-click menu in the IVR Scripts folder. The General tab contains this information:

- IVR Script Name: Not editable.
- Description: Text area that identifies the purpose of the script. The description is shown on the IVR Scripts screen together with the script name.
- Max time in IVR: Setting to prevent unintended infinite loops configured in an IVR script from keeping calls in the IVR for an indefinite amount of time.
- Associated Campaigns: View all campaigns that use this script. You can't remove a script if any campaigns are using it.
- Called By Scripts: View all IVR scripts that run this script.

You can configure the default properties of the Text-To-Speech editor and for data access.



- TTS:
  - Language: List of languages that you can choose for TTS prompts in the Text-To-Speech editor: English (UK), English (US), Spanish (MX), and Portuguese (BR).
  - Voice: Voice character available to speak the voice prompts. The voice is female.
- Data Access: Default parameters used to access the data in the Query module.
  - URL: Address of the data.
  - Method: GET and POST methods.
  - Fetch timeout: Time-out in seconds for the request.
  - Script Type: Type of script for Web server: ASP, PERL, PHP.
  - Script path: Location of the script on your system.
  - Visual IVR Default Timeout (min): Time-out in minutes for the visual IVR to appear.

> **Important:** Five9 recommends setting this to the 30-minute maximum for IVR scripts used to transfer chat interactions to chatbot.

- Reset Error Code to 0: Resets `__error_code__` value to 0 between interconnected modules.
  - Enabled: The `__error_code__` value is set in each executed module. Default value for new scripts.
  - Disabled: The `__error_code__` value carried throughout execution.

> **Example**
>
> Consider three subsequent IVR modules: Module1 and Module2 lead to an IfElse module. The ifElse module starts with an `__error_code__` value of 0. If an exception happens in Module1, the `__error_code__` of Module1 is set to a corresponding non-zero value. Module2 is completed normally. In this example, the IfElse goes to the TRUE branch as soon as the Module2 is executed without problems. Otherwise, the IfElse module returns FALSE.

- Use IVR time zone in variables assignment: Select this option to use the IVR **Set Variable Module** to assign IVR `_TIME_` variable to `Contact.Time`. Conversely, you can use this option with the **Contact Update Module** to synchronize the contact variables with the contact record.

Variables

A variable is a field to use in your IVR script to store and manipulate temporary data in the IVR. Variables have a name, type, and value. Variables are essential parts of a script. All script modules can access defined variables. Store call-attached data in the form of variables to use in latter parts of the IVR script or integrate into the text-to-speech messages. You can assign customer data to variables.

Use the predefined variables or create your own to store temporary data. You manage variables in the Variables window opened in the IVR Script properties window (the Script menu). See also, **Managing Variables**.

While creating TTS prompts, enter text phrases and insert contact, call, or system variables in the text. See also, **Adding Prompts**.

Use variables to hold values to keep for later processing during script execution. When you request the external Web server for information, you will probably want to use the result of that request somewhere else in your script.

Variables include these types:

- **User Variables**: Variables have local scope and are accessible only by the script where they were defined. The BUFFER variable is automatically created in each script. Create script variables with names that include alphanumeric characters and underscores, starting from a letter or underscore.

- **Call Variables**: Metadata about a call: Call.ANI, Call.DNIS, Call.bill_time, Call.campaign_id, Call.campaign_name, Call.comments, Call.disposition_id, Call.disposition_name, Call.end_timestamp, Call.handle_time, Call.hold_time, Call.length, Call.number, Call.park_time, Call.queue_time, Call.session_id, Call.skill_id, Call.skill_name, Call.start_timestamp, Call.type, Call.type_name, and Call.wrapup_time.

- **Call Attached Variables (CAVs)**: Key-value pairs specific to calls available until the agent assigns a disposition. These variables are accessible from the IVR by the agent who receives the call or transfer, by agents who are consulted or added to a conference call, and from the IVR again when a call transfers back to the IVR. Call variables are global variables that are often permanent (stored for reporting purposes); whereas IVR variables are temporary local variables used within an IVR script.

- System Variables:

    - **CRM_ID**: Internal ID of the CRM record currently selected in the IVR.

    - **DATE**: System date set in the time zone of the campaign that contains the IVR.

    - **DAY**: Numeric value that represents the day of the week set in the time zone of the campaign that contains the IVR.

        - **1: Sunday**

        - **2: Monday**

        - **3: Tuesday**

        - **4: Wednesday**

        - **5: Thursday**

  - **6: Friday**
  - **7: Saturday**
- **INPUT**: Optional variable to use as follows:
  - **DTMF**: Retains the caller's choice for further branching.
  - **Speech recognition**: Words spoken by the caller. Use this variable to add a confirmation prompt, for example, *You have chosen {*`apples`*}. Is this correct?*
- **LAST_AGENT_EXTENSION**: Phone extension of the last agent who handled the call.
- **LAST_AGENT_NAME**: User name of the last agent who handled the call.
- **SWI_LITERAL**: Words spoken by the caller as interpreted by the last Input module.
- **TIME**: System time set in the time zone of the campaign that contains the IVR.
- **TIME_ZONE**: Time zone of the campaign that contains the IVR.

- Contact Variables (same as Contact Data Fields, see Basic Configuration Administrator's Guide, Contact Data Fields)
- Agent Variables (Agent.first_agent, Agent.full_name, Agent.id, Agent.user_name)
- IVR Variables (IVR.error_code, IVR.error_desc, IVR.last_module, IVR.last_state)

Data Types. Each IVR variable has a type. Use types to simplify data consistency control.

String	Boolean*
Number	Percent
Date	Email
Date/Time	URL
Currency	Phone Duration

* The only boolean values accepted are lowercase `true` and `false`.

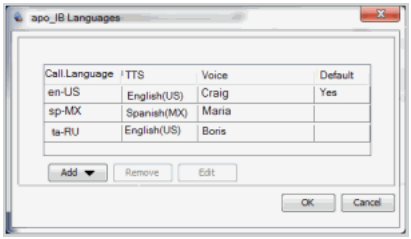
Values. The following are ways of assigning values to a variable while using IVR:

- By specifying initial value in variables definition screen. See **Managing Variables**.
- From scheduler (for upper level script). See Managing IVR Script Schedules for Autodial and Inbound Campaigns in the Campaign Administrator's Guide.
- From calling procedure (if the script is invoked by other script). See **Foreign Script Module**.
- By using the Set Variable IVR module.
- As user input.
- Through internal database dip (for contact variables).
- In result of request to Web server.

Variables of any type not initialized by any of these options have a special NULL value. It is possible to assign NULL value to a variable or check if a variable is NULL using the If/Else module. NULL values aren't defined for logical expressions and results in exceptions in corresponding modules (If/Else and Case modules).

Languages

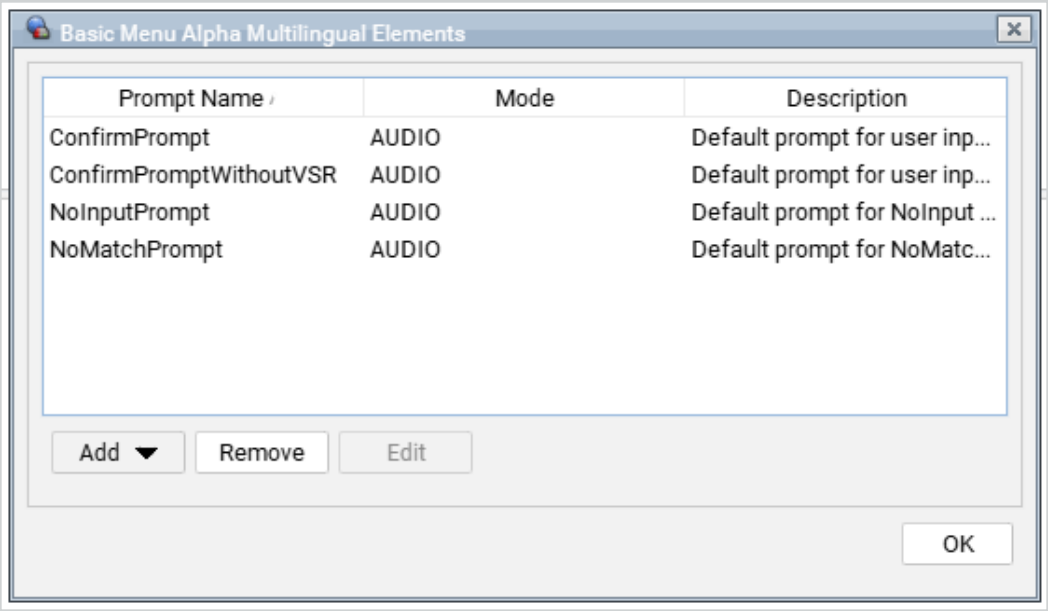
In the IVR script builder, select **Actions > Script > Languages** to specify a set of supported languages for specific IVR scripts.



You must have a Call Language variable for each language in your IVR script, as shown above. Select **Add** to specify the default **TTS** language and **Voice** for new prompts for a new Call Language variable. You can set any the TTS to any language, but you must set a default language.

Multilingual Elements

You can create dynamic audio for your scripts: visuals, text, menu items, and estimated wait time announcements. To add items, select **Script** > **Multilingual Elements**.



Audio prompts. Click **Add** and create or use an existing prompt. The menus are similar to other prompt menus.

Visual prompts. Click **Add** and create or use an existing prompt. The menus are similar to other prompt menus.

Text. Click **Add** to add text and variables.

Menu item. Click **Add** to create audio, visual, and text-based prompts and other items containing variables and thumbnail images.

EWT announcement. Plays an estimated wait time (EWT) message to the customer stating when an agent will answer a call transferred by the Skill Transfer module. The EWT announcement plays after the set standard prompt (see **Adding Prompts**).

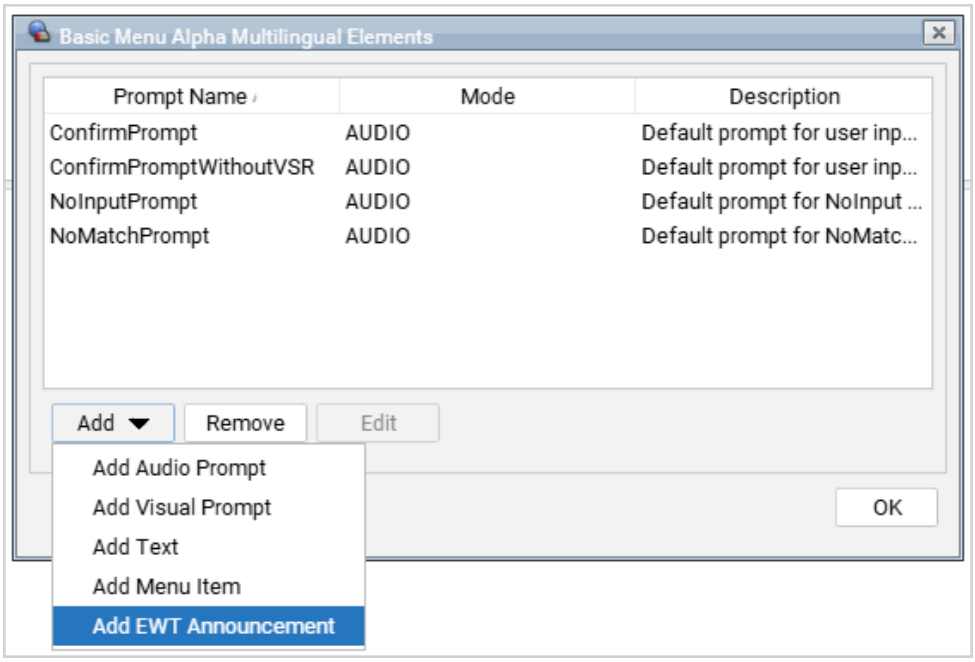
When creating an EWT announcement, the EWT interval (in seconds) is evaluated as:

- EWT interval > 0 : If between 0–59 seconds, < 1 minute
- EWT interval > 1 : If between 60–119 seconds, > 1 minute
- EWT interval > 2 : If between 120–179 seconds, > 2 minutes

The EWT *interval* is the number of accepted calls transferred by the Skill Transfer module in the last 15 minutes divided by the total queue time.

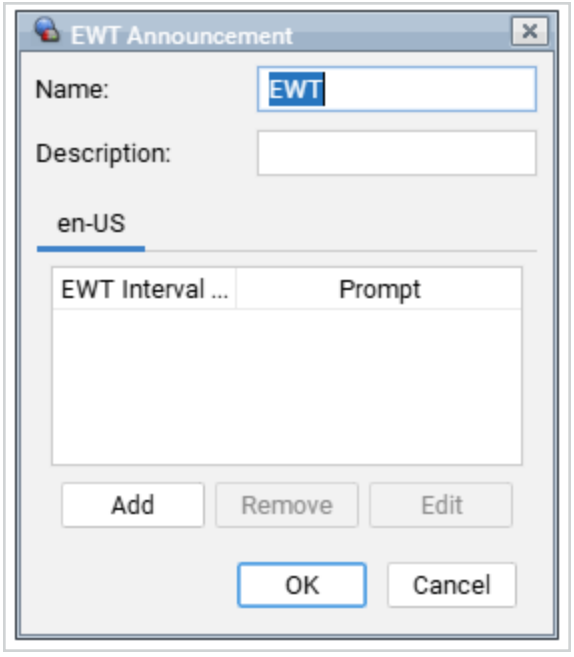
> **Note:** If the call is already assigned to an agent, EWT is always 60 seconds.

1 Click **Add**, and select **Add EWT Announcement**.



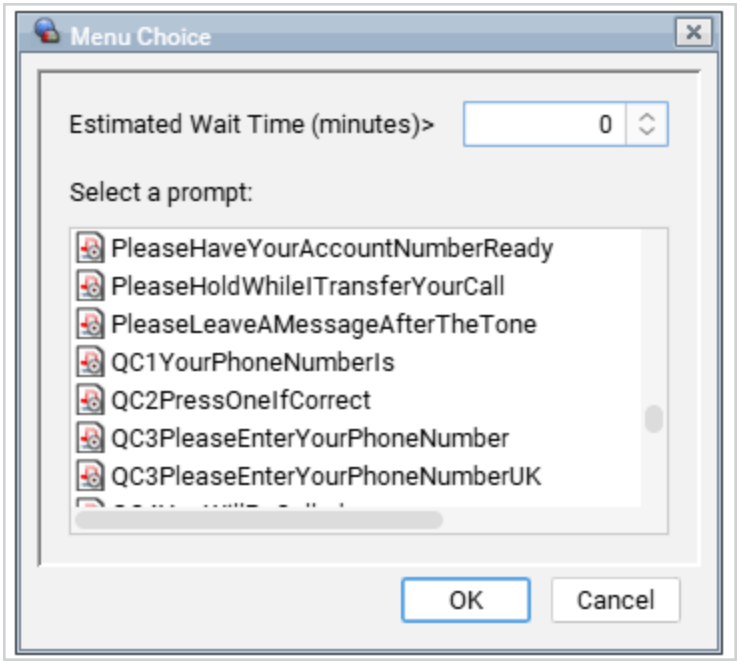
2 Name and describe the announcement.

The name displays on the tab in the EWT Announcement window.



3 Select **Add**.

The Prompt menu contains a list of announcements you created for different EWT durations or events (see **Adding Prompts**).



4 Select a prompt and the EWT to send in the announcement.

5 Select **OK** two times.

Speech Recognition Grammars

> **Note:** If you need speech recognition features, contact your Five9 account director.

These grammar types only apply if you have the Five9 IVR with Speech Recognition package to create advanced self-service voice applications, for example:

- Menu-driven call routing, like with a customer prompt: *You can say Sales or Customer Service*.
- Entering an account or tracking number.

The standards for speech recognition grammars are located at https://www.w3.org/TR/speech-grammar/.

The **Input** and **Menu** modules use speech recognition to compare spoken words to a predefined grammar of expected phrases from a variety of voices:

alphanum	digits
boolean	number
ccexpdate	phone
creditcard	socialsecurity
currency	time
date	zipcode

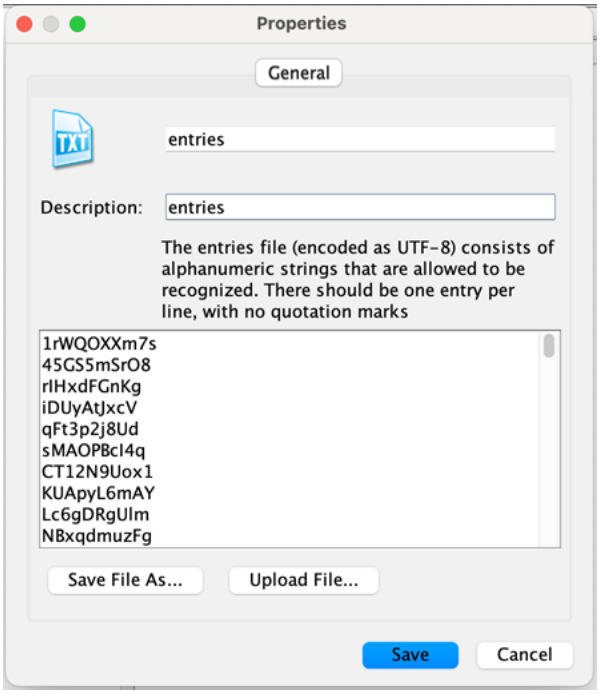
alphanum

Recognizes alphanumeric strings (a connected string of up to 20 digits and alphabet characters), such as *abc123*. Use this grammar to recognize items such as, a product code or order number. alphanum isn't case sensitive. Allowed characters are A–Z and a–z, and the digits are 0–9. Non-alphanumeric characters, such as hyphens (-), dots (.),

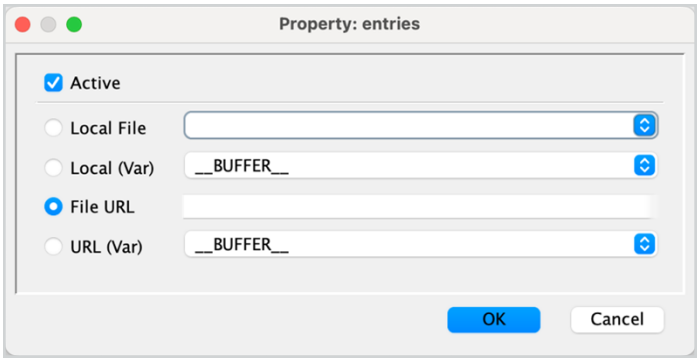
and underscores (_) aren't recognized; when spoken, these reduce recognition accuracy.

Parameter properties.

Parameter	Description
entries*	URI specifying a file listing allowed constraints, one per line.
** Required*	



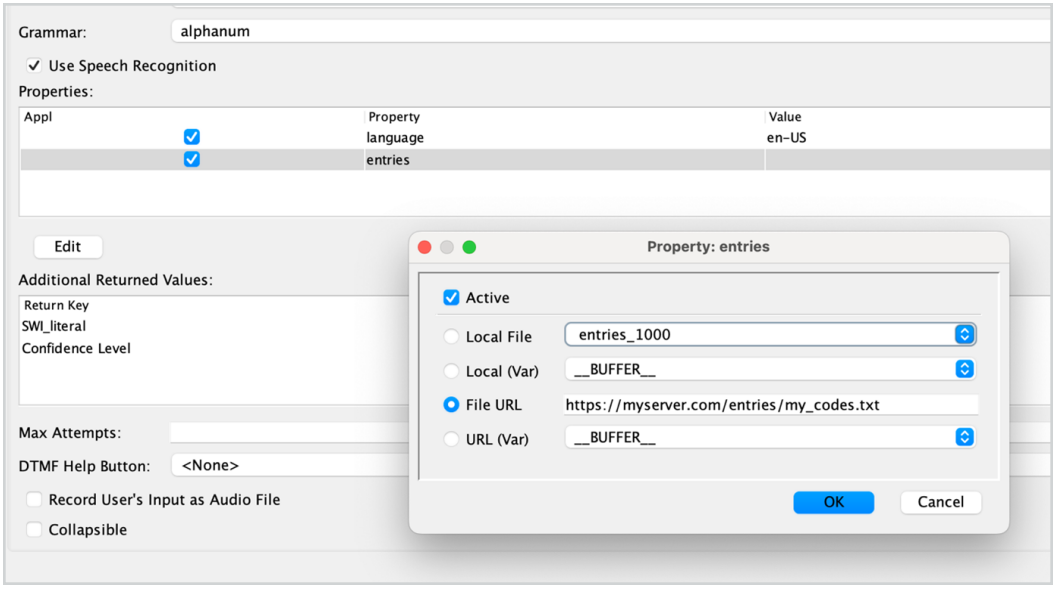
The possible options for `entries` are **Local File** or **File URL**. The **Local File** option allows you to use files uploaded to **Misc IVR Files** in the IVR Scripts node. You can use variables for both options.



Files can contain over a million entries, but must be smaller than 1M. An error displays if you try to upload a file larger that 1M.



File URL allows you to use a remote file that can have over a million entries and be retrieved using the URL.



The `entries` file (encoded as UTF-8) consists of alphanumeric strings to recognize, one entry per line. Don't use quotation marks. Constraints are uppercase and lowercase alphabetic characters (recognition considers cases the same). Non-alphanumeric characters, such as dashes or spaces, are ignored. The entries can't contain special characters: those with accents (for example, è) or tildes (~). By default, each constraint has no spaces between the elements.

You can add a header with a list of directives to the top of the file. The header must consist of lines beginning with a double colon (::) followed by a directive (no spaces).

Directive	Description
`::DELIMITED`	This file uses spaces between each element in each constraint. Spaces are ignored. Use this directive when two characters represent a single alphabet character (for example, the Spanish letter *ch*).
`::WEIGHTED` *max*	Constraints have a weight value following the entry to indicate the probability of hearing that constraint (for example, 12a4 and 1284 sound similar in English). You can assign a higher weight to the entry that would more likely be spoken. `max` is the maximum weight a constraint can have. When using `WEIGHTED`, you must end every constraint with `<space><real_number>` where, `real_number` is the weight to assign the constraint. **Note:** • You must include the space even if not specifying `::DELIMITED`. • Non-numeric weights cause the entries file to fail to load. Any specified value greater than `max` defaults to `max` and a warning displays.
`::LENGTH` *len*	All constraints in the file are the same length, *len* characters long. This directive improves recognition accuracy.
`::NUM` *n*	This file contains *n* constraints (or fewer). This can speed the loading of the entries file as only the specified number of constraints will load.

Note: Dual tone multi-frequency (DTMF) is not recognized by `alphanum`.

Return key/values.

Key	Description
MEANING	Contains a string of ISO-8859-1 digits and lowercase letters with no embedded spaces.

Additional Returned Key/Values.

Key	Description
SWI_literal	Contains the exact recognized text.

This is an example entries file:

You can limit the list of constraints to numbers. For example, a *digits.txt* entries file might contain:

```
1564

2345

8642

1119999911
```

boolean

Accepts yes or no from the caller. *Correct* is accepted as a synonym for *yes*. By default, 1 (=yes) or 2 (=no) is assigned to the variable.

Parameter properties.

Parameter	Default Value	Description
y	1	Desired DTMF digit equivalent to yes.
n	2	Desired DTMF digit equivalent to no.

Return key/values.

Key	Description
MEANING	True or false.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

ccexpdate

Understands the expiration date on a credit card. Expiration dates are usually a month and a year embossed on a credit card in the form mm/yy or MonthYYYY. The grammar recognizes variations of the date, for example, December 2007, twelve oh seven, twelve of two thousand and seven, twelve slash zero seven, etc.

Parameter properties.

Parameter	Default Value	Description
`referencedate`	current date	Date in YYYYMMDD format to use in computing ranges.
`maxallowed`	84 months	Latest date recognized expressed as a number of months beyond reference date.
`maxexpected`	48 months	Latest likely date recognized expressed as a number of months beyond reference date.

Return key/values.

Key	Description
MEANING	Recognized date in YYYYMMDD format. For example, 20110331 refers to March 31, 2011. The value is the same whether or not the caller

Key	Description
	specified a day of the month. The day is always set to the last day of the month. Can be assigned to a selected variable in the Input Module (default is BUFFER).

creditcard

Understands a credit card number, optionally preceded by the credit card name or the words *account number* or *account*. For example, a caller can say, *Visa account number four oh one seven...*, *MasterCard five zero zero two...*, or *three seven three five...*. The grammar understands any commercial credit card that adheres to the ISO standard numbering scheme: all cards issued by Visa, MasterCard, American Express, Discover, and Diners Club, and many private label cards provided by individual retailers (department stores, gas companies, etc.).

This standard dictates minimum and maximum length of the digit string, open digit sequences, and a check digit used as the last digit in the string so that the entire number meets the mod 10 checksum criterion. Five9 recommends that you validate numbers with related information (Expiration date, Security codes, Database validation).

Parameter properties.

Parameter	Default Value	Description
`typesallowed`	All types are recognized.	Credit card types. To specify more than one, use the list to enable individual card types: American Express, Diners Club, Discover, MasterCard, Private Label, and Visa.

Return key/values.

Key	Description
MEANING	Recognized credit card number. Can be assigned to a selected variable in the Input Module (default is BUFFER).

Additional Returned Key/Values.

Key	Description
CARDTYPE	Assigned to the type recognized, where the types are of the same set that can be specified in the type property. Even if the caller does not specify the card type, the type is inferred from the card number, for example: all Visa cards start with 4.

currency

The currency grammar is available for these currencies:

- Dollars and cents: For speech recognition, these phrases are accepted: *ten dollars*, *ten dollars and fifteen cents*, and *ten fifteen*.
- UK pound and pence
- Euro and cents

You may use all available currencies in all the relevant parts of your scripts: grammars, display, prompts, and input modules, such as Get Digits, Input, and Set Variable.

All currency, IVR, system, and call variables support the UK and Euro currencies.

Parameter properties.

These parameters apply only to speech recognition for US English only. They do not apply to TTS.

Parameter	Default Value	Description
`minallowed`	0.0	Minimum amount.
`maxallowed`	9999.99	Maximum amount.
`minexpected`	0.0	Minimum likely amount.
`maxexpected`	9999.99	Maximum likely amount.
`granularityallowed`	0.01	Granularity of recognized results.
`granularityexpected`	0.01	Granularity of likely results.

Return key/values.

Key	Description
MEANING	String in this format: `<currency><main unit amount><dot><subunit amount>`. Automatically assigned to the SWI_literal variable in the Input module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

date

Accepts a date spoken in any of several formats, such as mm-dd-yyyy or mm/dd/yyyy.

Parameter properties.

Parameter	Default Value	Description
`minallowed`	19000101	Earliest date recognized, expressed as YYYYMMDD
`maxallowed`	21991231	Latest date recognized
`minexpected`	19000101	Earliest likely date
`maxexpected`	21991231	Latest likely date

Return key/values.

Key	Description
MEANING	Date string expressed as YYYYMMDD. Recognized phrases include `4 June`, `4 June 2006`, `4, 6, 2006`, `the 4th`, `4th June`, and `Monday, the 4th of June`. The MEANING key is automatically assigned to the SWI_literal variable in the Input module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

digits

Recognizes a continuously spoken string of up to 20 digits (that is, the caller is not required to pause after each digit). Valid characters are the digits 0-9. The digit 0 can be pronounced as either *oh* or *zero*. Punctuation characters such as hyphens (-), dots (.), and underscores (_) are not recognized; if spoken they reduce recognition accuracy.

Parameter properties.

Parameter	Default Value	Description
`minlength`	1	Minimum number digits recognized
`maxlength`	20	Maximum number digits recognized

Return key/values.

Key	Description
MEANING	String of digits (ISO-8859-1 encoding), with no spaces, for example: 12345. Automatically assigned to the SWI_literal variable in the Input Module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

number

Accepts quantities such as *ten*, *one hundred and forty*, *five hundred sixty one point five*, *negative five*, and *minus four point three*.

Parameter properties.

Parameter	Default Value	Description
`minallowed`	0	Minimum number.
`maxallowed`	999 999 999.99	Maximum number.
`maxdecimal`	2	Maximum number of decimal places (maximum 9).
`minexpected`	0	Minimum likely number.
`maxexpected`	999 999.99	Maximum likely number.
`granularityallowed`	1.0	Granularity of recognized results. This must be an integer. If set, fractional entries are recognized. To control allowed decimal precision, use the `maxdecimal` parameter.
`granularityexpected`	1.0	Granularity of likely results.

Return key/values.

Key	Description
MEANING	String of ISO-8859-1 digits with no spaces, for example: if the caller says *twenty five*, the result is 25. Automatically assigned to the SWI_ literal variable in the Input Module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

phone

Accepts 7- and 10-digit North American phone numbers and three-digit numbers ending in 11, such as 911. An optional 1 may be placed before 7- or 10-digit numbers. Dashes are optional. For example, if 16789999 is recognized, the returned result is 6789999. The grammar allows phrases, such as *three two four fifty five seventy two* and strings of individual digits.

Return key/values.

Key	Description
MEANING	Variable-length string of digits with no spaces. Automatically assigned to the SWI_literal variable in the Input Module. Assigned to a string of digits representing the recognized phone number. A leading 1 is omitted in the return value. For example, if 16789999 is recognized, the return result is 6789999. The return string may optionally contain the character x to indicate a phone number with an extension, for example: 8005551234x789.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

socialsecurity

Understands 9-digit US Social Security numbers. For example, a caller can say, *oh one seven, four seven, six five eight three*. Illegal numbers, such as those beginning with three zeros, are rejected. The grammar accepts numbers with first digits ranging from 0 to 7 but does not accept those beginning with 8 or 9.

Return key/values.

Key	Description
MEANING	Recognized number. Can be assigned to a selected variable in the Input Module (default is BUFFER).

time

Time of day spoken by the caller, for example: HH:MM [AM | PM]. Recognized phrases include times given in 12-hour format (5 o'clock), 24-hour format (twenty-three fifteen), and qualified times such as *before 5 o'clock* and *about 5*.

Parameter properties.

Parameter	Default Value	Description
`minallowed`	0000	Earliest time recognized.
`maxallowed`	2359	Latest time recognized.
`minexpected`	0000	Earliest likely time.
`maxexpected`	2359	Latest likely time.
`granularityallowed`	1	Allowed granularity in minutes.
`granularityexpected`	1	Expected granularity in minutes.

Return key/values.

Key	Description
MEANING	Four-digit string in the 24-hour format, from 0000 to 2359. Automatically assigned to the SWI_literal variable in the Input Module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

zipcode

Recognizes valid United States ZIP Codes in either five- or nine-digit format.

Return key/values.

Key	Description
MEANING	Recognized five- or nine-digit ZIP code. Automatically assigned to the SWI_literal variable in the Input module.

Additional Returned Key/Values.

Key	Description
SWI_literal	Exact text that was recognized.

IVR Modules

Each IVR module controls an aspect of a call. An IVR script is a set of linked modules. When the system receives a call, the IVR script routes the caller from one module to the next until the caller is transferred to an agent, voicemail, or another destination. Specific modules are used at the start, middle, or end of a script. For a list of error messages that you can see with each module, see Error Messages.

Start Module


Incoming Call Module

Center Modules


Agent/Voice Mail Transfer Module


Answering Machine Module


Case Module


Conference Module


Contact Update Module


Foreign Script Module


If/Else Module


Input Module


Iterator Module


Language Module


Lookup Contact Record Module


Menu Module


Query Module


Set DNC Module


Set Variable Module


Skill Transfer Module


System Info Module


Update System Info Module

Get Digits Module | Play Module | Voice Input Module

Transfer and Terminating Modules

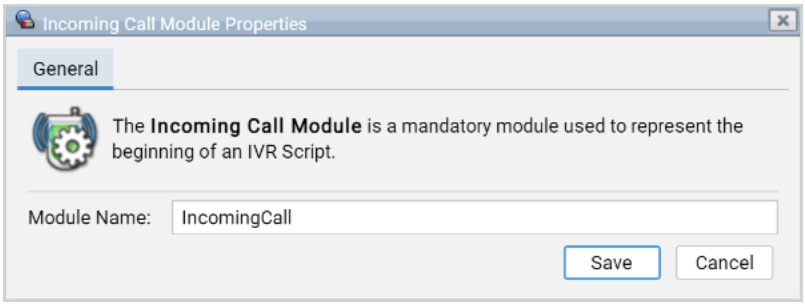
Extension Transfer Module | Voicemail Transfer Module | Start on Hangup Module

Third Party Transfer Module | Hangup Module

> **Important**
>
> Incorrect regular expressions in IVR modules are no longer executed for a long time. They are now stopped after one second.

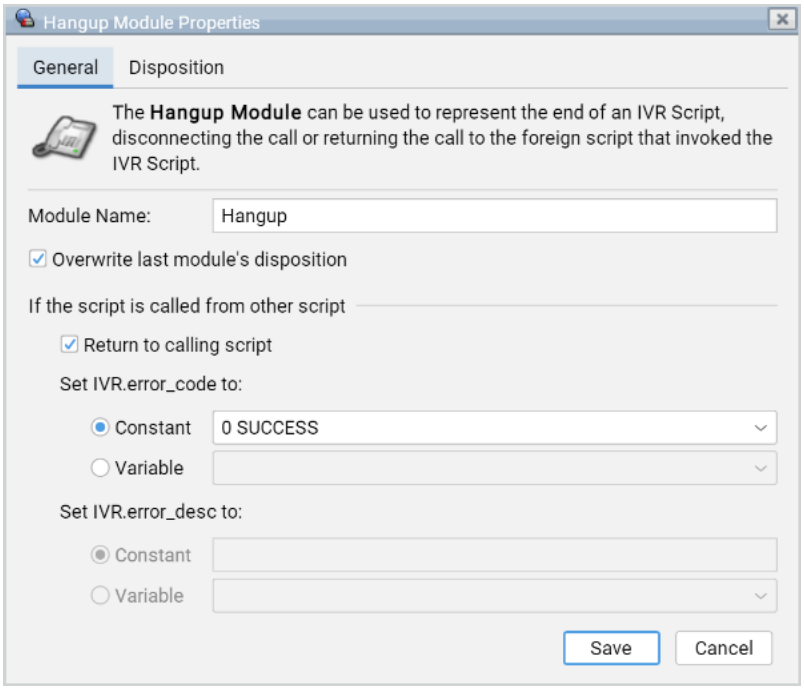
Incoming Call Module

The Incoming Call module is the first module of all IVR scripts. By default, it is already in the work area when you create a IVR script. You cannot remove this module from the work area. You can name the module, but you cannot assign properties to it. See IVR Modules for the description.



Hangup Module

Use this module to disconnect a call, which ends the script. If the script was started from another IVR script, this module returns the call to the initial script.



General tab.

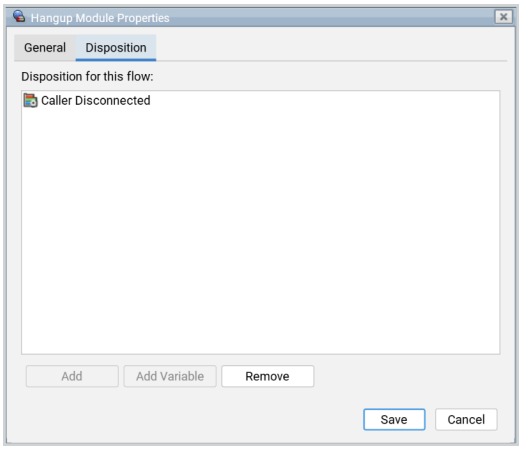
- **Module Name:** Name of the module specific to the script or the campaign.
- **Overwrite last module's disposition:** If a disposition was assigned in the previous module in the script, this option enables you to change the disposition for the call.
    - Enables the Disposition tab.
- **If the script is called from other script:** If the current script follows another script, select how to exit the current script:
    - Return to calling script: continue with the parent IVR script.
    - Set IVR.error_code to:
    - Constant: Specify the error code to return to the parent script.
    - Variable: Specify the contact, system, IVR, or call variable to use for the error code that is returned to the parent script.

Disposition tab.

- **Caller Disconnected:** Default disposition.
- **Add:** Select this button to add a disposition.

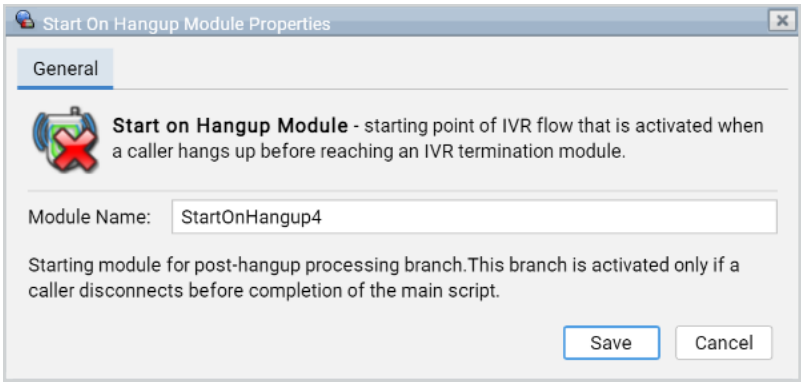
- **Add Variable:** Select this button to add a variable that contains the value of the disposition you want to set.
- **Remove:** Select this button to remove a disposition.

For more information about dispositions, see Selecting Dispositions.



Start on Hangup Module

This module enables you to start another process when callers hang up before reaching a termination module, a transfer module, or the Hangup module. You do not need to configure this module.



Troubleshooting an IVR Script

Use the Five9 VCC Debugger to troubleshoot an IVR script. To access the debug tool, do the following:

1. Navigate to the **Campaign properties DNIS** tab.
2. Click **Set Params** > **Start**.

   The Five9 VCC Debugger screen opens.
3. Select the session type and system variable, and enter the value.
4. Click **Start in Browser** to launch.

   When the debug tool is launched, it will be triggered when the information entered is matched. Once the information is matched, the debugger will navigate the IVR script and verify whether or not the script is accurate.
5. If an error is found, the module(s) with an error is highlighted in red. Click the highlighted module name to display the details in the browser.

   The debugger will run through the modules included in the script. Some modules contain more information than others.

Modules

The following are the modules outlined in **IVR Modules**. For a list of error messages that you can see with each module, see **Error Messages**.

Agent/Voice Mail Transfer Module
Answering Machine Module
Case Module
Conference Module
Contact Update Module
Extension Transfer Module
Five9 Rules Engine Module
Foreign Script Module
Get Digits Module
If/Else Module
Input Module
Iterator Module
IVA Transfer Module
Language Module
Lookup Contact Record Module
Menu Module
Natural Language Processing Module
Play Module
Query Module
Salesforce Module
Set DNC Module
Set Variable Module
SFDC Einstein Module
Skill Transfer Module
System Info Module
Third Party Transfer Module
Update System Info Module
Voice Input Module
Voicemail Transfer Module

Agent/Voice Mail Transfer Module

The Agent/Voice Mail Transfer module is a termination module that enables you to transfer calls to agents or to voicemail.

If **Agent Transfer** is selected then the interaction is routed to the specified agent.

> **Note**
> You can also route by agent extension id or by variable. Additionally, Five9 supports the module's **transfer to any available agent** option.

Agent Assignment for Text Channel Interactions

The following rules apply to agent assignment for text channel interactions.

Transferring to a Specific Agent

An interaction is assigned to an agent when the agent identified by the agent transfer module is:

- Logged in
- Ready
- Available
- Not at interaction capacity

Transferring to Any Available Agent

To transfer to any available agent, select to enable the **Transfer to any available agent** option. The text interaction is routed to any available agent, chosen using longest-wait algorithm. If there are no available agents then the interaction is routed to the default skill for the profile. Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

For text channel interactions, Five9 stops processing the IVR script after using an agent transfer module regardless of agent availability.

If a user abandons the chat session while waiting for an agent to accept that interaction, it is not assigned to the agent selected by the agent transfer module.

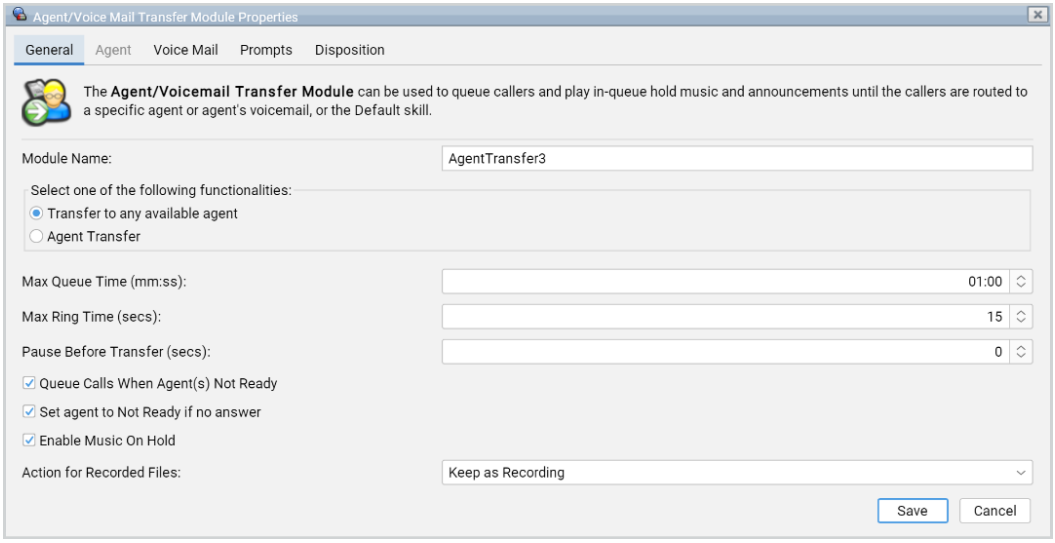
The Text Channels Administrator Console setting **Ignore Agent Interaction Limits for Transfers and Conferences** does not apply to interaction limits for this module. The text interaction is assigned to an agent only if the current interaction capacity is less than the maximum allowable capacity, regardless of this option setting in SCC.

Agent/Voicemail Assignment for Voice Interactions

This module enables voice interaction transfer to agent, skill, or voicemail options to exit an IVR script.

General Tab
Agent Tab
Voice Mail Tab
Prompts Tab
Dispositions Tab

General Tab

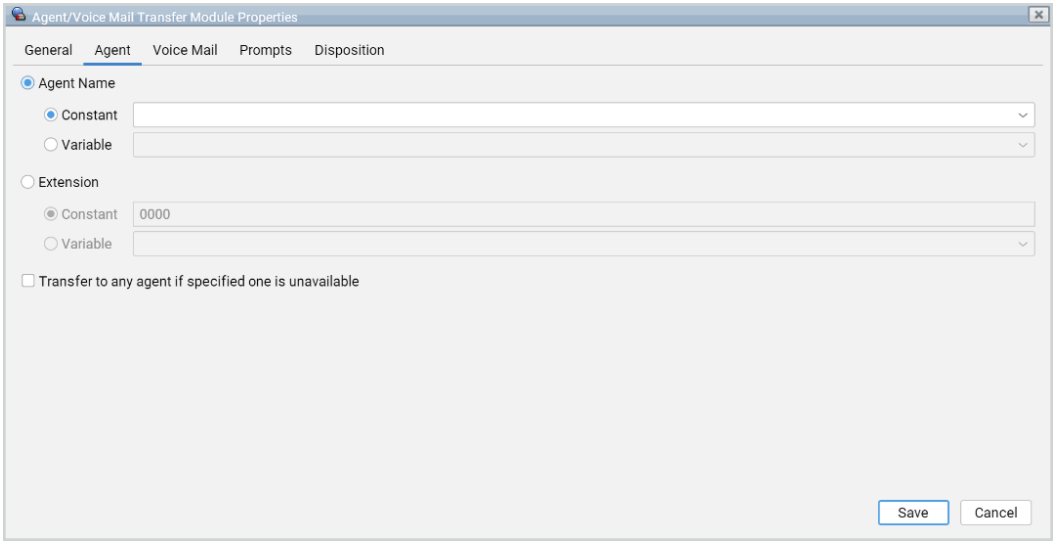


- **Transfer to any available agent**: Enables the Voice Mail tab.
- **Agent transfer**: Enables the Agent tab.
- **Max Queue Time**: Maximum number of minutes and seconds allowed for calls in a queue.
- **Max Ring Time**: Maximum number of seconds allowed for agents to answer calls.
- **Pause Before Transfer**: Number of seconds before transferring a call to a selected agent.
- **Queue Calls When Agent(s) Not Ready**: Whether to add calls to a queue for the maximum queue time specified when agents are not available:
  - Enabled: Calls are placed in a queue.
  - Disabled: Calls are transferred immediately to voicemail.
- **Set Agent to Not Ready If No Answer**: Whether to change an agent's status to Not Ready if the agent does not answer the call within the Max Ring Time.
  - Enabled: Agent's status is changed.
  - Disabled: Agent's status is not changed.
- **Enable Music On Hold**: Whether to play an audio file when the caller is waiting in the queue.

- **Action for Recorded Files**: Method for handling the recorded files gathered by the previous modules. See also **Using Recorded Files**.
    - Keep as Recording: Save recorded files as a recording to access from reports. The recorded files are not sent to the agents or skills.
    - Send to Agent: Routes recorded files to the agent. If agents are not available and the voicemail option is enabled, the recorded files become part of the voicemail message.

Agent Tab

Enabled if you selected **Agent Transfer** in the General tab. Transfers the call to either and agent or to an extension.



- **Agent Name**: Agent who receives the transfer after the maximum queue time expires:
    - Constant: List of your agents.
    - Variable: List of your contact, system, agent, call, IVR, or user CAV variables. Only string variables are allowed.

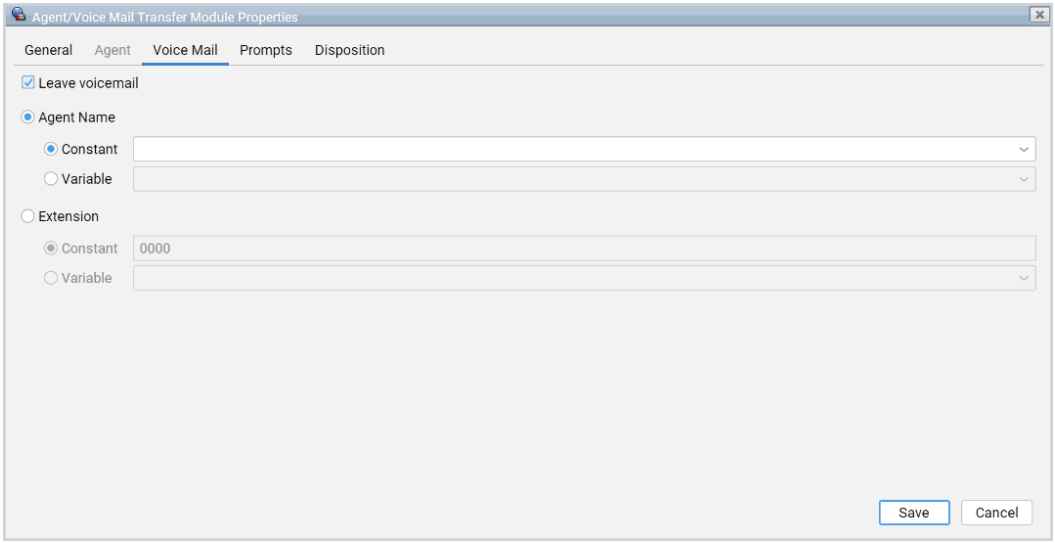
> **Note**
>
> If the assigned agent is unavailable, such as logged out, not ready, or at capacity, and **Transfer to any agent** option is not enabled, the system will seek alternatives in this order:
>
> 1. Default agent specified in system variable.
> 2. Default skill specified in system variable.

- **Extension**: Extension who receives the transfer after the maximum queue time expires:
  - Constant: Specific four-digit extension.
  - Variable: List of your contact, system, agent, call, IVR, or user CAV variables.

- **Transfer to any agent if specified one is unavailable**: Whether to transfer the call to any available agent if necessary.
  - Enabled: Transfer the call to any available agent.
  - Disabled: Seek transfer to defaults specified above (Agent Name).

Voice Mail Tab

Enabled if you selected **Transfer to any available agent** in the General tab.



Typically used to send calls to a general voicemail user account. You can create a user account to capture general messages after selecting a skill group in the Skill Transfer module.

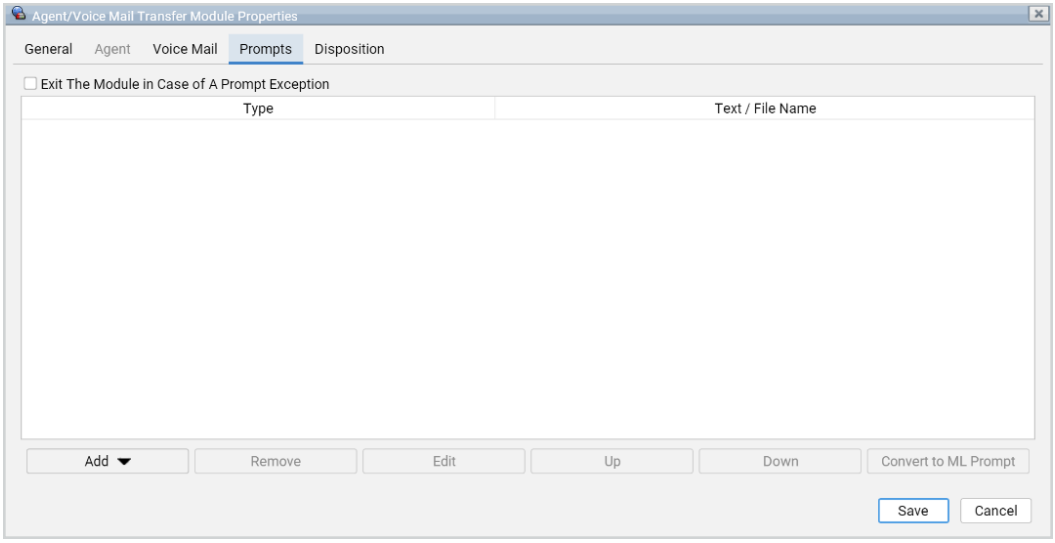
- **Leave voice mail**: Whether to enable voicemail messages for the agent or extension.

- **Agent Name**: Voice mailbox to receive the transfer after the maximum queue time expires:
  - Constant: List of all your agents.
  - Variable: List of your contact, system, agent, call, IVR, or user CAV variables. Only string variables are allowed.

- **Extension**: Extension to receive the transfer after the maximum queue time expires:
  - Constant: Specific four-digit extension.
  - Variable: List of your contact, system, agent, call, IVR, or user CAV variables.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds).



- **Exit the module in case of a prompt exception**: Whether to exit the module if the prompt cannot be played.
  - Enabled: Exits the module when the prompt cannot be played.
  - Disabled: Does not exit the module. The defective prompt is ignored.

Dispositions Tab

The default disposition is Abandon. For more information, see Selecting Dispositions.

Answering Machine Module

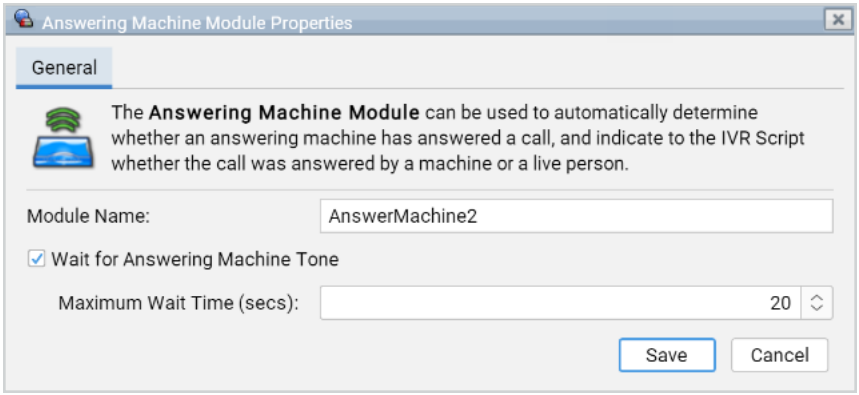
The Answering Machine module is used to determine if the call is answered by a person or a machine and to route calls according to the script.

> **Important:** If you plan on requiring this functionality, the only supported location is the first module after the Incoming Call Module. Using the Answering Machine Module later in the flow is not supported and may trigger error 1400.

The parts of the module are used as follows:

- Answering machine: Module branch used when the system determines that the call is answered by the recording of an answering machine. In this case, the script proceeds to the next module, which is usually a Play module that contains a recorded message followed by a Hang Up module.
- Live person: Module branch used when the system determines that the call is answered by a person. In this case, the script proceeds with the rest of the script.

If you omit this module, the beginning of the recorded message of the following Play module is cut off while the answering machine greeting is played.



- **Wait For Answering Machine Tone**: Whether to wait for a tone. This option is typically used when the answering machine tone may not be immediately detected.
  - Enabled: Wait for a tone
  - Disabled: Do not wait for a tone.

> **Important:** When this option is enabled, the system waits the configured maximum wait time, anticipating the tone at the end of the voicemail greeting. After the configured maximum wait time, the system proceeds to the next module, typically a Play module with a recorded message. In a case where the answering machine message exceeds the configured maximum wait time, the recorded message may be

abbreviated or not heard at all, or the call may be disconnected while the voicemail greeting is still playing.

- **Maximum Wait Time**: Applies if you enabled the answering machine tone option. Number of seconds to wait for the answering machine greeting. The default is 20 seconds.

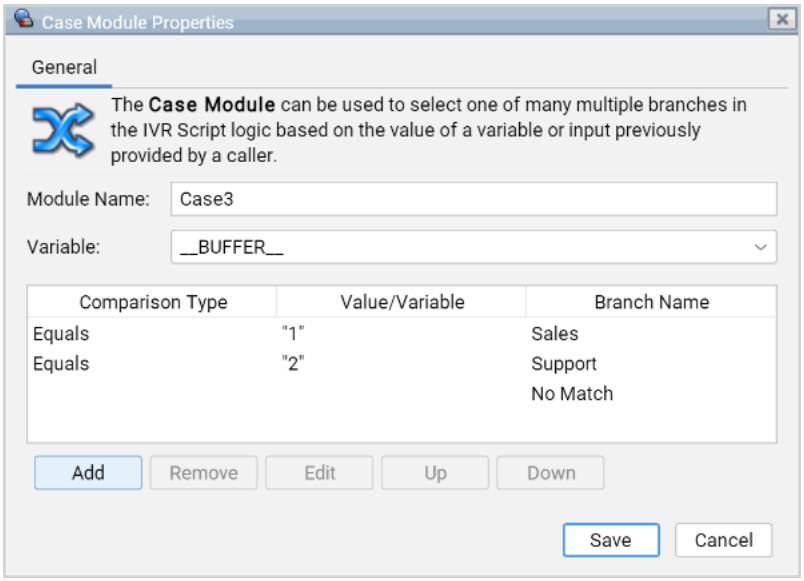
Case Module

The Case module enables you to create as many branches as you need to handle all the possible user input or the information contained in a variable. Each possible case must have its own branch.

Example

A Get Digits module contains this prompt: *For Sales, press 1. For Support, press 2.* The Get Digits module is followed by the Case module that contains the BUFFER variable with the values 1, which is leads to the Sales branch, and 2, which is leads to the Support branch. In this case, the Case module has three branches: Sales, Support, and No Match to handle all other caller input.

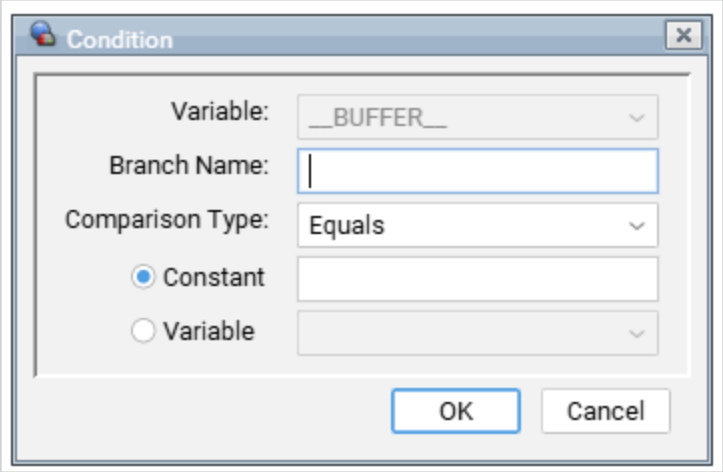
For more example, see also Creating an IVR Script and Creating an IVR Loop.



- **Variable**: Variable that stores the caller's input, for example when the Case module follows the Get Digits module. Use the default variable (BUFFER), select one from your contact, system, agent, call, IVR, or user CAV variables, or create custom variables in the **Script > Variables** menu. You can add, modify, delete, and order variables as needed. Represents the left variable in the equation.
- **Table**: Comparison Type Value/Variable Branch name: Represent the operator, the right variable, and the exit from the module, for example:

Variable	Comparison Type	Value/Variable	Branch name
BUFFER	equals	1	Sales

- **No Match branch**: Default branch used when the comparison does not match the available options. For example, if the prompt specifies to press 1 or 2, but the caller presses 3 or nothing, the script uses the No Match branch to exit the module.
- **Condition window**: Menu that enables you to define the right variable of the equation.



- **(Left) Variable**: Always BUFFER.
- **Branch Name**: Exit from the module. Branch names can contain up to 50 characters.
- **Comparison Type**:
  - Equals: Exact match
  - Like: Supports wildcards % and _.
  - RegExpr: Regular expression that matches specific characters.
  - IsNULL: Empty field

- **(Right) Variable**:
  - Constant: Specific value that you want to find.
  - Variable: List of your contact, system, agent, call, IVR, or user CAV variables.

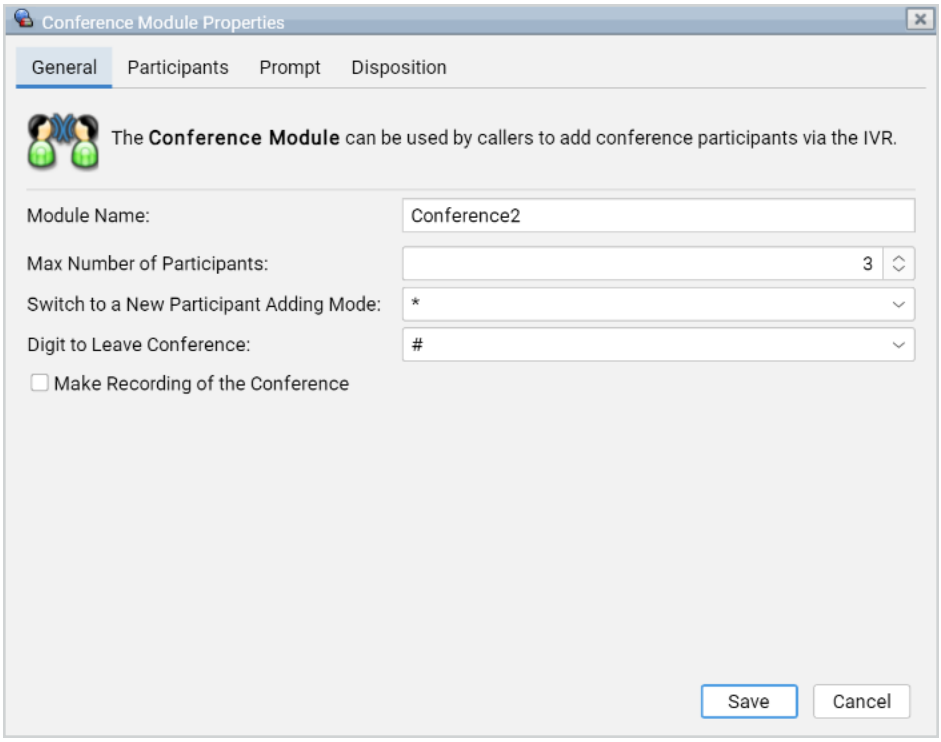
Conference Module

The Conference module enables callers to add other parties to a conference call. Callers entering this module are prompted to enter a phone number to invite a participant. The module dials the number and connects the second party to the first caller. Participants can leave the conference at any time. Except while adding a conference participant, the first caller can leave the conference or hang up. At that time, the conference is discontinued, and all participants are disconnected.

If your domain is not enabled for the E.164 format for international phone numbers, agents must enter 10 digits to conform to the North American Numbering Plan. If your domain is enabled for the E.164 format, agents must enter phone numbers for all calls according to your configuration: in your national format or up to 15 digits, starting with the plus (+) sign and the country code. If you do not specify a format, the VCC uses the E.164 format for all numbers. For more information, see the Basic Configuration Administrator's Guide.

General Tab
Participants Tab
Prompt Tab
Dispositions Tab

General Tab

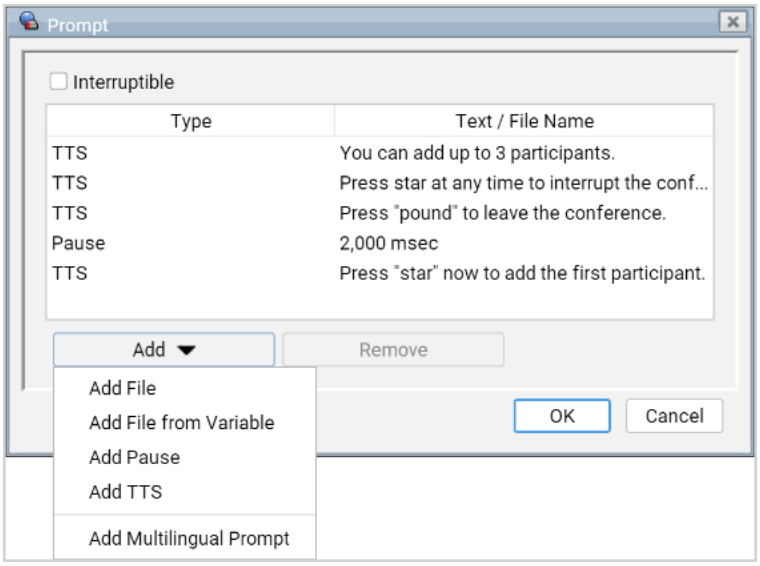


- **Max Number of Participants**: Maximum allowed number of conference participants. If the number is exceeded, add a prompt on the Prompt tab to inform the person who is managing the conference.
- **Switch to a New Participant Adding Mode**: DTMF button to access the conference option to enter a new participant phone number for the conference. The default is the star (*) key.
- **Digit to Leave Conference**: DTMF button to exit the conference. The default is the pound (#) key.
- **Make Recording of the Conference**: Whether to save the conference as audio file. The recording is available in reports. See also Using Recorded Files.

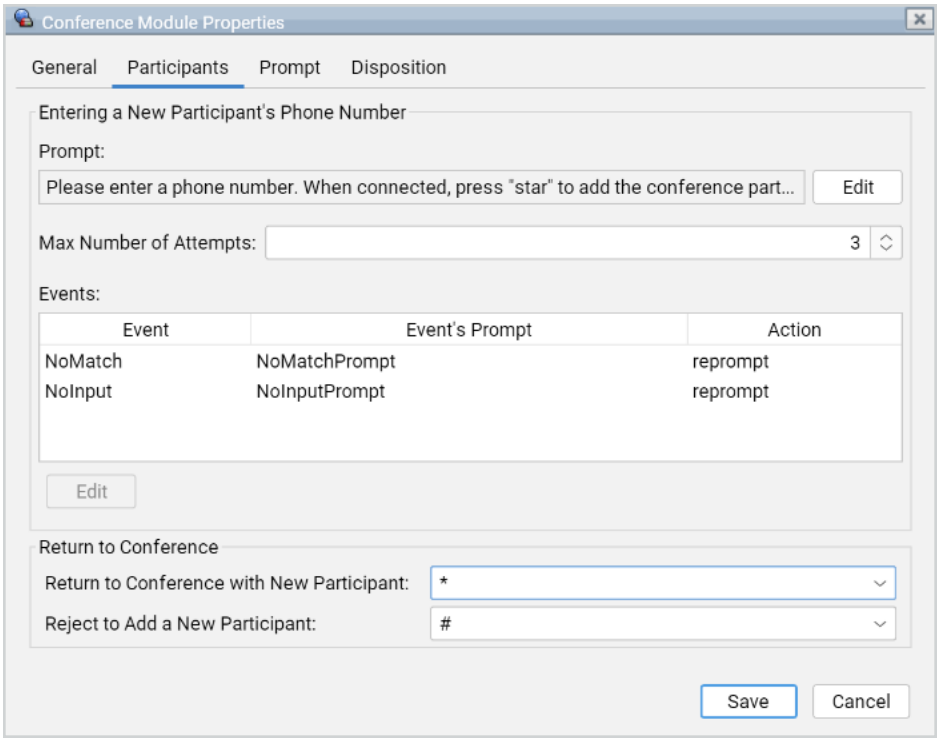
Participants Tab

- **Prompt**: Default prompt comprising two TTS prompts. You can add prompts from a file, a variable, or the TTS builder. You can arrange the prompts in any

sequence. Between prompts, you can add brief pauses (milliseconds).

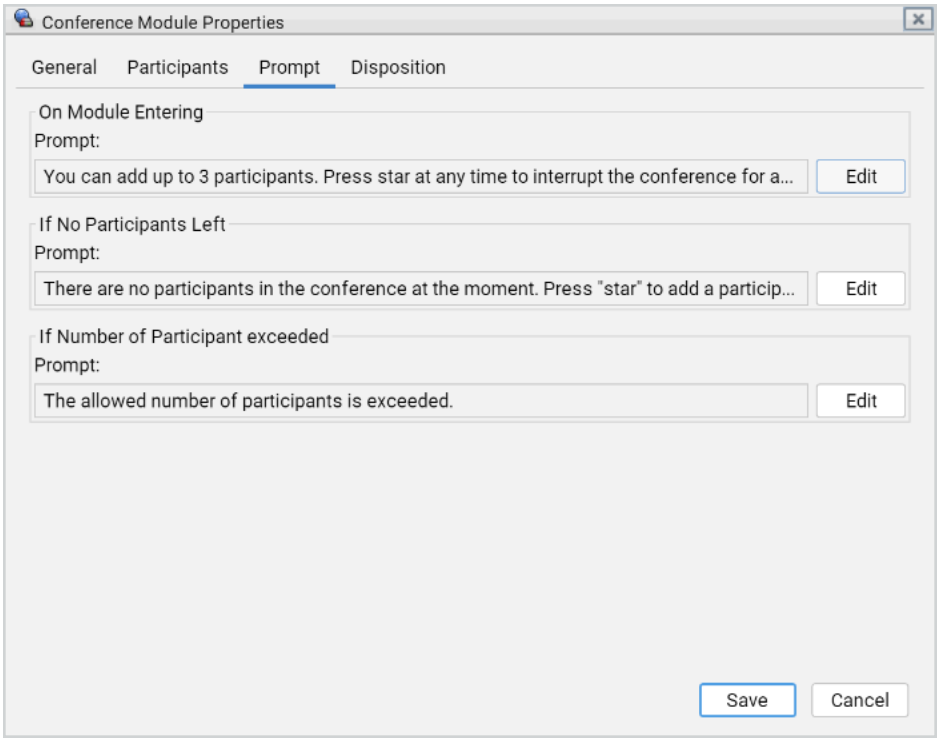


- **Interruptible**: Whether to stop playing the prompt as soon as the requested operation is completed.
  - Enabled: Stop playing the prompt.
  - Disabled: Finish playing the prompt in all cases.
- **Max Number of Attempts**: Number of attempts to enter the phone number of a new participant.
- **Events**: Error messages and actions requested from users to resolve the problem. You can add prompts from a file, a variable, or the TTS builder. You can arrange the prompts in a specific sequence.



Prompt Tab

Prompts that are played during different stages of the conference. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). All prompts can be interruptible.



- **On Module Entering**: Default TTS prompt played when a user enters the conference. This prompt comprises four TTS prompts and a pause.
- **If No Participants Left**: Default TTS prompt played for the person who created the conference when all other participants have left the conference. The prompt is repeated every 10 seconds if the caller does not enter a key. After three attempts, the module is exited with an exception.
- **If Number of Participants Exceeded**: Default TTS prompt when the maximum number of participants has been reached. The menu item for interruptible prompts is disabled.

Dispositions Tab

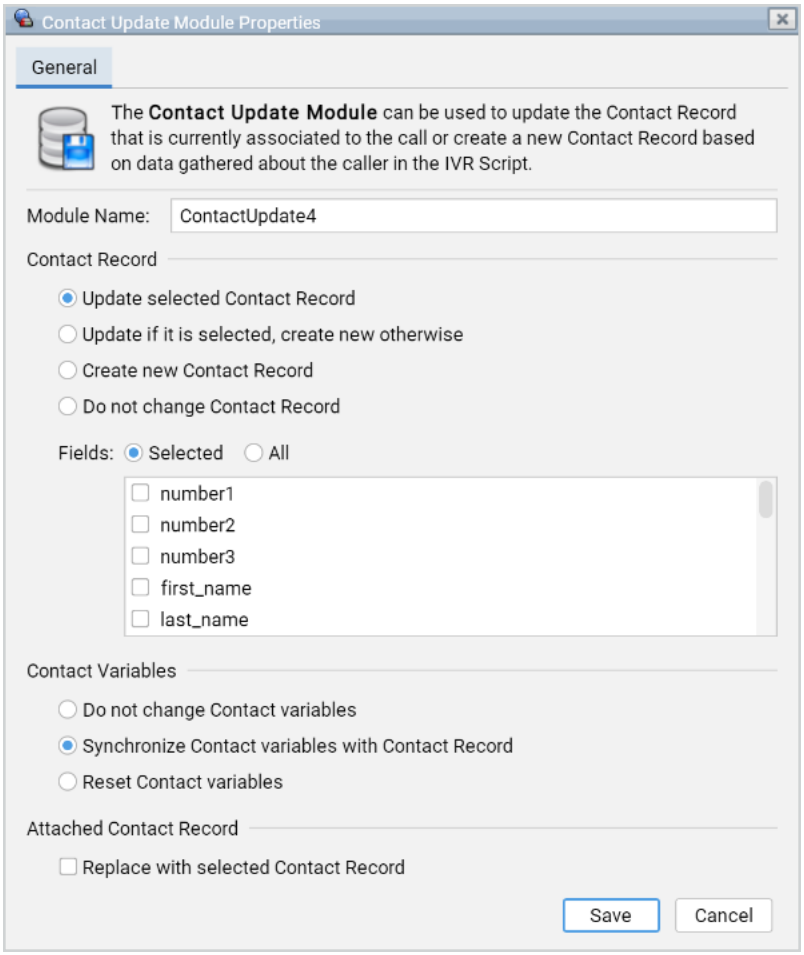
The default disposition is No Disposition. For more information, see Selecting Dispositions.

For example, you can add dispositions to handle these events:

- A prompt is repeated if the caller does not press a key for 10 seconds. After three attempts, the module is exited with an exception.
- The caller is disconnected while the module is being processed.

Contact Update Module

The Contact Update module enables you to use the current call data to create or update a contact record and to attach an existing contact record to the call.



- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.
- **Contact Record**: Action to take with the current call data of the record:
  - Update Selected Contact Record: Update the record with the call data by using the contact fields below.

  - Update if it is selected, create new otherwise: update by using the contact fields below.
  - Create New Contact Record: Create a contact record by using the contact fields below. A new record is considered a current record and CRM_ID is changed accordingly.
  - Do not change Contact Record: You cannot change the record because the contact fields below are disabled.

- **Fields**: List of contact fields that you can use to update the contact record in the first three options above.

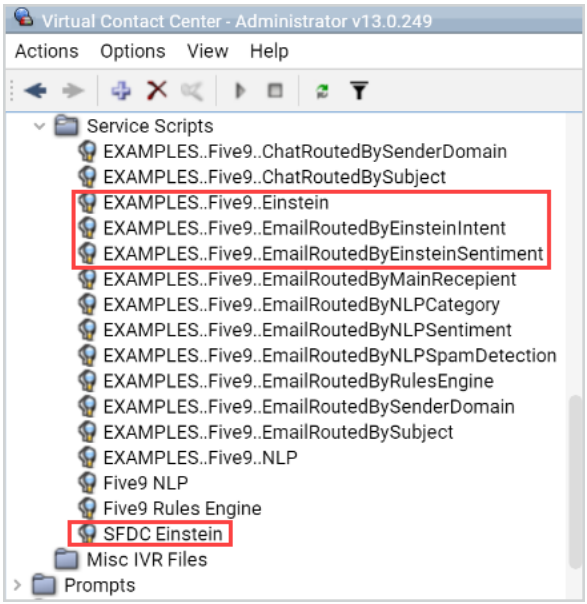
- **Contact Variables**: Action to take with the contact variables:
  - **Do not Change Contact Variables**: Makes no update to the contact variables.
  - **Synchronize Contact variables with Contact Record**: Enables you to set values from the variables if the corresponding fields are not checked for update.
  - **Reset Contact Variables**: Enables you to assign default values, such as an empty string, or 0, for all variables.

- **Replace with Selected Contact record**: Whether to replace the attachment with another contact record:
  - Enabled: Replaces the attachment with a contact record that you define.
  - Disabled: Maintains the riginal contact record.

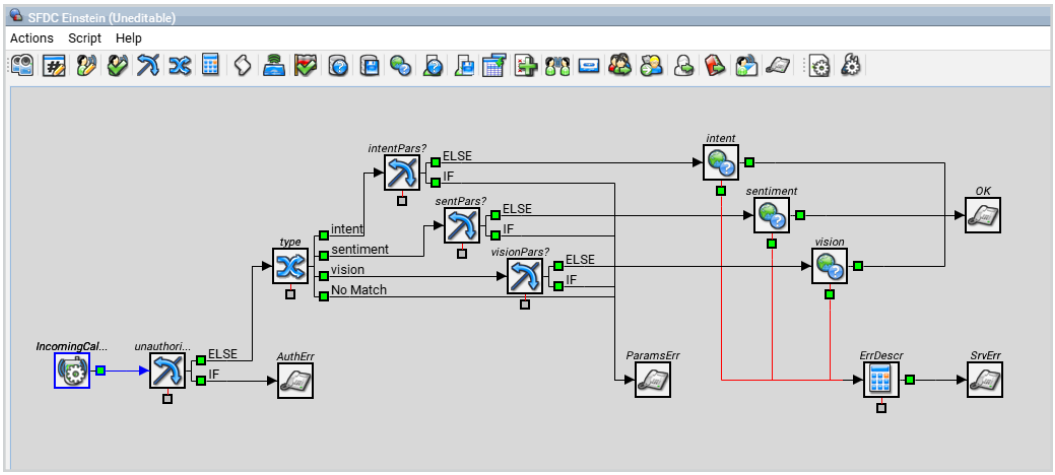
SFDC Einstein Module

The SFDC Einstein module enables you to integrate your implementation with the Salesforce Einstein Platform Service technologies, including Einstein Vision and Einstein Language. This section describes how to use Einstein Language to identify sentiment and intent to provide enhanced routing decisions and recommended next best actions to your agents. To use SFDC Einstein, you need to train the Einstein engine to your requirements. For more information about Einstein training model development, features, and capabilities, see the Salesforce Einstein documentation.

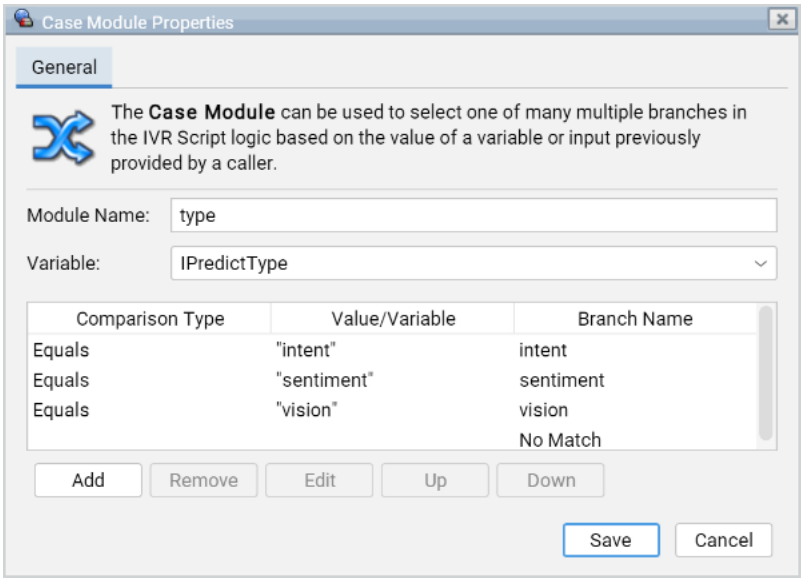
You can access the SFDC Einstein script for non-editable viewing at **IVR Scripts > Service Scripts > SFDC Einstein**. To edit the files, right-click the script name and select make a copy, then rename and save or go directly into the IVR builder.



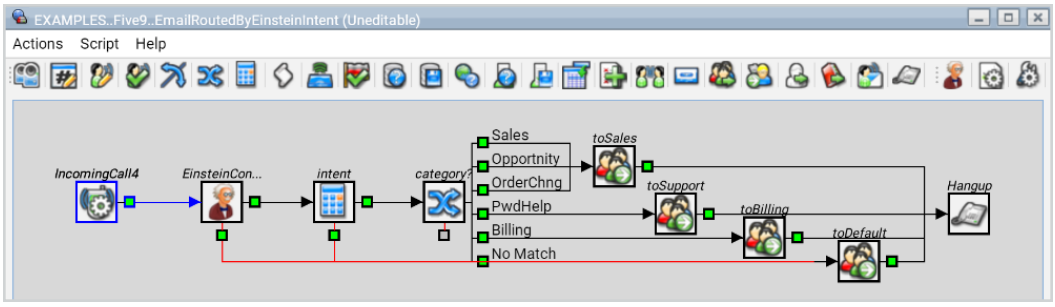
The SFDC Einstein module is a pre-packaged IVR script within a module; the example file is shown below.



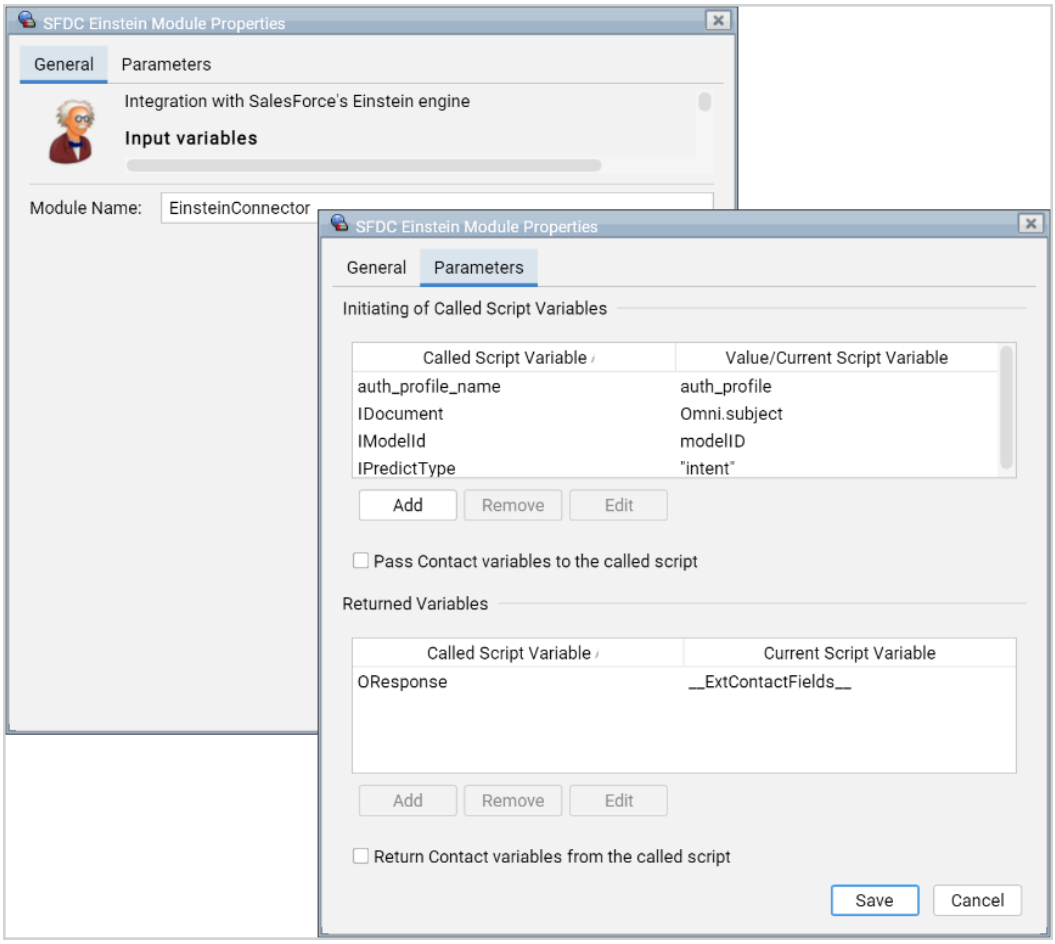
You can view each module used within the script. For example, opening the properties for the first Case module within the SFDC Einstein script shows the distribution for sentiment, intent, and vision.



You can drag the SFDC Einstein module directly to your canvas, or create a duplicate of a prepared script and substitute your domain-specific information. The example below shows a script designed to route by SFDC Einstein-determined intent.



Once you have made a duplicate script, or otherwise introduced the SFDC Einstein module to your IVR script, right-click or double-click to access the module properties.

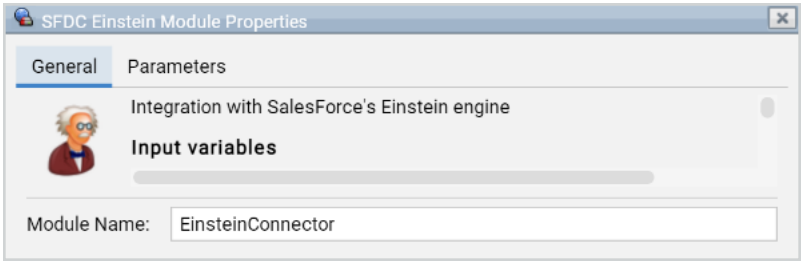


You can rename the module in the **General** tab and assign your specific parameters in the **Parameters** tab.

Properties

General Tab
Parameters Tab

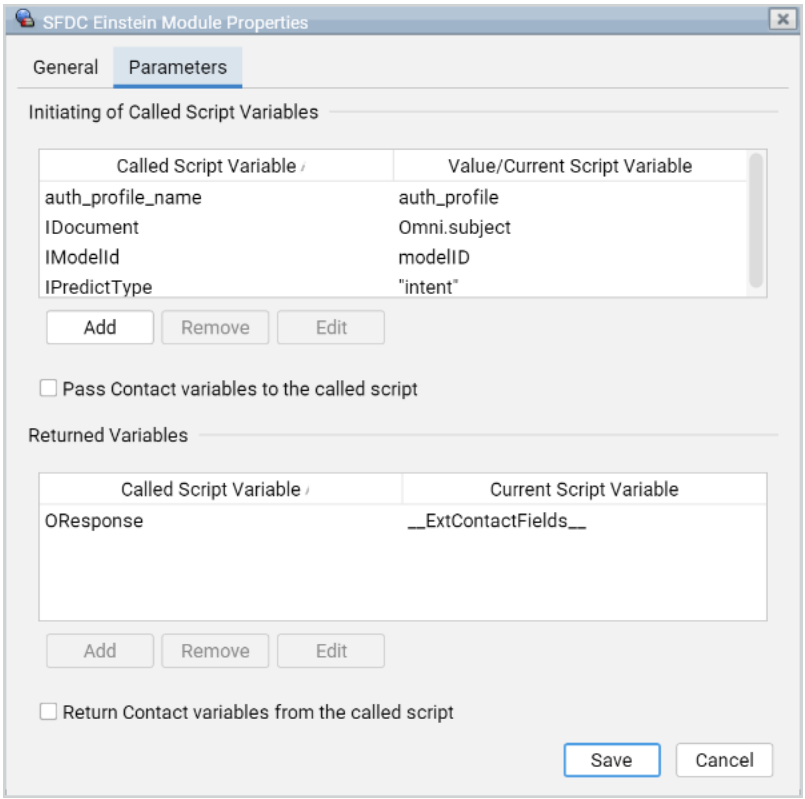
General Tab



- **Module Name**: Name shown in IVR builder.

Parameters Tab

- **Input Parameters**: Contains called script with variable parameters:



  - **auth-prof-name**: Name of an authorization profile configured for Einstein engine in VCC.
  - **IModelId**: Name of a module that is specified in SFDC Einstein. See Einstein documentation.

- **IPredictType**: Type of Einstein API. Supported values:
  - `sentiment`
  - `intent`
  - `vision`
- **IDocument**: String to be sent to Einstein. Required for `sentiment` and `intent` types.
- **ISampleLocation**: URL for an image file. Required for `vision` only.

Select check box to pass contact variables to the called script.

- **Output Parameters**: Contains response attributes listed as KVList pairs with parameters of the model and their probabilities evaluated by SFDC Einstein.
  - For **sentiment**, the keys are strings positive, negative or neutral. The associated values are their probabilities.

    Example

    ```
    __ExtContactFields__ = { "positive":"0.8673582",
    "negative": "0.1316828", "neutral":" 0.0009590242" }
    ```

  - For **intent** the keys are intents defined during the model training. The associated values are their probabilities.

    Example

    ```
    __ExtContactFields__ = { "sales":"0.8673582",
    "support":" 0.1316828", "human
    resources":"0.0009590242" }
    ```

  - For **vision** the keys are recognized objects defined during the model training, the associated values are probabilities of the recognition.

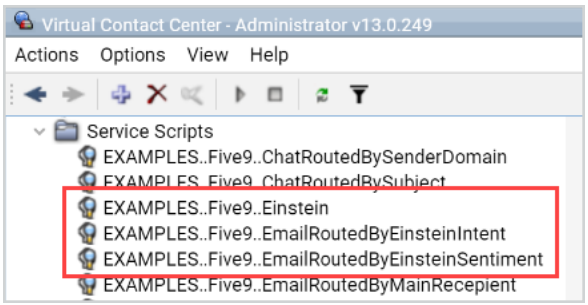
    Example

    ```
    __ExtContactFields__ = {"Beaches":"0.97554934",
    "Mountains":"0.024450686"}
    ```

- **Possible Errors**:
  - **91**: System errors; any problem while connecting to Einstein or parsing a response.
  - **92:** Inconsistent or unspecified input parameters.
  - **93**: **Auth_profile_name** not specified.

Example IVR Scripts with SFDC Einstein Module

To see an example as a reference before you create your own, you can open any of the example SFDC Einstein files listed under the **IVR > Service Scripts** subfolder. You can copy and rename any of the example scripts to use in your contact center routing.



Extension Transfer Module

The Extension Transfer module transfers a call to an agent after the caller enters a four-digit extension. The module plays the prompt *Please enter the extension of the party you wish to reach*. If a user account matches the extension number, the call is transferred to the agent or to voicemail if the agent is not available.

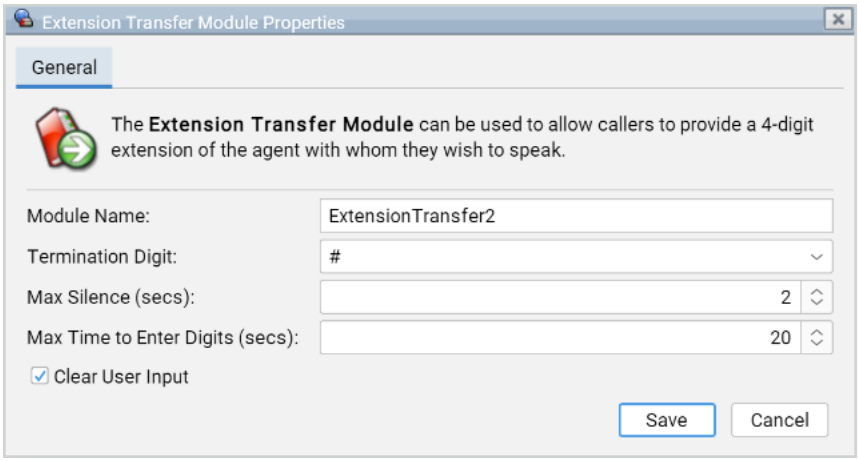
This module combines the Get Digits and two Play modules with standard files played during the module execution (input prompt) and on wrong user input.

Because this module has two connector ports, it can be used as a termination module and as a child module. If a Play module precedes the Extension Transfer module, the prompt in the Extension Transfer module is not played, which enables you to add customized instructions for entering an extension in the Play module.

This module handles invalid entries and extensions as follows:

- When the Extension Transfer is used as a termination module, this module plays the message *Extension xxxx is not available* followed by *Please enter the extension of the party you wish to reach*. The caller may enter an extension up to three times. The call is disconnected after three invalid entries.
- When the Extension Transfer is followed by another module, the IVR script proceeds to the following module.

General Tab



- **Termination Digit**: Option for callers to exit the module without entering an extension by pressing the key specified.
  - Enabled: the possible options are # (pound) and * (star).
  - Disabled: the value N/A disables the option.
- **Max Silence**: Number of seconds that the module waits between digits when callers are entering the extension. The default is 2 seconds.
- **Max Time to Enter Digits**: Number of seconds that the module waits for callers to finish entering the extension. If callers exceed the time, the IVR script proceeds to the next module or repeats the current module. The default is 20 seconds.
- **Clear User Input**: Whether information entered by the caller before reaching this module is erased.
  - Enabled: delete all user input before the Extension Transfer module.
  - Disabled: do not enable if you have a prompt that provides instructions before the Extension Transfer module.

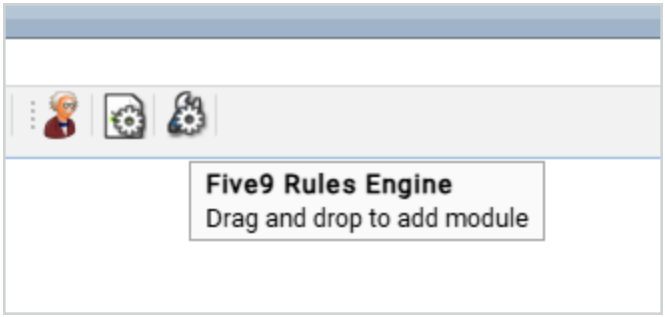
Dispositions Tab

The default disposition is Transferred to 3rd Party. For more information, see **Selecting Dispositions**.

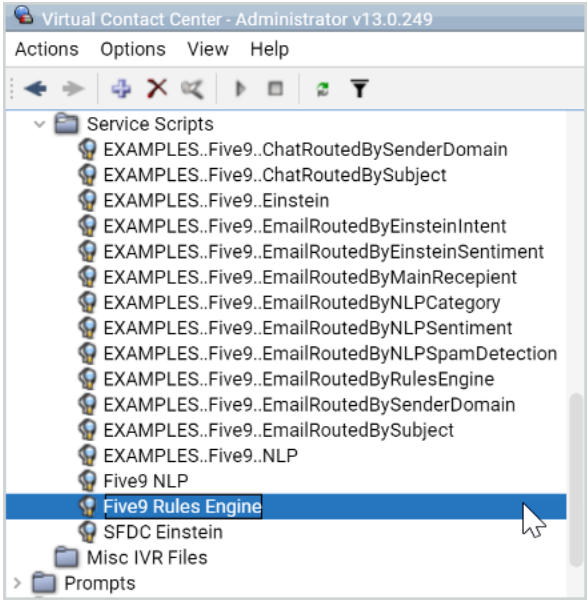
Five9 Rules Engine Module

The Five9 Rules Engine module enables you to provide more granularity to your email distribution. You can send key-value attributes as requests to the rule engine. The rule engine returns the list of attributes updated by your defined rules file. This module executes rules and updates the database with tags, attributes, and/or next best actions.

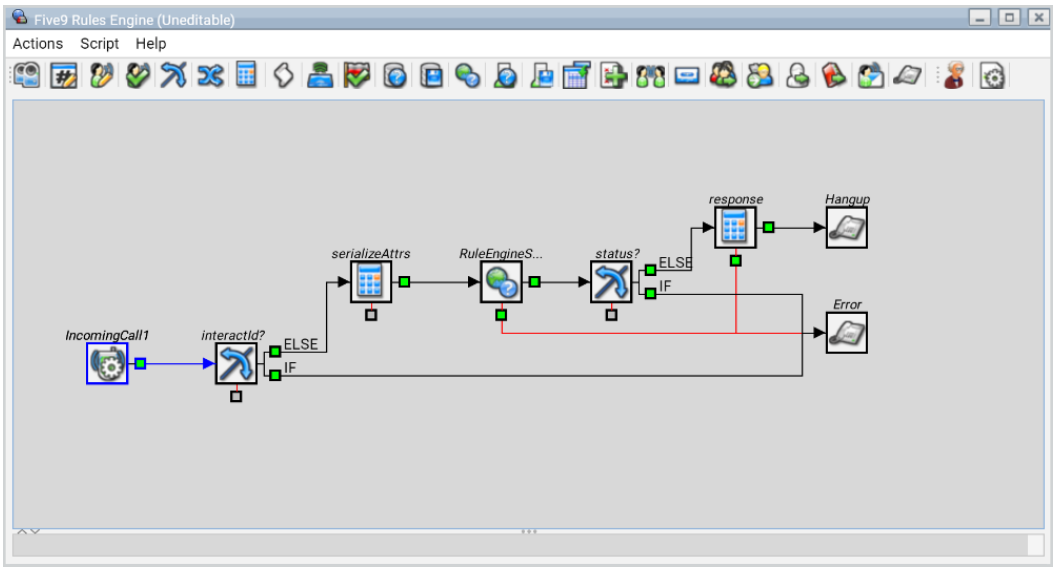
You can access the Five9 Rules Engine from the IVR Builder toolbar.



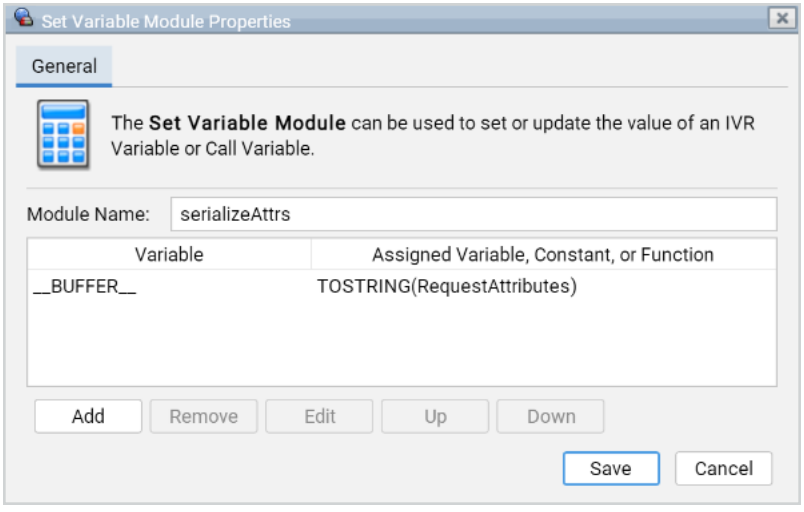
For your reference, you can access a read-only reference of the Five9 Rules Engine script at **IVR Scripts** > **Service Scripts** > **Five9 Rules Engine**.



The Five9 Rules Engine module is a pre-packaged IVR script within a module. The read-only example is shown below.



You can view each module used within the script. For example, if you open the properties for the first Set Variable module, it shows the request attributes. This value is sent to query the Five9 real-time rule engine. The response is received as a list of key-value pairs.



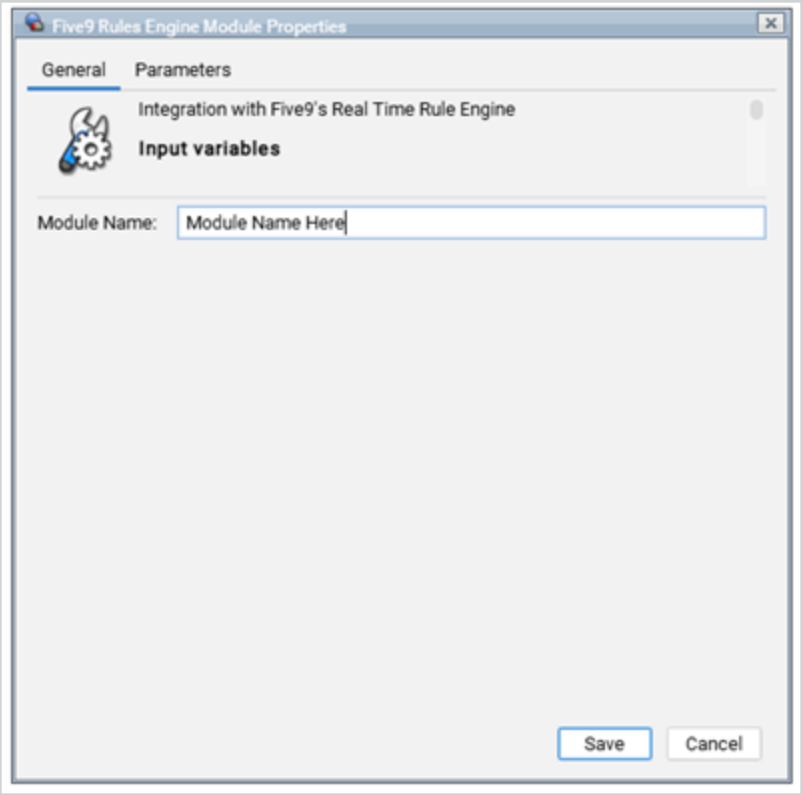
In addition to the attributes received, the rule engine may also use the body of the email to enhance routing decisions. You can use regular expressions or a Drools file. In your Five9 Rules Engine definition file, the attributes are in the **DynamicAttributes** object; the email body is located in the `getBody()` method in the `workitem` object. The rule engine also returns the list of attributes received in the request. For information about creating a Drools file, refer to the Engagement Workflow chapter of the Five9**Digital Engagement Administrator**'s guide.

The following example shows a sample criteria KVList for email spam filtering.

```
{'1':'Undeliverable','2':'MAILER-DAEMON','3':'Automatic
Reply','4':'Delivery Status Notification','5':'OPT
OUT','6':'Instagram','7':'wine','8':'erection','9':'Online phar-
macy','10':'Viagra','11':'Vicodin','12':'Xanax','13':'Reverses
aging','14':'Lose weight','15':'Removes
wrinkles','16':'Valium','17':'Cures bald-
ness','18':'hormone','19':'Diarrhea','20':'As seen on','21':'Buy dir-
ect','22':'Earn $','23':'Make $','24':'One time mailing','25':'Weight
loss','26':'All nat-
ural','27':'50%off','28':'Heute','29':'Morgen','30':'benutzen','31':'kön-
nen','32':'gehen','33':'machen','34':'und','35':
'das','36':'out of the office','37':'free','38':'win'}
```

Called script variables are sent and returned by using the rules engine module and Drools file.

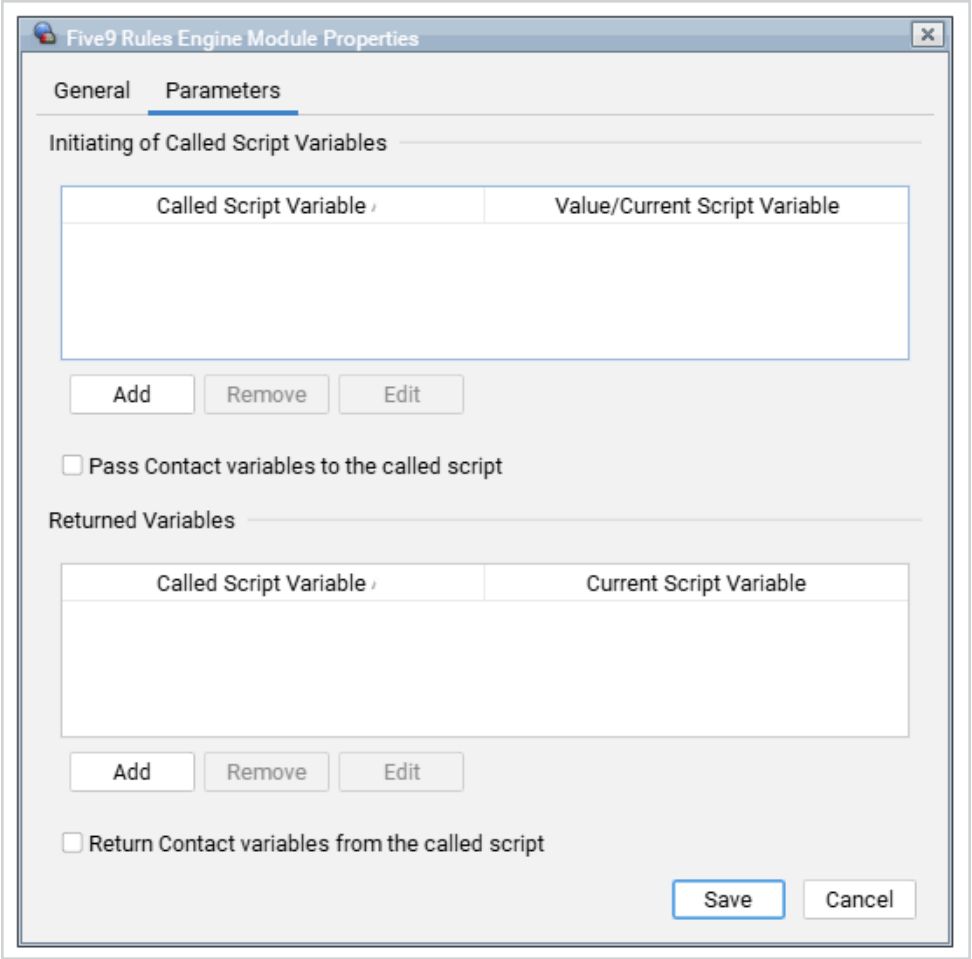
General Tab



- **Module Name**: Name shown in IVR builder.

Parameters Tab

- **Initiating of Called Script Variables**: Contains called script with variable parameters:



Important

The Five9 Rules Engine evaluates messages up to 20,000 characters in length. Messages exceeding this limit may be distributed to the default skill associated with the assigned profile.

- Response transformation field: Add regular expressions enclosed in parentheses. Regular expressions are automatically added to the RegExp Group field.

Example

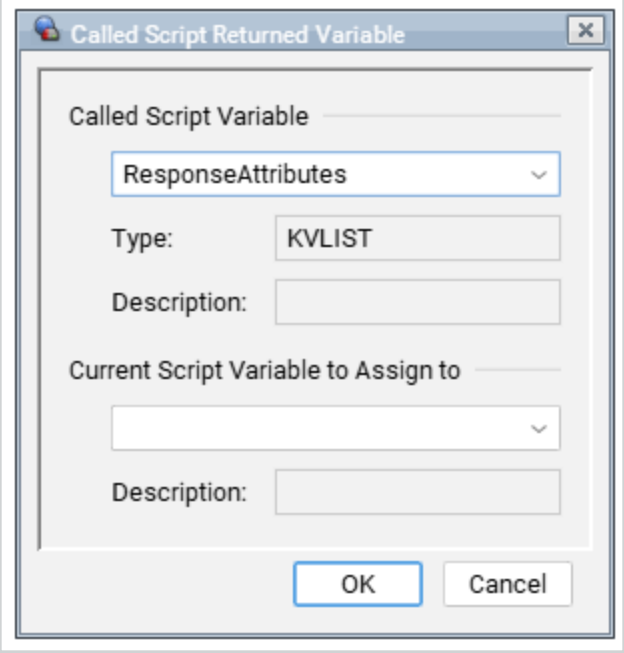
This expression matches the first instance of one or more characters.

```
<State>(.^?)</State>-<City>(.+?)</City>(.+?)
```

- Map the expressions to IVR variables in the RegExp Group field. Assign the result to a variable. In this case, the result is assigned to the `City` variable.

Enable option to pass contact variables to the called script.

- **Returned Variables**: Contains response attributes listed as key-value pairs.

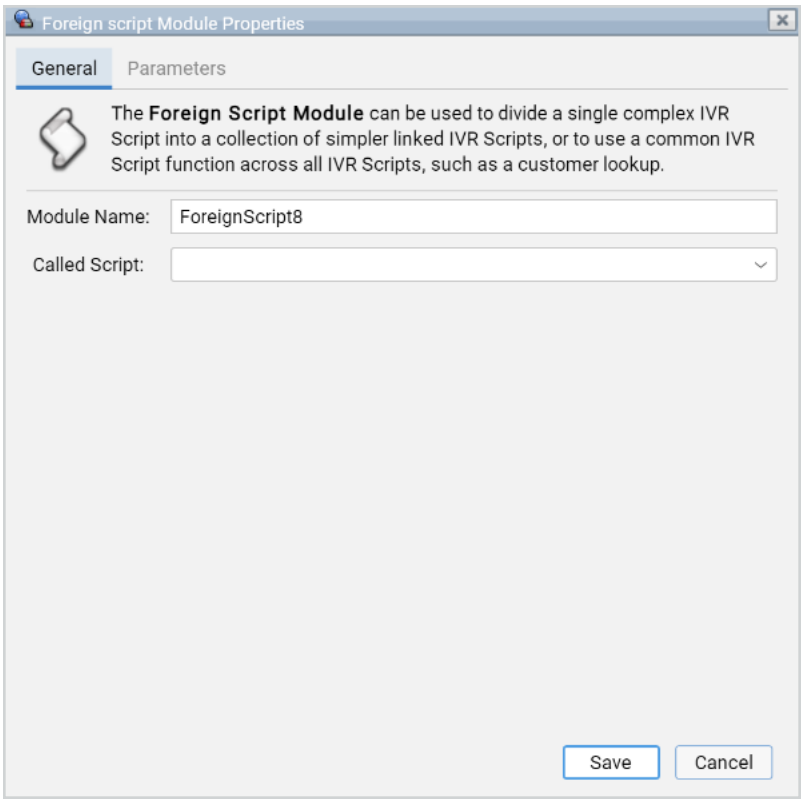


Foreign Script Module

The Foreign Script module enables you to use an IVR script that contains at least one variable in the current script. The variables of the foreign script enable you to set the variables in the current script so that variables are returned in your current script. For example, you can use the same search script in multiple scripts. You can use the Foreign Script module after any module with defined variables.

Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

General Tab

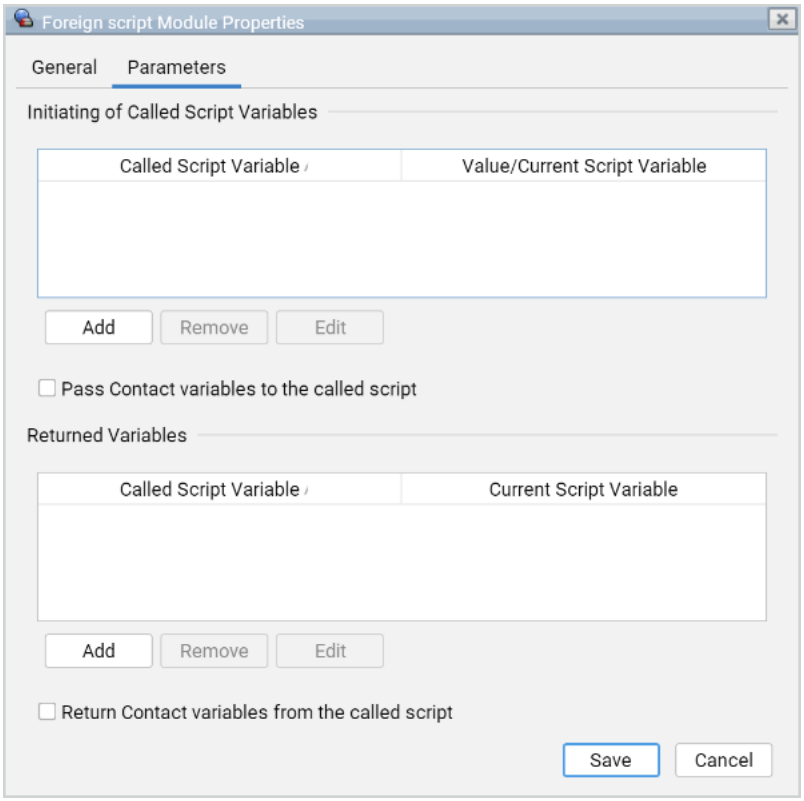


- **Called Script**: List of your scripts. When you select a script, the Parameters tab is enabled, but the menus are disabled unless the foreign script contains variables.

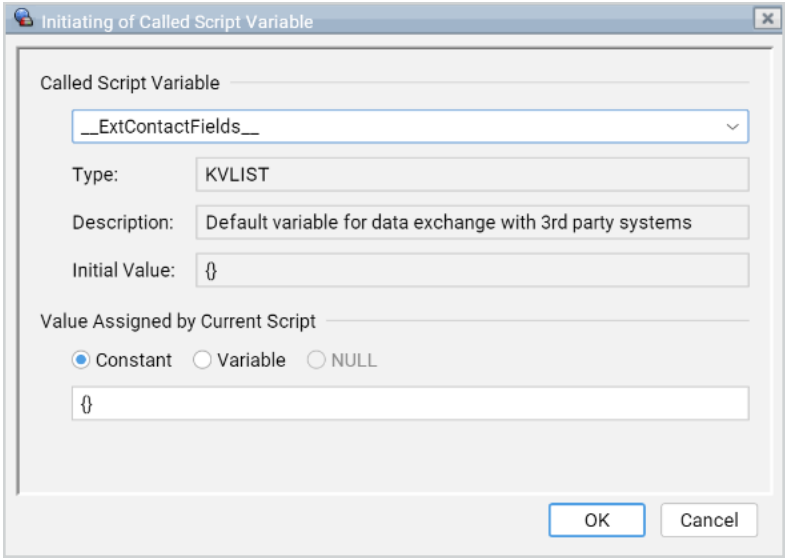
Parameters Tab

Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

- **Initiating Called Script Variables**: Variables to pass to the foreign script.



To set the variables of the foreign script to values of the current script, click **Add**.



    - Called Script Variable: List of variables in the foreign script, data type of the variables, and optional description and initial value.
    - Value Assigned by Current Script: Value to assign to the variable:
        - Constant: Single value that you specify.
        - Variable: >List of your user, IVR, and user CAV variables. When you select a variable, the description is automatically populated.
        - NULL: Empty field.

- **Pass contact variables to the called script**: Whether to pass contact variables to the foreign script:
    - Enabled: Contact variables are passed.
    - Disabled: Contact variables are not passed.

- **Returned Variables**: Variables that store the returned data:
    - Called Script Variable: List of variables in the foreign script, data type of the variables, and optional description and initial value.
    - Current Script Variable to Assign to: Variable that stores the returned data. The list contains your user, IVR, and user CAV variables. When you select a variable, the description is automatically populated.

- **Return contact variables from the called script**: Whether to accept contact variables from the foreign script:
    - Enabled: Contact variables are returned.
    - Disabled: Contact variables are not returned.

Get Digits Module

The Get Digits module enables you to route the call by using digits entered by the caller into a variable. When the module receives the correct digits, the IVR script proceeds to the next module. The result of this module can be assigned to a string or integer variable.

Important

When you use custom variables that contain sensitive data, the values are replaced by##### in the VCC server logs and cannot be saved in the database.

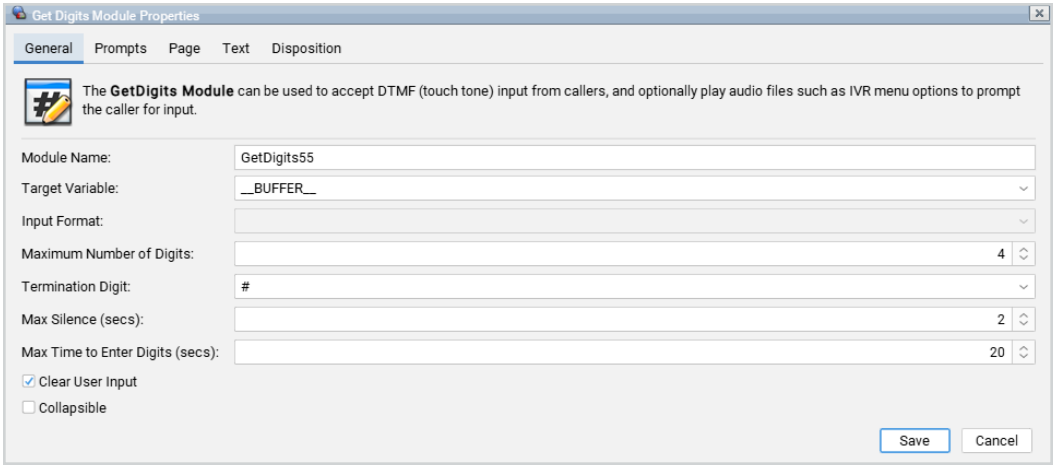
If your domain is not enabled for the E.164 format for international phone numbers, agents must enter 10 digits to conform to the North American Numbering Plan. If your domain is enabled for the E.164 format, agents must enter phone numbers for all calls according to your configuration: in your national format or up to 15 digits, starting with the plus (+) sign and the country code. If you do not specify a format, the VCC uses the E.164 format for all numbers. For more information, see the Basic Configuration Administrator's Guide.

When using Visual IVR scripts, you may also add images to pages and menus to enhance your brand or to describe a product or service. However, you cannot add links to images. For more information, see Page Tab.

For example uses, see **Creating an IVR Script**, **Creating an IVR Loop**, and **Using an Agent Extension in an IVR**.

General Tab
Prompts Tab
Page Tab
Text Tab
Dispositions Tab

General Tab



- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.

- **Target Variable**: List of user, contact, IVR, and user CAV variables that can store the caller's input. You can also create a set of custom variables in **Script > Variables**.
- **Input Format**: Format template for the caller's input. This table contains the input format options for entering data:

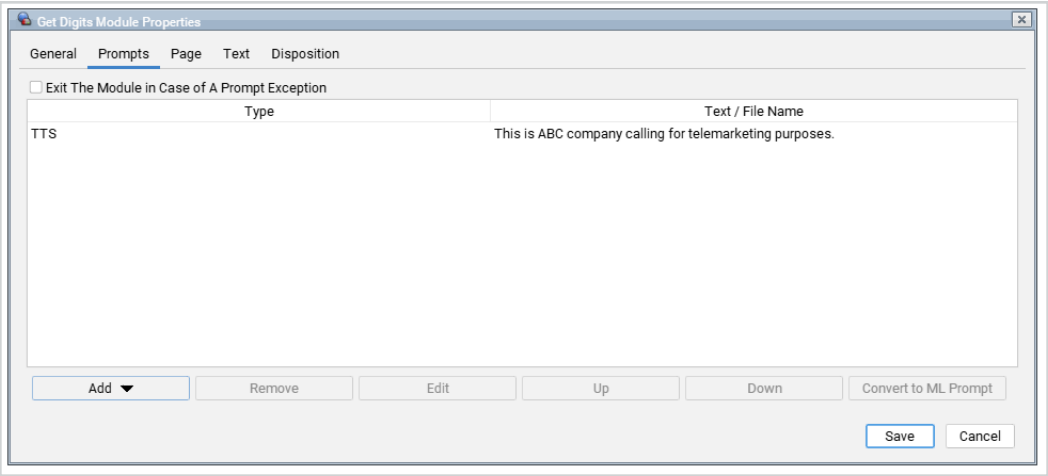
Variable Data Type	User Input
Date	MMDDYY
	MMDDYYYY
	DDMMYYYY
Time	HHMM
	HHMMP
Currency	$...$CC
	$...$

- **Maximum Number of Digits**: Number of digits allowed before proceeding to the next module.
- **Termination Digit**: Option for callers to exit the module and proceed to the next module by pressing the key specified.
  - Enabled: the possible options are # (pound) and * (star).
  - Disabled: the value N/A disables the option.
- **Max Silence**: Number of seconds that the module waits between digits. The default is 2 seconds. Does not apply if the maximum number of digits is set to 1.
- **Max Time to Enter Digits**: Number of seconds that the module waits for callers to finish entering digits. If callers exceed the time, the script proceeds to the next module or repeats the current module. The default is 20 seconds.
- **Clear User Input**: Whether to erase the information entered by the caller before reaching this module.
  - Enabled: Delete all user input before this module.
  - Disabled: Do not enable if you have a prompt that provides instructions, such as pressing a key (termination digit) to exit the queue, before this module. Otherwise you erase the caller's input in the Play module.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.

In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.

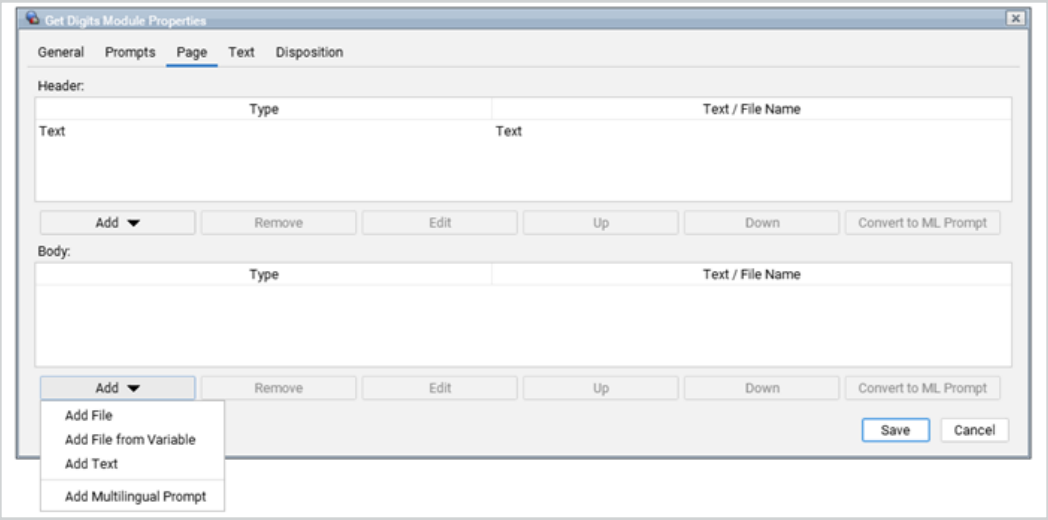


- **Exit the module in case of a prompt exception**: Whether to proceed to the next module if a prompt error occurs:
  - Enabled: Proceed to the next module.
  - Disabled: Exit the script.

Page Tab

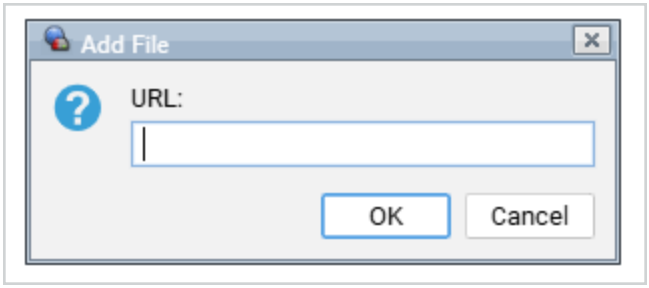
This tab contains the list of Visual IVR prompts that are shown visually in the customer's Web browser when a IVR script is executed.

- If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.
- If this tab does not contain prompts, the prompts in the Prompts tab are shown.

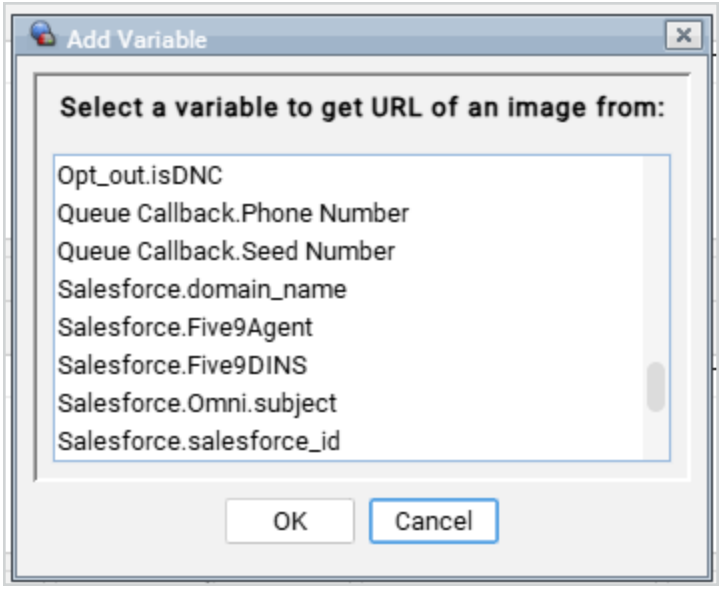


This tab enables you to add different types of prompts:

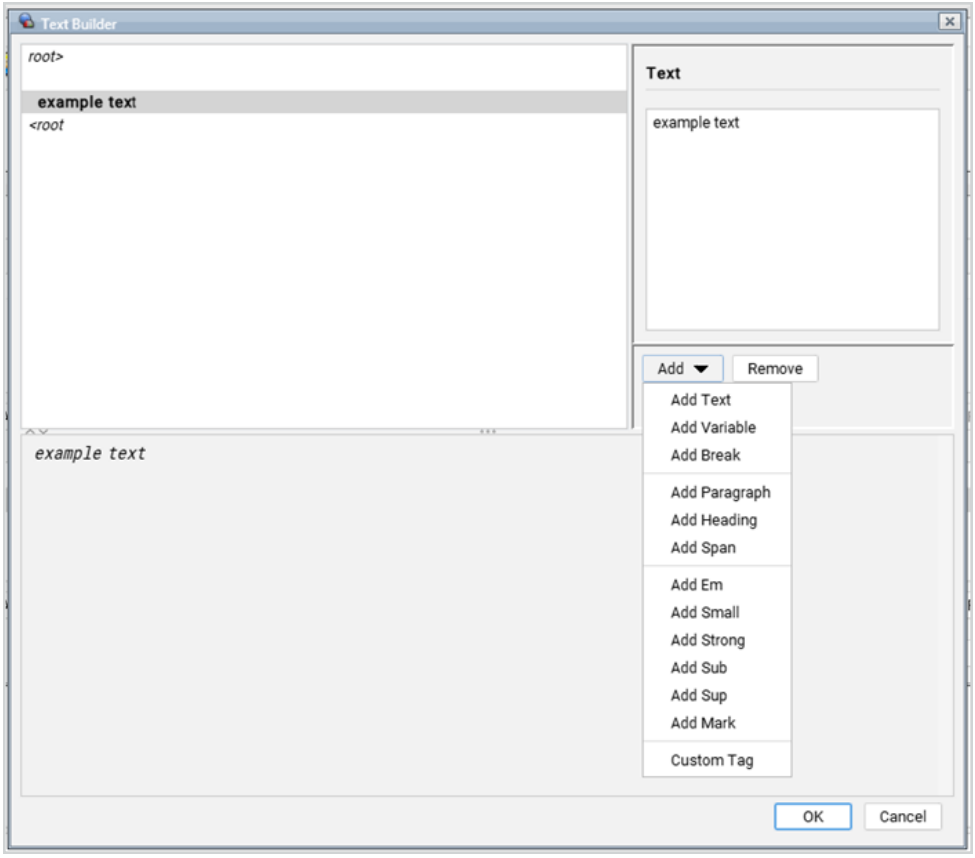
- **File**: URL of an image.



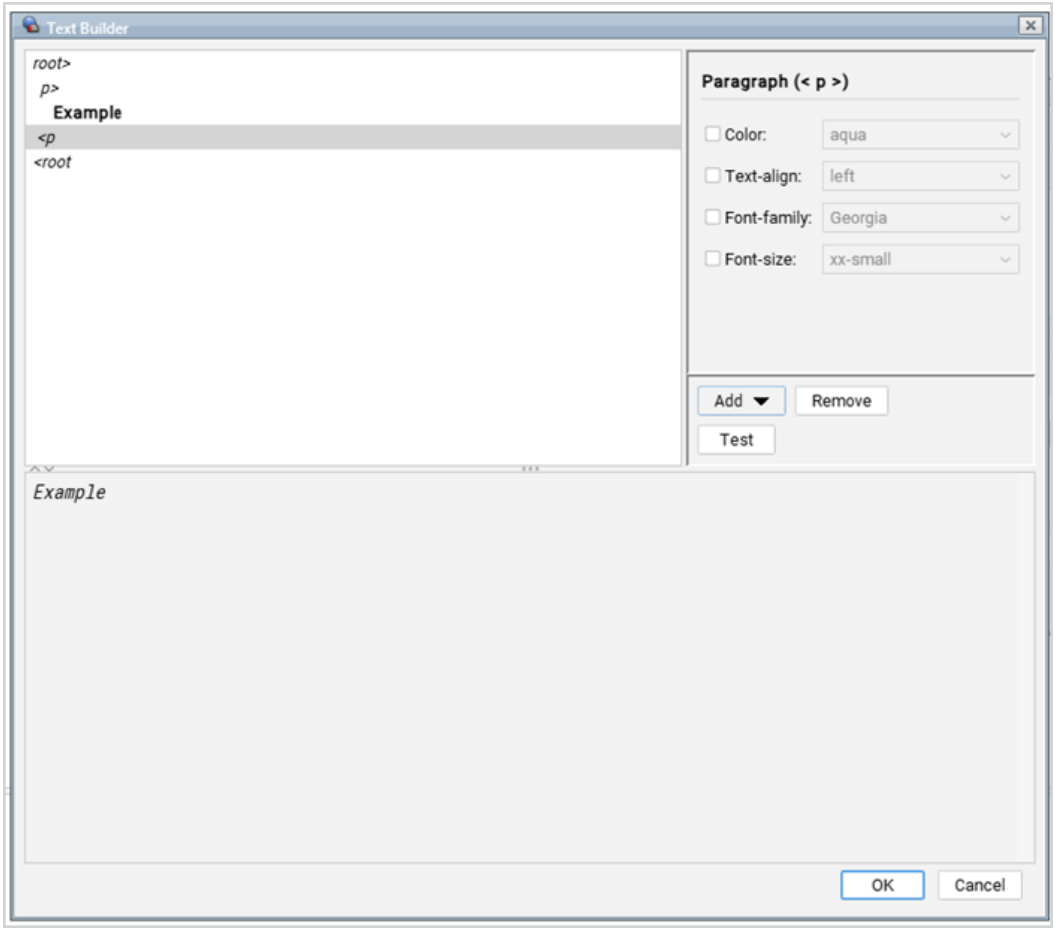
- **Add File from Variable**: Variable that contains the URL of an image.



- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.
- **Custom Tag**: For more information, see **Using the Visual IVR URL**.

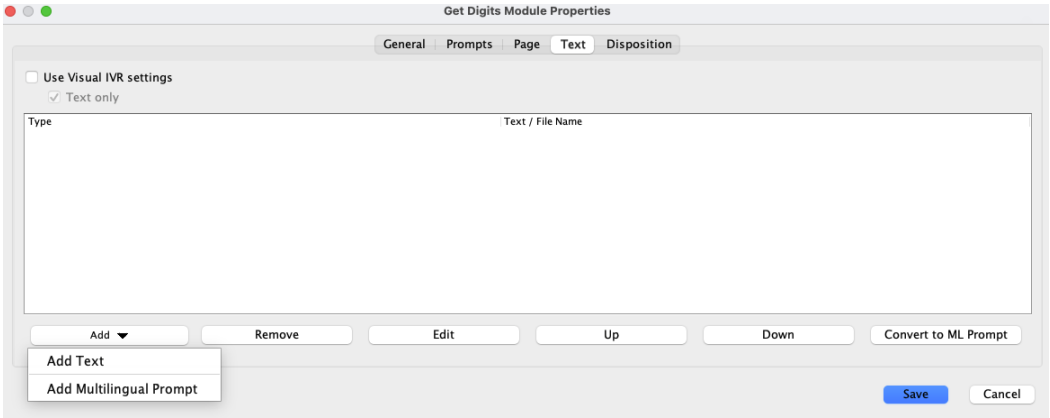


The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break. You can use the custom tag element to use specific HTML elements. The Test button enables you to preview the HTML text.



Text Tab

This tab enables configuration options for chat, SMS, email, and integration channels.



- **Use Visual IVR Settings**:
  - Enabled: digital engagement interactions receive the data configured on the **Page** tab.

    Text only: If enabled, the XML/HTML are removed from the data configured on the Page tab.
  - Disabled:
    - The Text only box is disabled.
    - **Add Text**: Text and variables can be added.
    - **Add Multilingual Prompt**: Only multilingual prompts with the type TEXT may be used here.

Dispositions Tab

The default disposition is Caller Disconnected. For more information, see Selecting Dispositions.

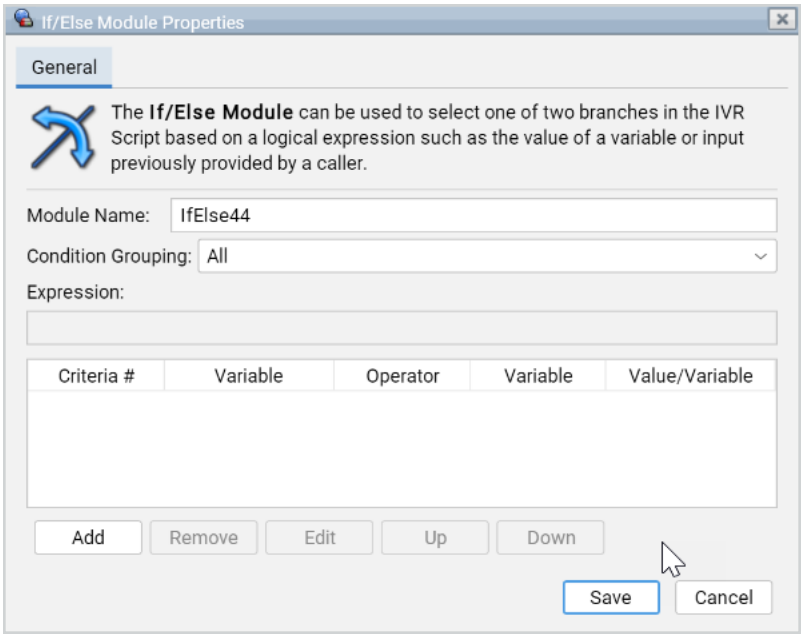
If/Else Module

The If/Else module enables you to route the script according to a condition, such as a logical expression that uses variables and constants. The module has two branches:

- If the condition is true, the flow uses the If branch.
- If the condition is false, the flow uses the Else branch.

If you need more than two branches, use the Case module. When the condition is boolean, you need to create only the If branch. Otherwise, the condition exits the module by the Else branch. For examples, see Creating an IVR Script and Creating an IVR Loop.

General Tab

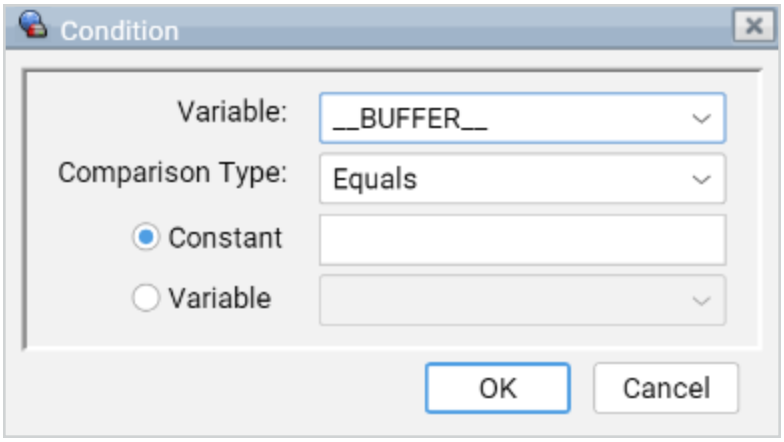


- **Condition Grouping**: Method used to join conditions:
  - Any: Any defined criteria are valid. The expression 1 OR 2 is entered automatically in the Expression field.
  - All: All defined criteria must be valid. The expression 1 AND 2 is entered automatically in the Expression field.
  - Custom: Custom expression that describes how to use the criteria. This option enables the Expression field.

- **Expression**: Logical expression that describes how to compare the conditions. If you have a complex expression, such as `1 AND 2 OR 3 AND 4`, it is evaluated as `(1 AND 2) OR (3 AND 4)` because `AND` is always evaluated before `OR`.

- **Condition table**: Numbered list of conditions that you can add, modify, delete, and arrange as needed. Criteria # represents the condition in the expression field.

- **New condition window**:



  - Variable: Left variable to be compared to a constant or another variable. List of your user, contact, system, agent, call, IVR, or user CAV variables.
  - Comparison Type: The available operators depend on the data type of the left variable.

Left Variable	Comparison Types	Right Variable
INTEGER NUMBER CURRENCY	Equals Less than More than	INTEGER NUMBER CURRENCY
STRING	Equals Like RegExpr	STRING Like supports wildcards % and _.
DATE or TIME	Equals Less than More than	DATE or TIME in the specified internal format
For all variables	IsNull	Empty field

  - Right variable to be compared:
    - Constant: Specific value. The only boolean values accepted are lowercase `true` and `false`.
    - Variable: List of your user, contact, system, agent, call, IVR, or user CAV variables.

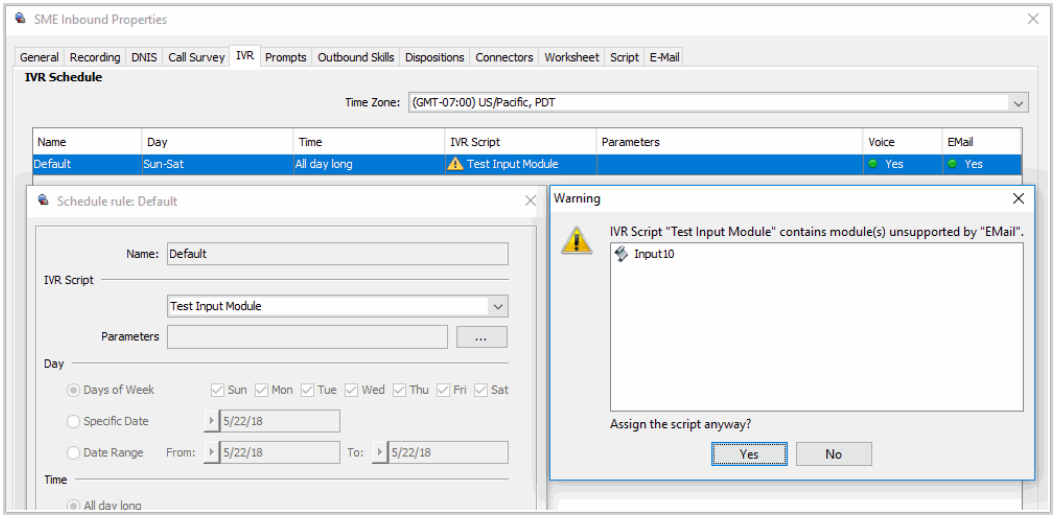
Input Module

The Input module analyzes the words spoken by callers or DTMF digits. Phrase recognition is based on predefined grammar. The meaning of the input is assigned to a variable.

Digital Channels
Languages
Properties
- General Tab
- Prompts Tab
- Events Tab
- Confirmation Tab
- Page Tab
- Text Tab

Digital Channels

The Input module is not compatible with digital channels. If your domain is enabled for digital channels, you see a warning when you use IVR scripts that contain this module in inbound campaigns. If you choose to use the script, a warning icon is displayed in the schedule description. The IVR schedule still works, but these incompatible modules are skipped.



Languages

You may have the option to use a language other than English.

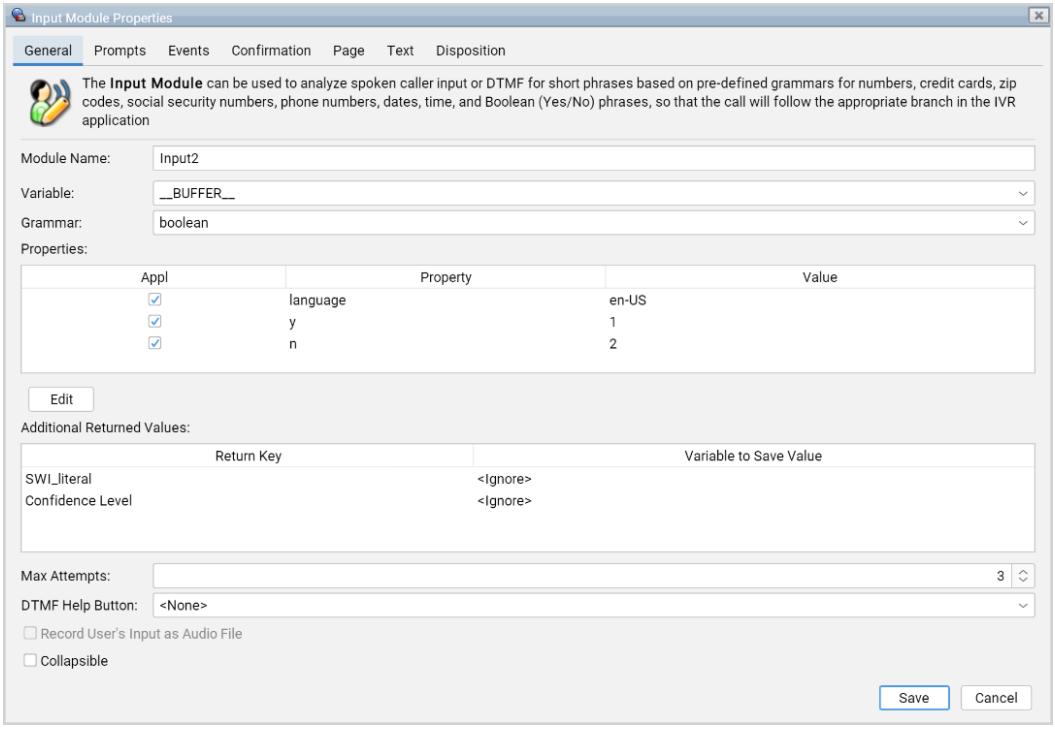
- If your domain is not enabled for the E.164 format for international phone numbers, agents must conform to the North American Numbering Plan by entering 10 digits.
- If your domain is enabled for the E.164 format, agents enter phone numbers according to your configuration: in your national format or up to 15 digits, starting with the plus (+) sign and the country code. If you do not specify a format, the E.164 format is used for all numbers.

Properties

This section describes the options available in this module.

General Tab
Prompts Tab
Events Tab
Confirmation Tab
Page Tab
Text Tab

General Tab



- **Module Name**: Name of the module in the script. In Visual IVR scripts, the name is displayed in the heading of the IVR window.
- **Variable**: Value saved as the variable (list of user CAV variables).
- **Grammar**: Speech recognition grammar is information that you can collect to obtain the meaning for the selected variable. Each type may have configurable properties and additional returned values. Five9 supports 2 active grammars: speech and DTMF. For detailed information, see **Speech Recognition Grammars**.
    - alphanum: Values allow entry of string formatted the same way as the input file. Non-alphanumeric characters (dash, space, and so on) are permitted but ignored in the result. Applies only to string variables.
    - **boolean**: Yes or no represented by y and n.
    - **ccexpdate**: Card expiration date.
    - **creditcard**: Credit card number that follows the ISO numbering scheme.
    - **currency**: Dollars and cents. Accepts a string in this format:

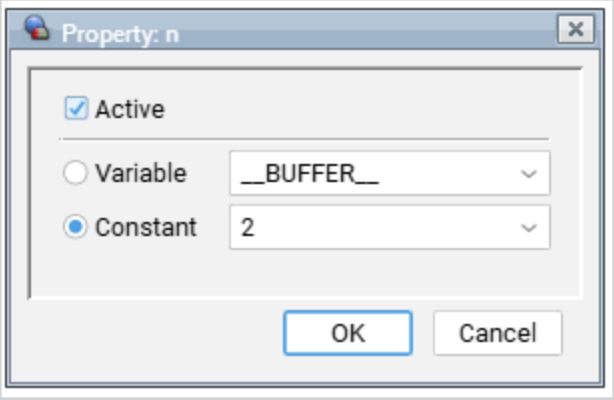
      `<currency><unit amount><dot><subunit amount>`.

Spoken examples: ten dollars, ten dollars and fifteen cents, and ten fifteen. For more information, see **currency**.

- **date**: Date spoken in any of the formats accepted by the system.
- **digits**: Continuously spoken string of up to 20 digits.
- externalgrammar: Available when a STRING variable is selected as grammar source in the Input module. Used with the ruleref URL field, which can be set to the URL of the grammar text file. The ruleref URL field is used to set the URL of the grammar text file.
  - **ruledef uri**: DTMF for active grammar support. Must be enabled to activate **rule id** and **return var** for DTMF active grammar support.
  - **rule id**: the root rule id in grammar. Accepts DTMF for active grammar support.
  - **return var**: name of the variable in the grammar file that will be returned and assigned to the selected variable. Accepts DTMF for active grammar support.
  - **ruleref uri**: explicit local rule reference.
  - **>ruleref uri DTMF**: explicit local DTMF reference. To enable the next two options, set this to **ON**.
  - **rule id DTMF**: DTMF-specific rule id.
  - **return var DTMF**: DTMF-specific return var.
  - In the visual IVR, the arbitrary grammar fields are represented as entry fields (up to 255 Characters).

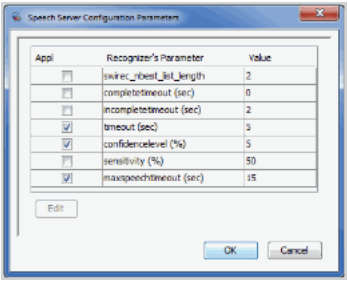
  Only **SWI_Literal** and **Confidence Level** are available as additional variables.
- **number**: Spoken quantities such as ten, one hundred and forty, five hundred sixty one point five, and negative five.
- **phone**: 7- and 10-digit North American phone numbers and three-digit phone numbers ending in 11, such as 911. An optional 1 can be placed before 7- or 10-digit numbers.
- **socialsecurity**: 9-digit U.S. social security numbers.
- **time**: Spoken time of day.
- **zipcode**: United States ZIP codes in five- or nine-digit format.

- **Properties**: Properties of the type of information selected in the Grammar menu:



- Appl: Whether the property is enabled.
- Property: Name of the property.
- Value: Value of the property. The language property cannot be modified. You can use a constant or a call variable.

- **Advanced**: Visible if your domain is enabled for speech recognition. Opens the **Speech Server Configuration Parameters** window.



- `swirec_nbest_list_length`: Maximum number of versions of the utterance returned by the recognizer. The default is 2. The range is 0 to 999.
- `completetimeout`: Duration of the silence after the user's speech before the speech is accepted or a nomatch event is returned. Used when the speech completely matches an active grammar and no further words can be spoken. The default is 0 milliseconds.
- `incompletetimeout`: Duration of silence after the caller's words to conclude that the caller is finished speaking. The default is 1500 milliseconds.
- `timeout`: Enabled by default. Number of milliseconds to wait for speech after a prompt ends. The default is 7000.

- `confidencelevel`: Enabled by default. Percentage of confidence that the spoken text is recognized. Words that score below this value are rejected. The default is 5%.
- `sensitivity`: Sensitivity of the speech detector. The default is 50%.
  - High percentage: More sensitive, which is better for quiet speech, but the risk that background noise is detected as speech increases.
  - Low percentage: Less sensitive, but may require that some callers speak more loudly.
- `maxspeechtimeout`: Enabled by default. Maximum duration in milliseconds of the speech collected from users. The default is 15000. No upper limit. No timeout = -1.

- **Additional Returned Values**: After recognizing the expression, the meaning is stored in the variable selected in the Properties menu.

  Depend on the selected grammar, other keys may be returned:

  - Return Key: Information specific to the grammar, such as the text that was recognized (SWI_Literal) or speech recognition confidence level.
  - **Max Attempts**: Number of times to repeat a prompt when a speech recognition error occurs, such as no match. The default is 3 times. NoInput and NoMatch events are considered input attempts.
  - **DTMF Help Button**: DTMF key to use for the caller to request help.
  - **Record User's Input as Audio File**: Whether to save the voice input as an audio file that is available in via reports. See also **Using Recorded Files**.

    IVR recordings are delivered by FTP singly or in batches. The naming convention of the files sent to the FTP server depends on whether you have checked the box **Set Name of Recording to Session ID During Transfer** for the campaign:
    - Enabled: IVR recording file names have this format:

      <session ID> @ <time of call><module name>.wav
    - Disabled: IVR recording file names have this format:

      <phone number> by <agent name> @ <time of call><module name>.wav
      - `<phone number>`: ANI (inbound), DNIS (outbound).
      - `<agent name>`: IVR recordings value is `nobody`.
      - `<time of call>`: Time that the call started.
      - `<session ID>`: Session ID of the call.
      - `<module name>`: IVR module that recorded the call.

- **Input Collapsible**: Visual IVR feature that applies to all types of prompts. Whether to concatenate all the prompts in the module whether they are played (standard prompts) or displayed (Visual IVR prompts) to callers.
    - Enabled: Concatenate prompts. Callers see at once all the prompts in the same window.
    - Disabled: Do not concatenate prompts. Callers hear or see each prompt after performing the requested action.

Prompts Tab

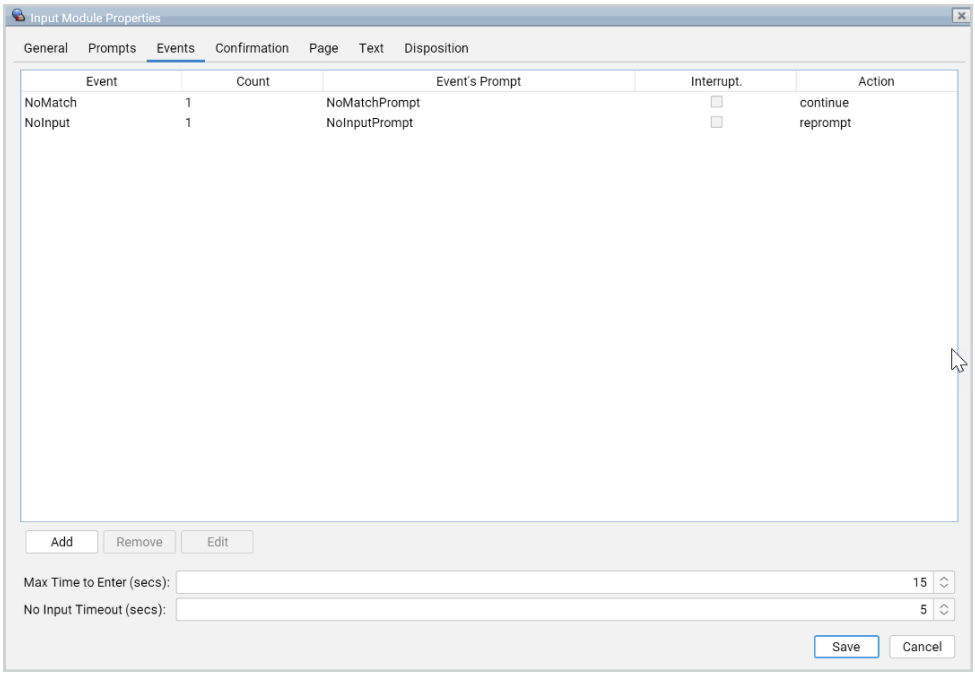
List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence and indicate how many times each can be used. Between prompts, you can add brief pauses (milliseconds).

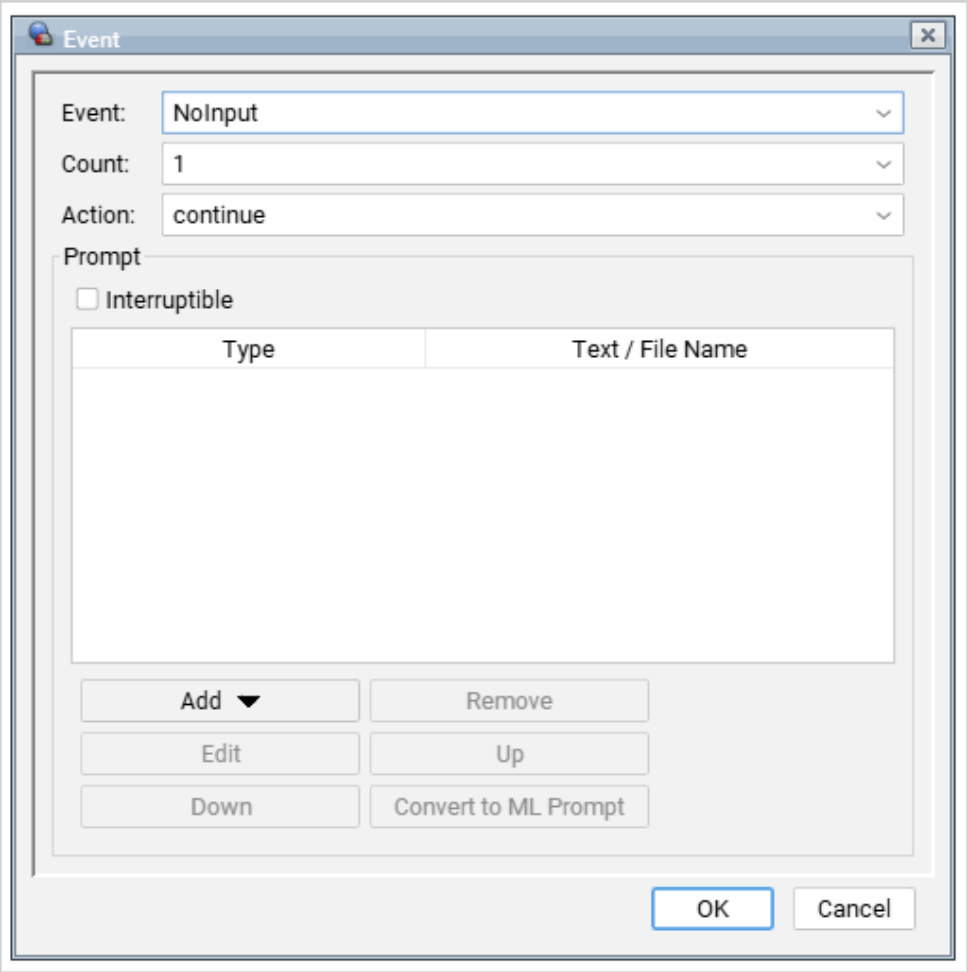
- **Interruptible**: If enabled, the module stops playing the prompt as soon as the requested operation is completed.
- **Count**: Number of times that the prompt can be repeated.

In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.

Events Tab

- **Event**: List of event handling options. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in a specific sequence.


Input Module Properties
General
Prompts
Events
Confirmation
Page
Text
Disposition
Event
Count
Event's Prompt
Interrupt.
Action
NoMatch
1
NoMatchPrompt
continue
NoInput
1
NoInputPrompt
reprompt
Add
Remove
Edit
Max Time to Enter (secs):
15
No Input Timeout (secs):
5
Save
Cancel



List of possible events:

- NoMatch: Generated if the speech recognition engine cannot find a match in the grammar.
- NoInput: Generated if the speech recognition engine does not hear any caller input before the time-out.
- Help: Generated if the caller presses the Help button.

- **Count**: Number of possible instances (1–13) for an action, which enables you to handle differently multiple errors of the same type. The count is increased regardless of the event.

Example

NoMatch event: The module repeats the prompt to the caller. If the number of attempts is exceeded, the exception NOT_ENTERED occurs, and the script proceeds using the No Match branch to the next module.

- **Action**: Action taken when the specified event occurs.
  - Reprompt: Repeat the prompt listed in the Prompts tab.
  - Continue: Proceed to next attempt without playing the prompt listed in Prompts tab.
  - Exit: Exit by the error branch at the bottom of the module. This event can occur even if the maximum number of attempts has not been reached. The error branch must be linked to subsequent IVR modules to handle the error.

- **Prompt**: List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.

- **Max Time to Enter**: Number of seconds that the module waits for callers to finish entering the information. If callers exceed the time, the IVR script proceeds to the next module or repeats the current module. The default is 15 seconds.

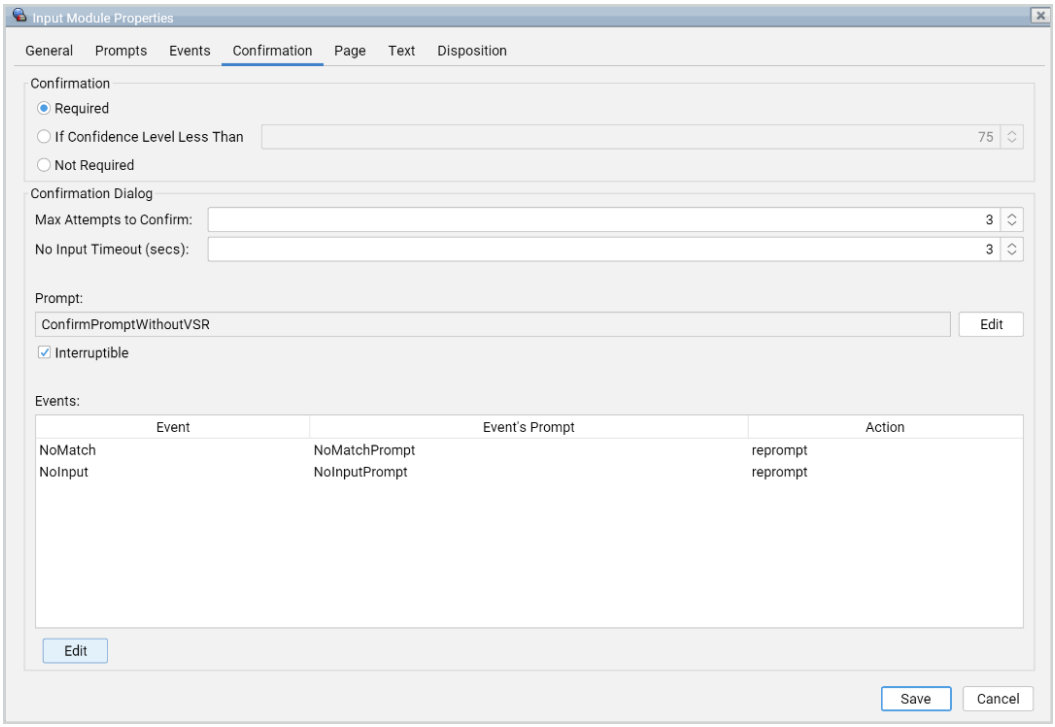
- **No Input Timeout**: Number of seconds allowed for the caller to provide no input. After the time-out, the NoInput event occurs.

- **Recognition Confidence Threshold**: Percentage confidence level that the system can recognize the caller's input, which can depend on the caller's accent, the quality of the phone connection. This threshold indicates when to consider the speech recognition successful or invalid. The default is 5%. If you set the threshold too high, the number of no matches may be artificially too high.

Confirmation Tab

Prompt used to verify that the system recognized the speech correctly. If the caller confirms the input, the script proceeds to the next module. Otherwise, the prompts are repeated.

- Required: Confirmation prompt is played after each caller's input.
- If Confidence Level Less Than: Confirmation prompt played only if the confidence level is low.
- Not Required: Confirmation prompt disabled.



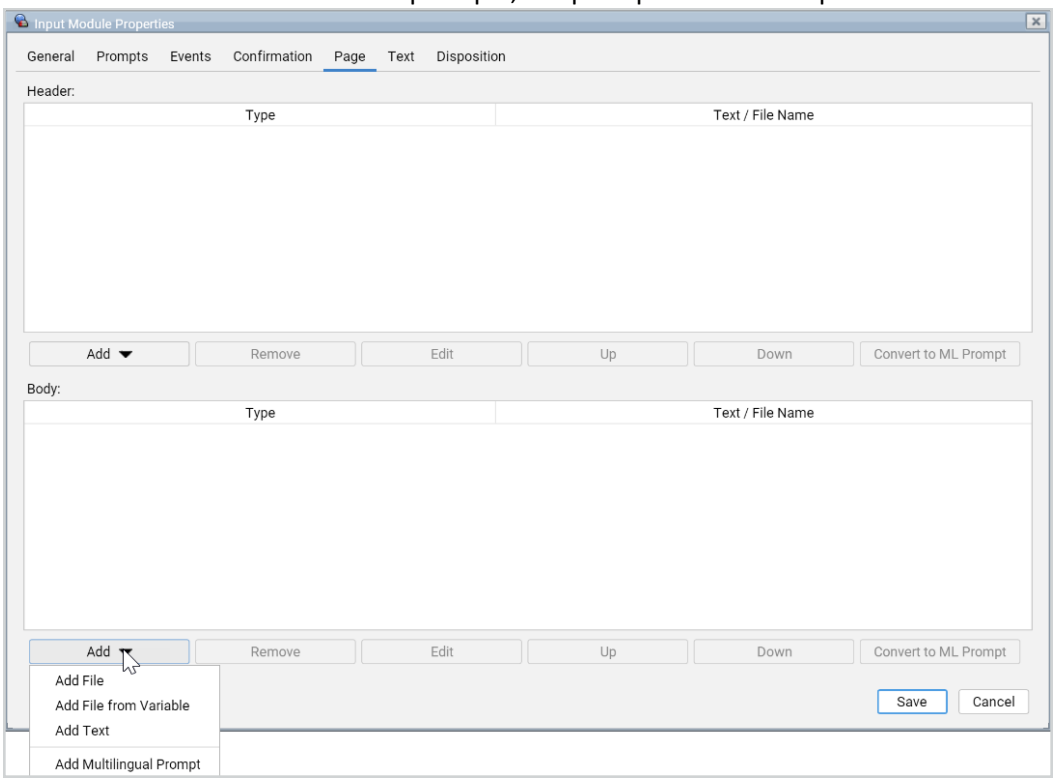
- **Max Attempts to Confirm**: Maximum number of times allowed to enter the confirmation answer. For example, the caller may say 1 or presses 1. If the number of attempts is exceeded, the exception NOT_ENTERED occurs, and the script proceeds to the next module.
- **No Input Timeout**: Number of seconds allowed for the caller to provide no input. After the time-out, the NoInput event occurs.
- **Prompt**: Prompt that describes the confirmation options. The local module variable $SWI_LITERAL is used to repeat the caller's input as it was recognized.
- **Events**: List of possible error events:
  - NoMatch: Speech recognition feature cannot find a match in the grammar.
  - NoInput: Speech recognition feature cannot hear caller input before the time-out.
  - Help: Generated if the caller presses the Help button.

Page Tab

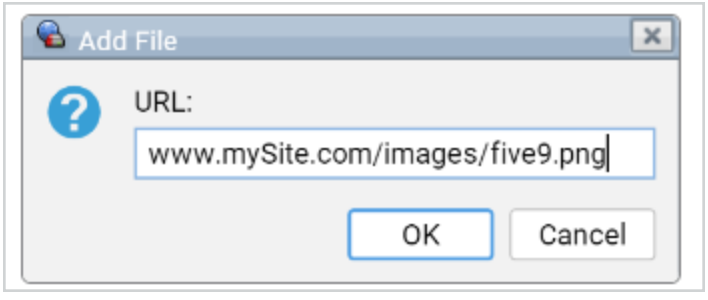
This tab contains the list of Visual IVR prompts that are shown in the customer's browser when a IVR script is executed. You may add images to pages and menus to

enhance your brand or to describe a product or service, but you cannot add links to images. Prompts are shown as follows:

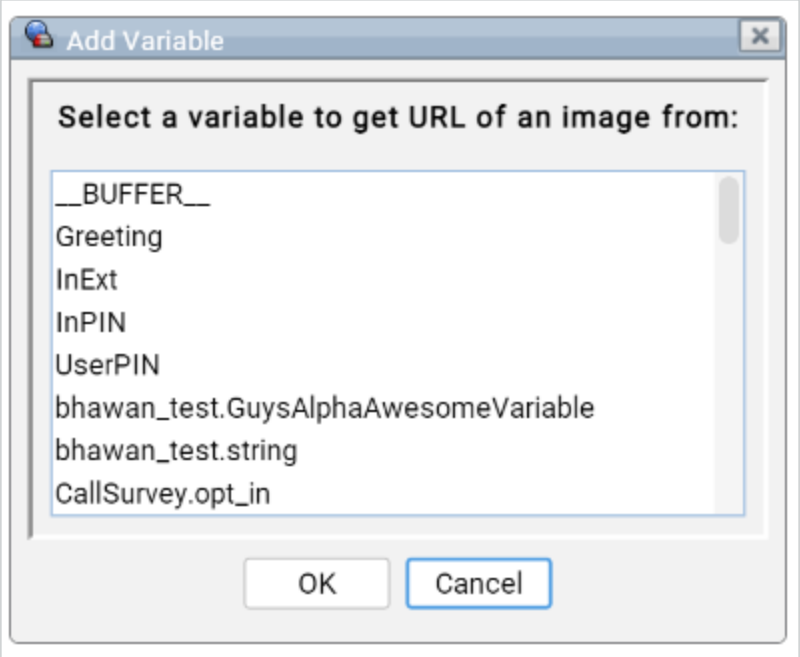
- If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.
- If this tab does not contain prompts, the prompts in the Prompts tab are shown.



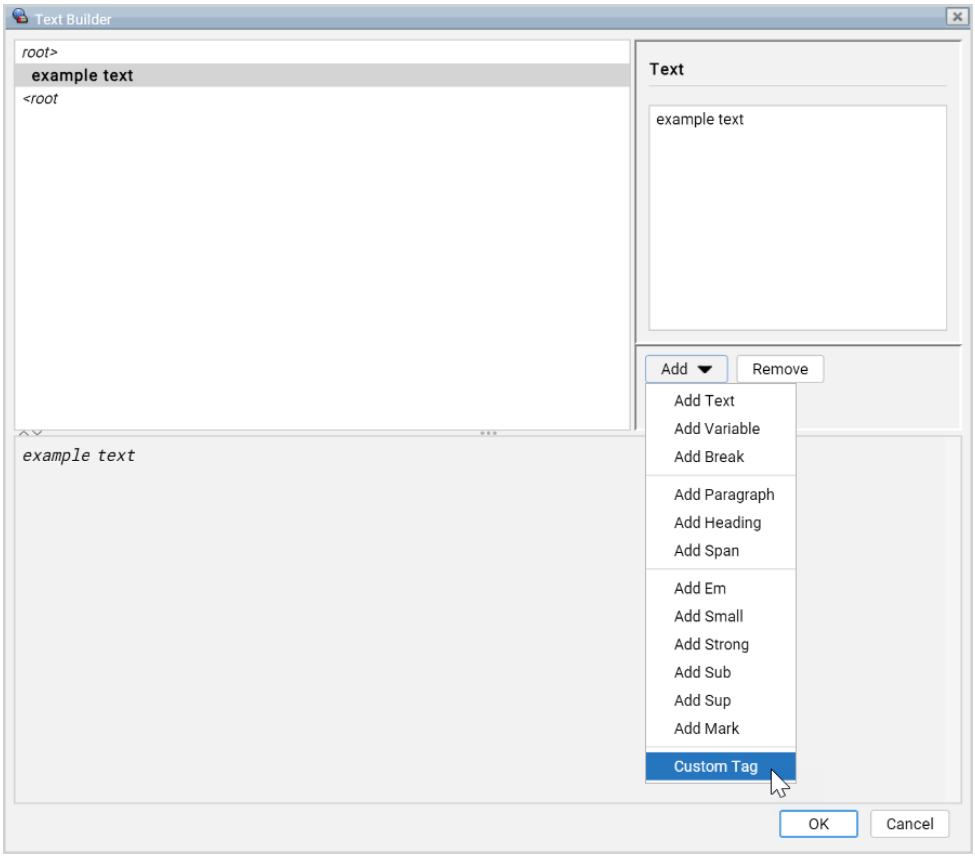
- **File**: URL of an image.



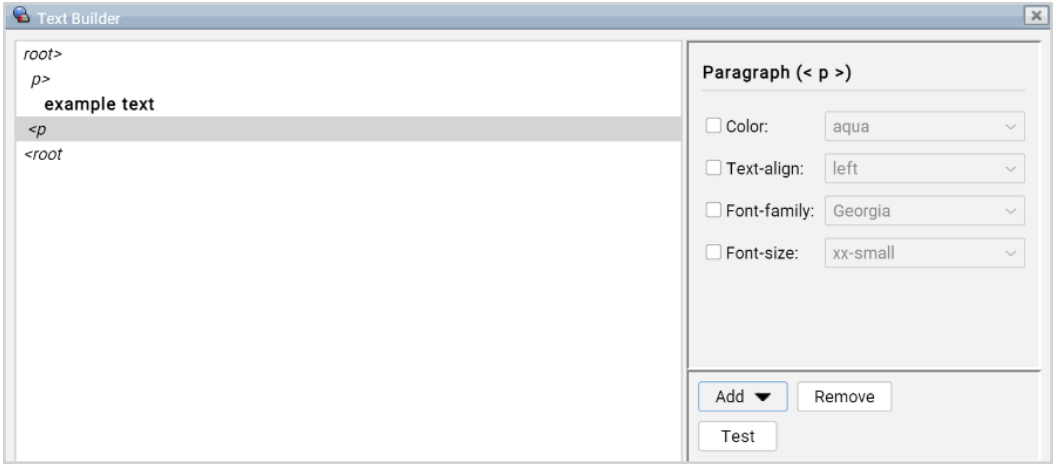
- **Variable**: Variable that contains the URL of an image.



- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.
- **Custom Tag**: See detailed usage information in **Using the Visual IVR URL**.

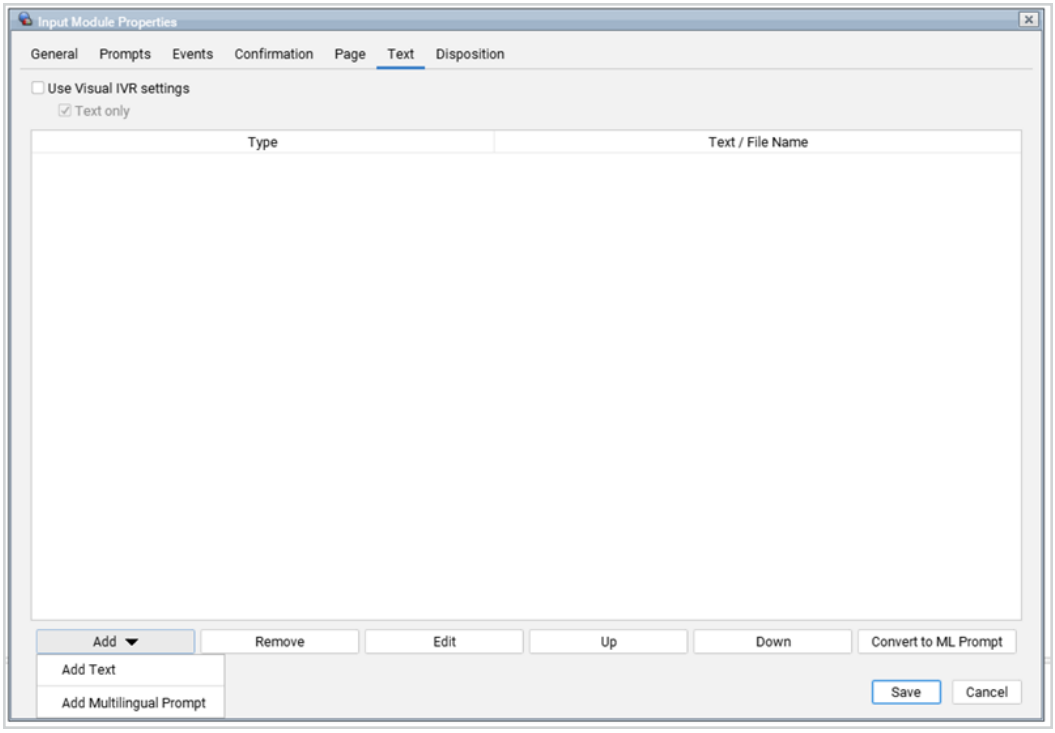


You can create HTML that contains formatted text and variables, and you can customize the text with bold, color, and emphasis. Unlike breaks in the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break. Click Test to preview the HTML text.

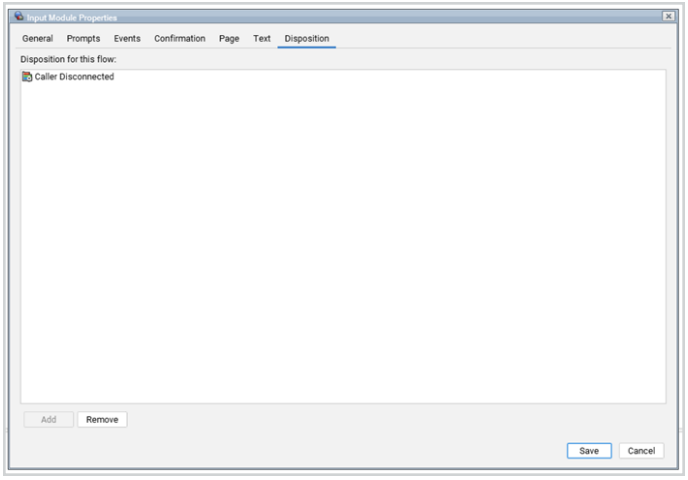


Text Tab

This tab enables configuration options for chat, SMS, email, and integration channels.

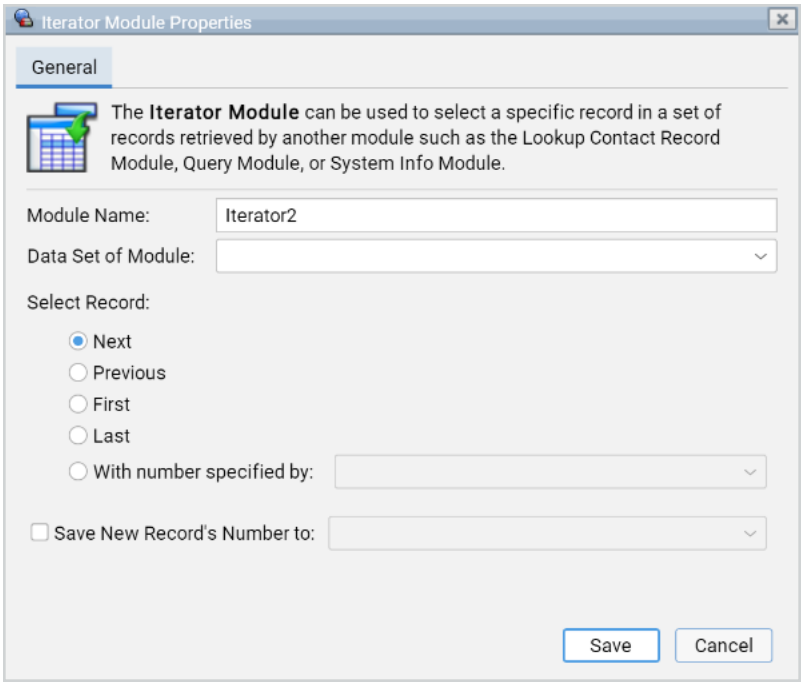


Dispositions tab. The default disposition is Caller Disconnected. For more information, see **Selecting Dispositions**.



Iterator Module

The Iterator module enables you to select a specific contact record from a set of records received from other modules.



- **Data Set of Module**: List of records retrieved by another module, such as the Lookup Contact Record, Query, or System Info modules.
- **Select record**:
  - Next
  - Previous
  - First
  - Last
  - With number specified by: List of call-attached variables
- **Save New Record's Number to**: Whether to save a record in another call variable. Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

IVA Transfer Module

The Intelligent Virtual Agent (IVA) transfer module enables you to pass interaction control to a chatbot, such as Five9 IVA-Digital, with an option to escalate that interaction to an agent when necessary. This section describes how to configure the IVA transfer module and provides an example IVR script that you can download and use in your environment.

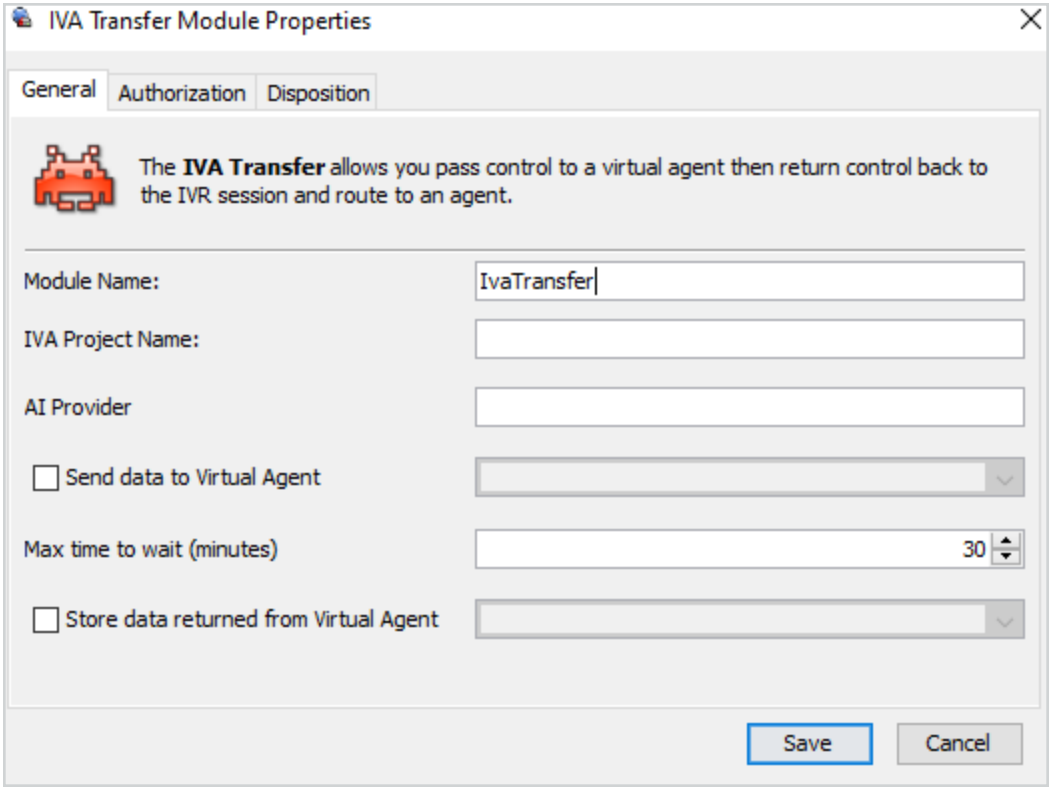
A pre-configured basic authorization profile is required to populate the **Authorization Tab** below. For more information about creating authorization profiles, see the Basic Configuration Administrator's Guide .

To control your IVA hours of operation, see the chat profile business hours settings in the Digital Engagement Administrator's Guide.

Properties

General tab
Authorization Tab
Disposition Tab

General tab



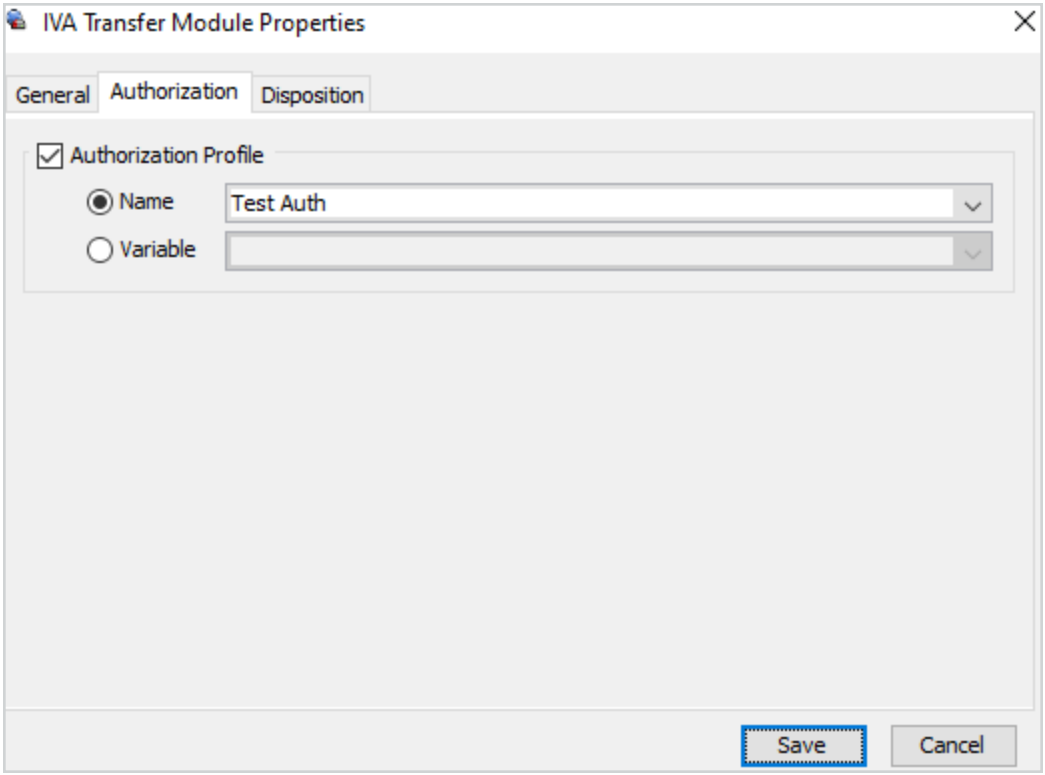
- **Module Name**: Name shown in IVR builder.
- **IVA Project Name**: Customer-facing name shown in your chatbot agent.
- **AI Provider**: URL to your chatbot vendor.

  Example: https://interaction.us7.studioportal.io/tasks/<*your-chatbot-task-key-here*>

- **Send data to Virtual Agent**: Select check box to pass contact variables to the chatbot.
- **Max time to wait (minutes)**: Maximum number of minutes allowed for this interaction. This setting controls the messaging bot time-out message that is configured in the Five9 Digital Engagement Administrator console.

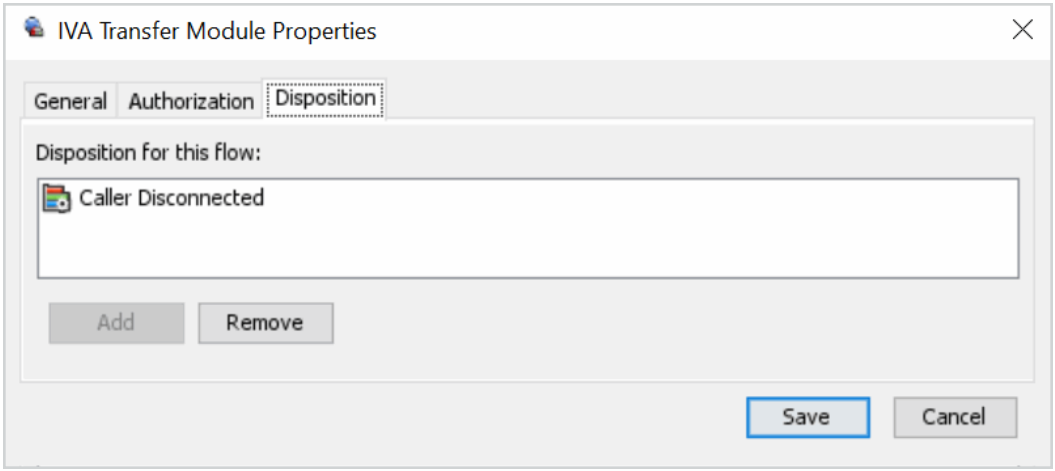
- **Store data returned from Virtual Agent**: Select check box to store the variable information from the chatbot.

Authorization Tab



- **Authorization Profile**:
  - Name: Name of an authorization profile configured for chatbot in VCC.
  - Variable: Name of a variable specified for chatbot authorization.
- **Possible Errors**: Chatbot is unavailable.

Disposition Tab



The default disposition is **Caller Disconnected**. Select a custom disposition for interaction flows that end in **Five9 Engagement Workflow**. For more information, see Selecting Dispositions.

Chat Customer Disconnect or Timeout

A chat user (customer/contact) disconnect or timeout may cause the IVR to fail at the next transfer, as the chat interaction is already disconnected. To enable post-terminate options, such as disposition, email transcript, survey, and so on, configure a hangup module as the next step after a disconnect. See chatbot_example script below.

Using the Chatbot Script

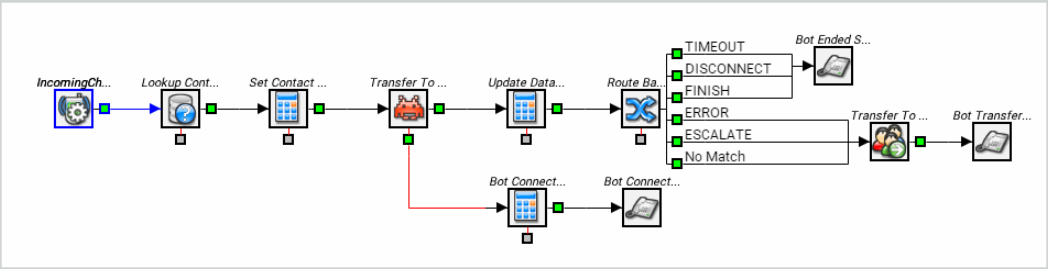
The supplied script assumes that you have a basic working knowledge of the Five9 IVR Builder. In this example, the contact information is retrieved from your system, if available, and sent to your chatbot. Any information returned from your chatbot is stored in Five9 as a chat transcript, and the interaction is routed by using standard Five9 IVR functionality.

You can rename the module and assign specific parameters in the **General** tab. You use the **Authorization** tab to assign a pre-defined basic authorization profile for transfer to Five9 IVA-Digital for chatbot tasks. For tasks not using Five9IVA-Digital, you may also

use an OAuth2 authorization profile or use a variable for authorization. For more information about authorization profiles, see the Basic Configuration Administrator's Guide.

You can download the chatbot example script here to save locally. Using an HTML editor, save the file with the `.five9ivr` extension for import into your Five9 IVR Builder. Use the Five9 IVR Builder to create a new IVR script, then import the local chatbot example script and modify for your domain. For more information, see **Importing IVR Scripts**.

To configure the IVA Transfer module in your local script, right-click or double-click to access the module properties. You can configure multiple languages for localized support with unique chatbot instances used for each language.

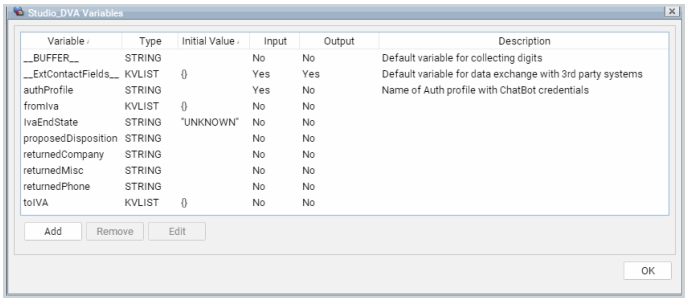


Creating the IVR Script Variables

The following variables are used in this IVR script:

Name	Type	Initial Value	Output	Input	Description
`_BUFFER_`	STRING		No	No	Default variable for collecting digits
`_ExtContactFields_`	KVLIST	`{}`	Yes	Yes	Default variable for data exchange with a third party system
`authProfile`	STRING		No	Yes	Name of AuthProfile with chatbot

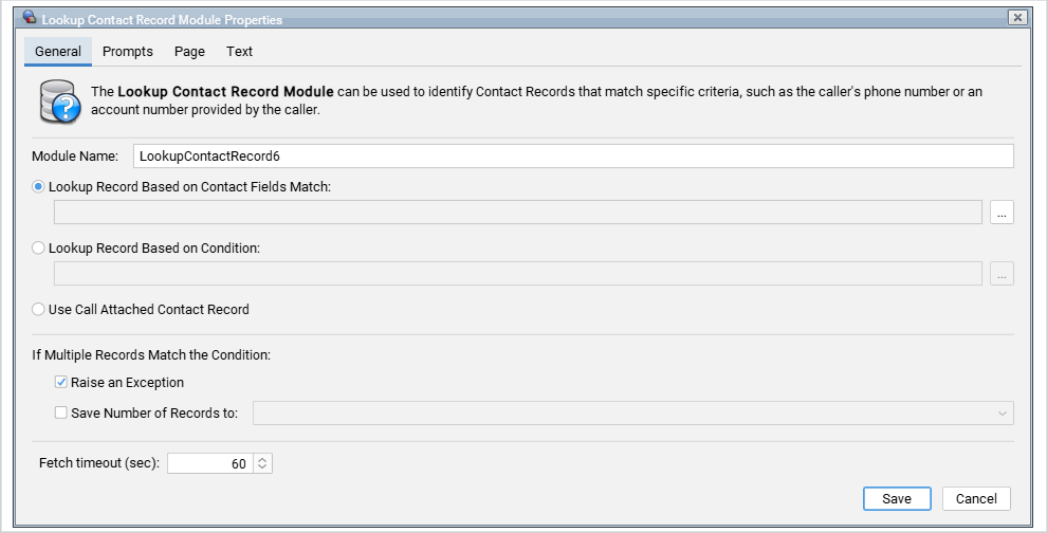
Name	Type	Initial Value	Output	Input	Description
					credentials
fromIva	KVLIST	{}	No	No	Data return from chatbot
IvaEndState	STRING	"UNKNOWN"	No	No	Identifies chatbot completion
proposedDisposition	STRING		No	No	
returnedCompany	STRING		No	No	
returnedMisc	STRING		No	No	
returnedPhone	STRING		No	No	
toIva	KVLIST	()	No	No	Data sent to chatbot



For more information about creating and assigning your IVR script variables, see **Managing Variables**.

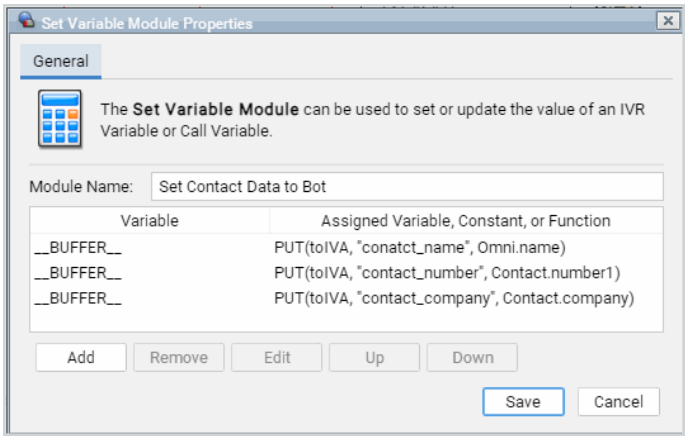
Looking up Contact Information

This script begins by using the Lookup Contact Record Module to identify your inbound contact information using first name, last name, and email fields. Unidentified contacts may be sent to a live agent later in this script. You can customize your contact record lookups to suit your needs. Phone numbers provided to the chatbot may be added to your callback list.



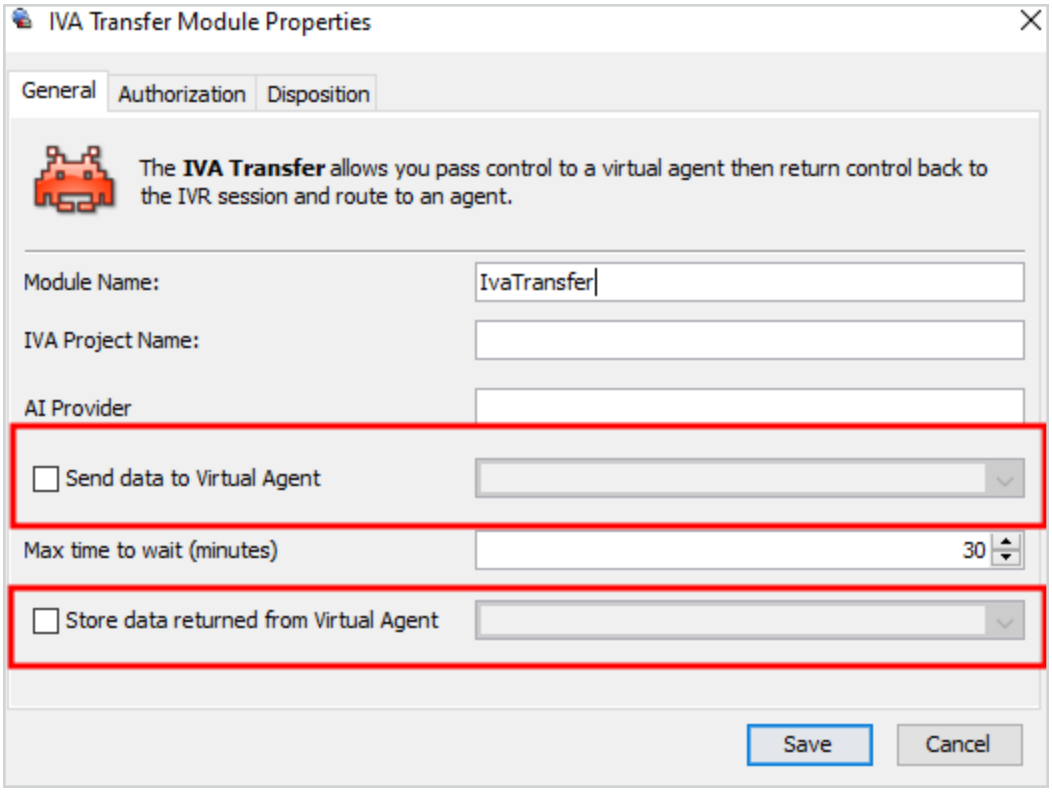
Storing and Using Your Contact Information

Use the Set Variable Module to store the variable information from the previous step in a KVList to send to the chatbot.



Sending the Interaction to the Chatbot

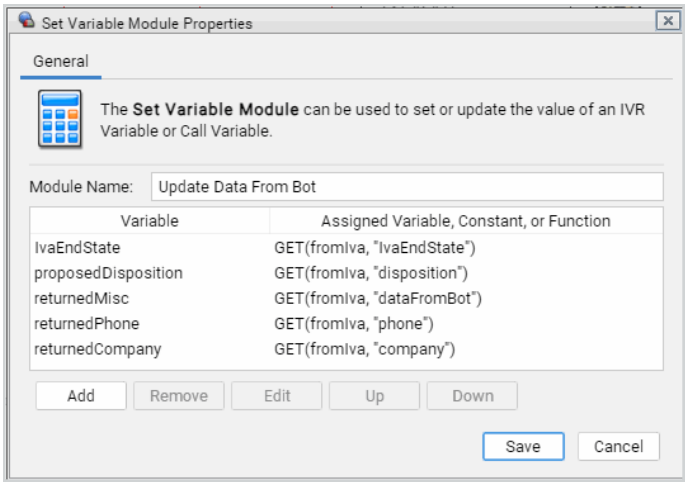
Use the IVA Transfer module to send the interaction and any variable information that you have identified to the chatbot using the **to/fromIVA** script variables configured in the first section.



Following the chatbot involvement, you can use logic within the IVR script to set the appropriate disposition, such as within the existing case statement, hangups actions, and so on, depending on your final configuration.

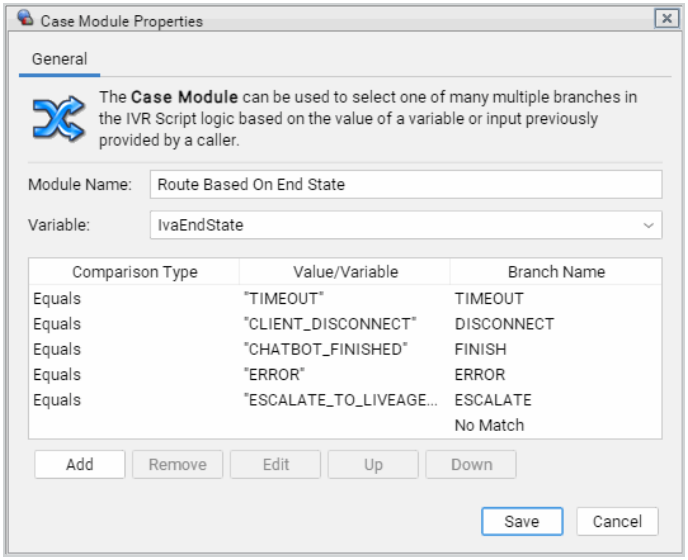
Storing the Returned Variable Information

Use the second Set Variable Module to store any information returned from the chatbot to the script variables defined previously.



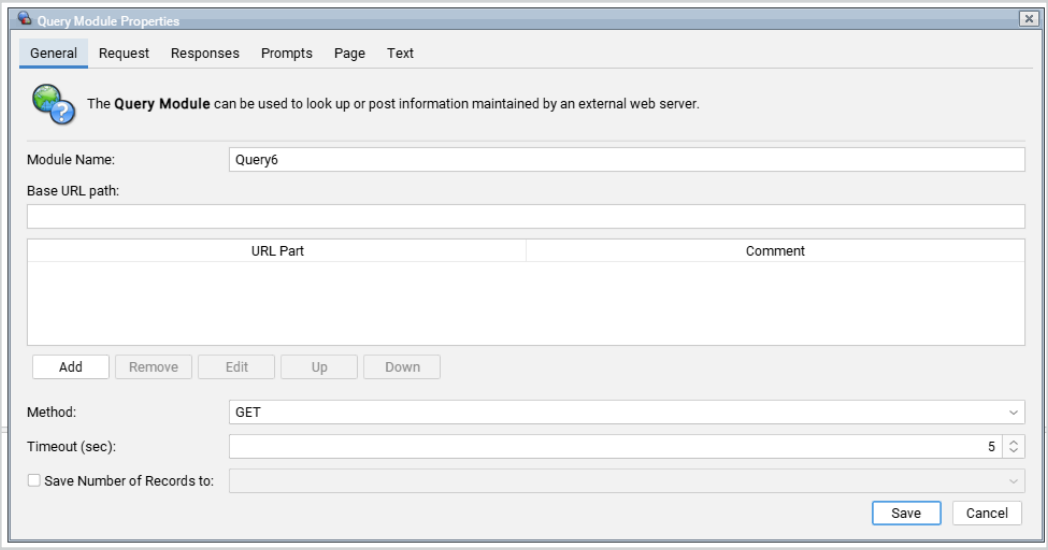
Continuing the Interaction

Use the Case Module to determine any next steps for this interaction. This module enables the full flexibility of traditional interaction routing to assist your customer as needed.



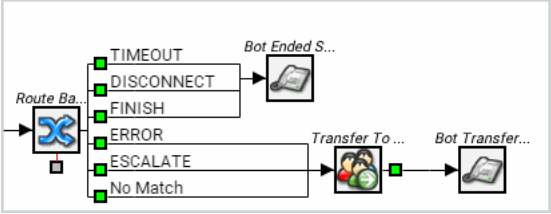
Adding New Contact Information

In this example, a Query Module is used to add new contact information to a dialing list.



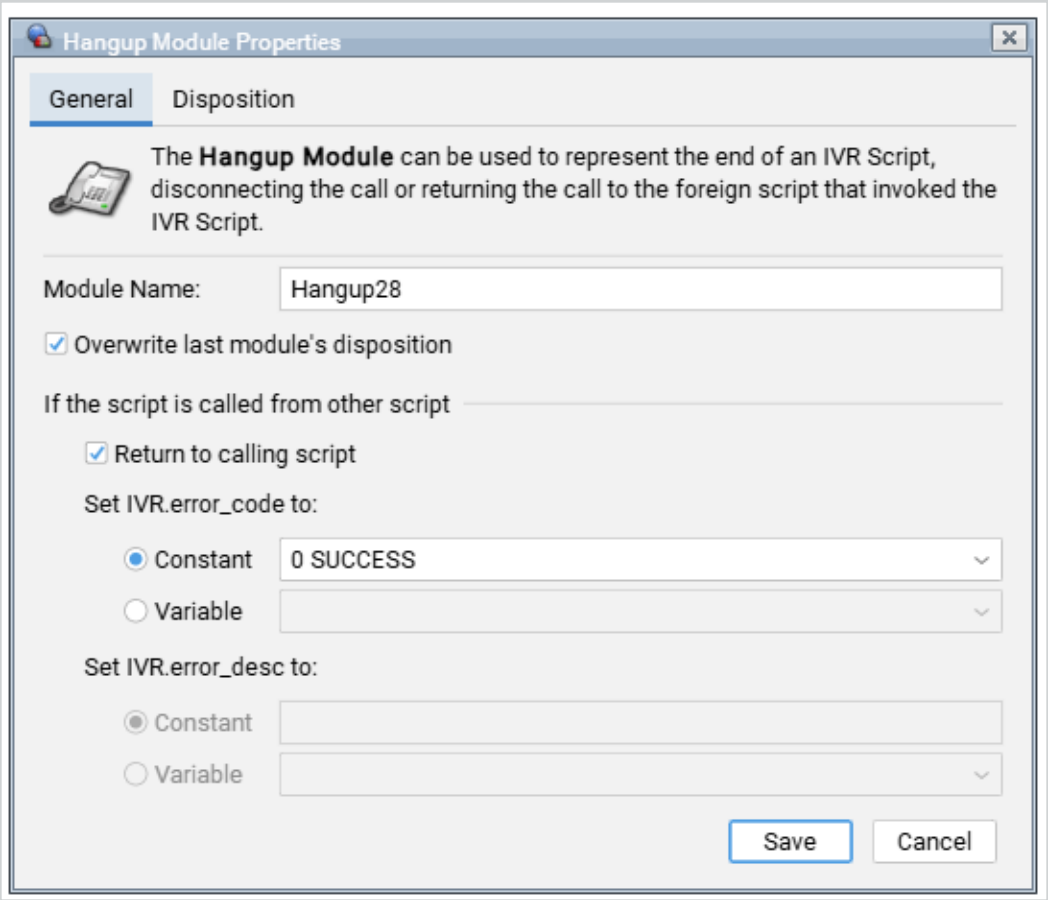
Sending the Interaction to an Agent

You can continue to route the interaction or assign a disposition to end the interaction. This example shows the Skill Transfer Module used to further route this interaction.



Ending the Interaction

You can use a hangup module to assign a disposition and end the interaction. In the General tab, check **Overwrite last module's disposition** to activate the **Disposition** tab.

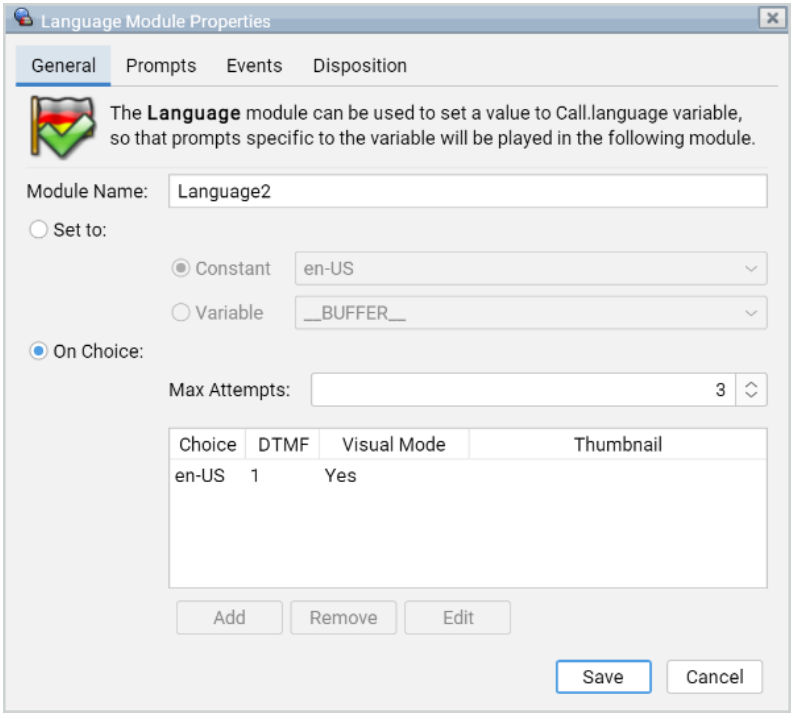

Hangup Module Properties
General
Disposition
The **Hangup Module** can be used to represent the end of an IVR Script, disconnecting the call or returning the call to the foreign script that invoked the IVR Script.
Module Name:
Hangup28
Overwrite last module's disposition
If the script is called from other script
Return to calling script
Set IVR.error_code to:
Constant
0 SUCCESS
Variable
Set IVR.error_desc to:
Constant
Variable
Save
Cancel

Language Module

Use this module to assign language routing options based on the languages defined in your Script menu (Call.Language variables) for use in IVR scripts. See **Languages** for how to add Call.Language variables to the Script menu.

General Tab
Prompts Tab
Events Tab
Dispositions Tab

General Tab



- **Module Name**: Role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.

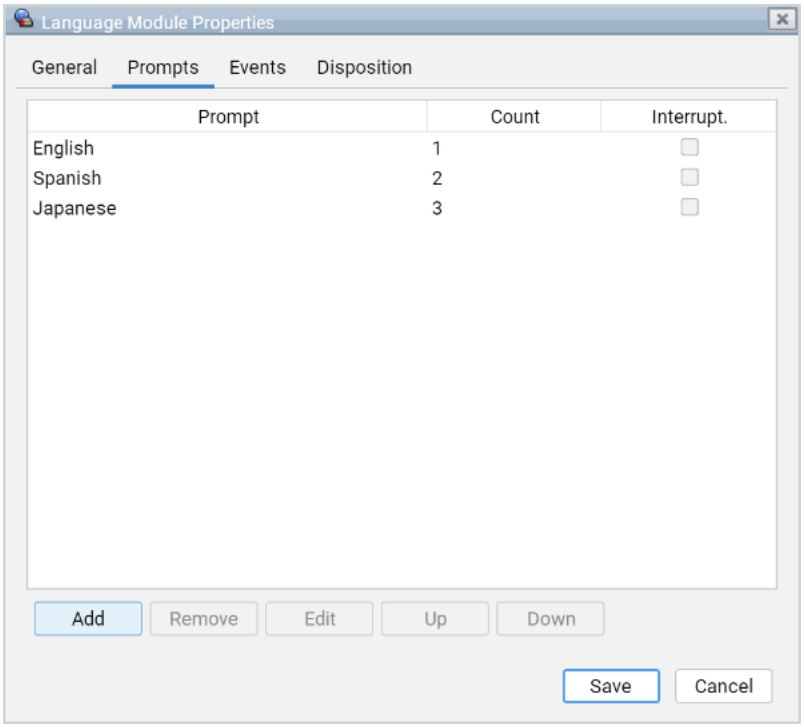
- **Set To**: Whether to assign a constant or variable language option.
  - Constant (default setting): A single language is offered. The module functions as a simple assignment. This option disables the Prompts and Events tabs. No prompts are played and no inputs are expected in this case.
  - Variable: Language options determined by your Call.language variable options.

- **On Choice**: Language items from which callers can select:
  - Choice: Language variable options correspond to languages defined in the Script menu. At least one choice must be created when using this option.
  - DTMF: Phone key that corresponds to the language selection. You can use a specific digit or automatic assignment.
  - Visual Mode: Whether the branch is enabled in the Visual IVR script.

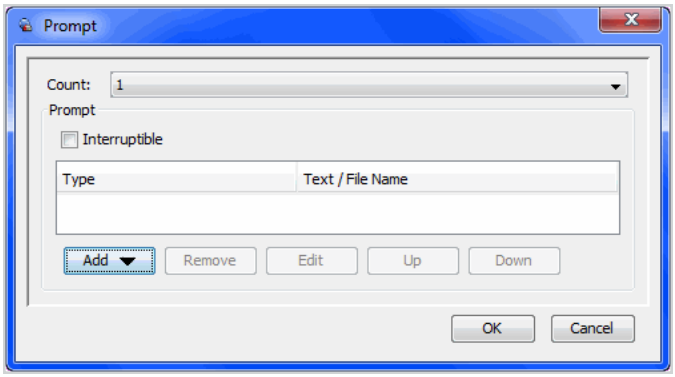
- **Max Attempts**: Maximum number of unsuccessful attempts at recognizing the language selection, after which a module exception exit is activated. When a NoInput or NoMatch error occurs, the prompt is repeated for up to the selected number of times. If this number is exceeded, the module is exited with an error code. This option enables you to limit the number of attempts.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.



In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.

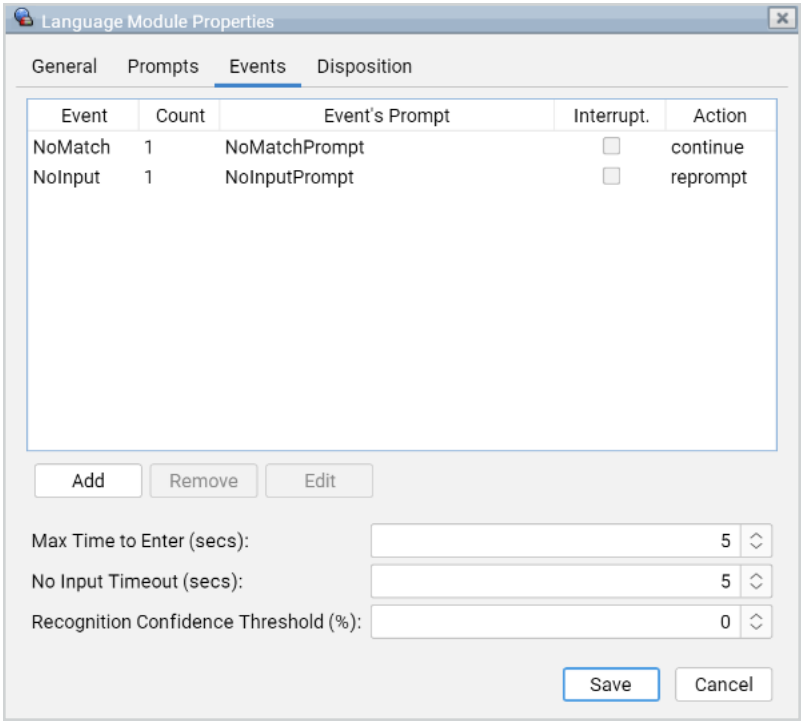


- **Count**: Minimum number of times that the user must speak for the prompt to be played. The default is 1.
- **Interruptible**: Whether to stop playing the prompt as soon as the caller has completed the requested action.

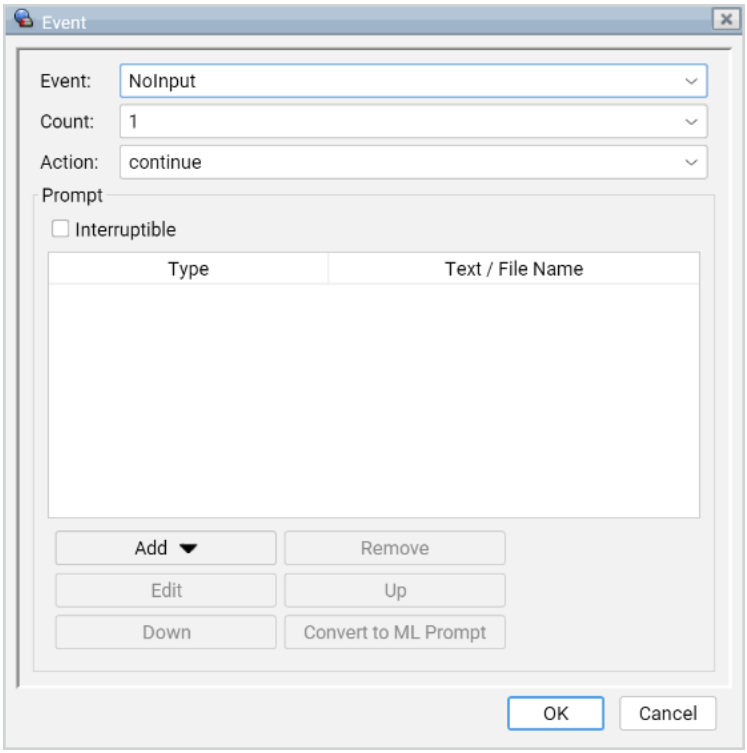
- Enabled: Stop playing the prompt as soon as the caller has completed the action.
- Disabled: Continue and finish playing the prompt even if the caller has completed the action.

Events Tab

List of event handling options. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in a specific sequence.



- **Event**: List of possible events:



  - NoMatch: Generated if the speech recognition engine cannot find a match in the grammar.
  - NoInput: Generated if the speech recognition engine does not hear any caller input before the time-out.
  - Help: Generated if the caller presses the Help button.

- **Count**: Number of possible instances (1–13) for an action, which enables you to handle differently multiple errors of the same type. The count is increased regardless of the event.

  Example

  NoMatch event: The first time, the module repeats the prompt to the caller. The second time, the IVR exits the module.

- **Match**: Whether the match should be exact or approximate.
  - Appr: Additional words after the grammar item are allowed if the required words are recognized, for example: The prompt [*For apple juice, say Apple or press 1. For orange juice, say Orange or press 2.*] enables

callers to say *Apple, please* or *Apples of course* instead of only *Apple*.

- Exact: Grammar items must be recognized completely.

- **DTMF**: Phone key that corresponds to the grammar phrase. You can use a specific digit or automatic assignment. With automatic assignment, each option corresponds to the previous option plus 1. For example, with the prompt [*For apple juice, say Apple or press 1. For orange juice, say Orange or press 2.*], 1 and 2 are assigned automatically if you select <Auto>.

- **Thumbnail URL**: Optional URL of a thumbnail image to appear in that branch.
  - Value: Specific value.
  - Variable: Name of variable. The value is the URL of the image.

- **On Recognition/DTMF**: Branch to use for each successful or failed event.
  - Leave Module: Content of the Branches tab and the No Match branch, which is used when the comparison does not match one of the options, such as when the prompt specifies 1 or 2, but the caller presses 3 or nothing.
  - Through Event: List of events described in the **Events** tab.

- **Count**: Minimum number of times that the user must speak for the prompt to be played. The default is 1.

- **Max Time to Enter**: Number of seconds that the module waits for callers to finish entering the information. If callers exceed the time, the IVR script proceeds to the next module or repeats the current module. The default is 15 seconds.

Dispositions Tab

The default disposition is Caller Disconnected. For more information, see **Selecting Dispositions**.

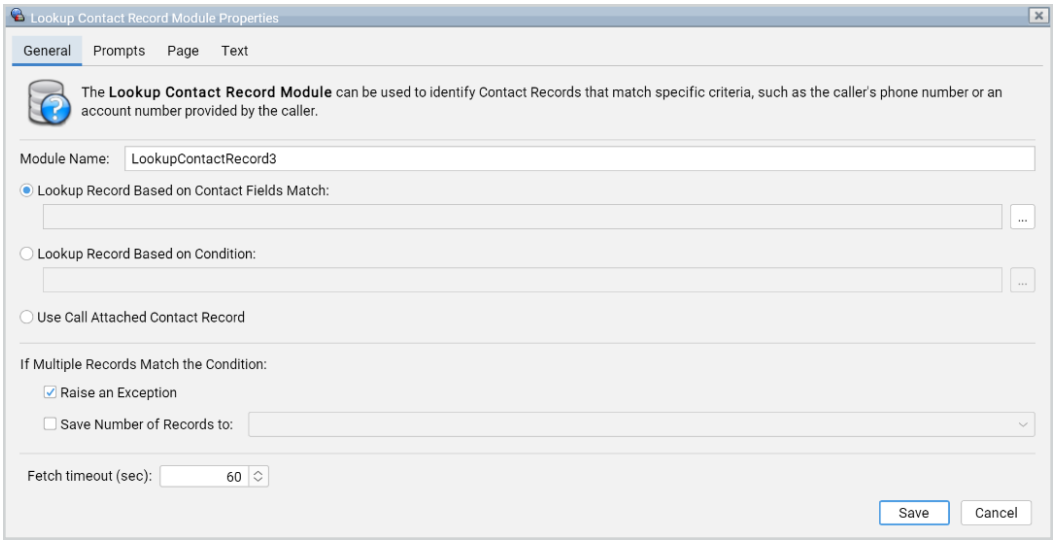
Lookup Contact Record Module

The Lookup Contact Record module enables you to retrieve information from the caller's contact record. This information can be used to process the call and to associate the call with the record by using the Contact Update module. The module

branches are success (at least one contact record exists) or failure (no contact record exists).

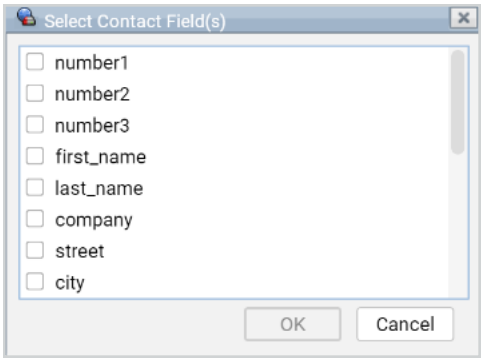
When using Visual IVR scripts, you may also add images to pages and menus to enhance your brand or to describe a product or service. However, you cannot add links to images. For more information, see Page Tab.

General Tab
Prompts Tab
Page Tab

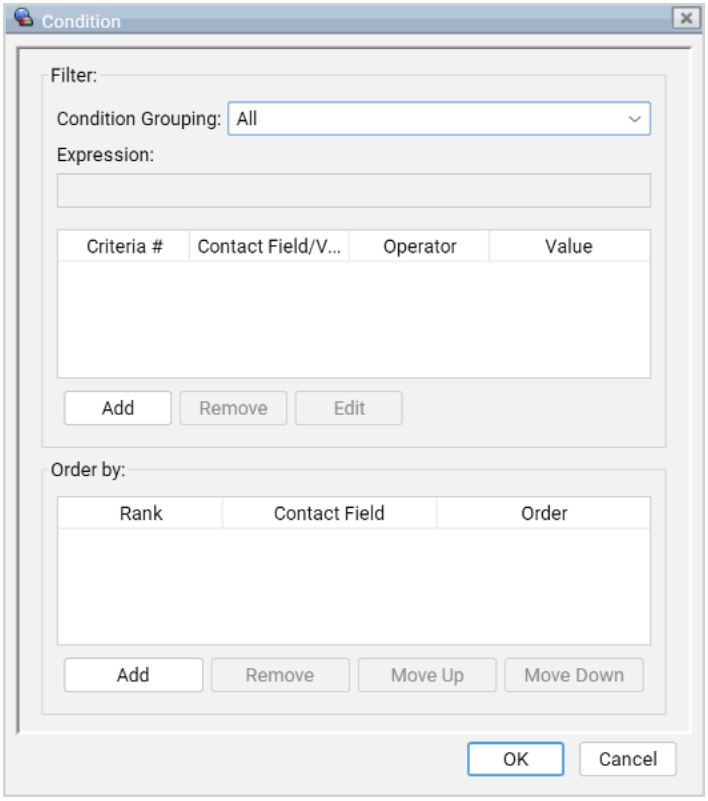


General Tab

- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.
- **Lookup Record Based on Contact Fields Match**: Contact field to use for the search. The menu contains a list of your contact fields.



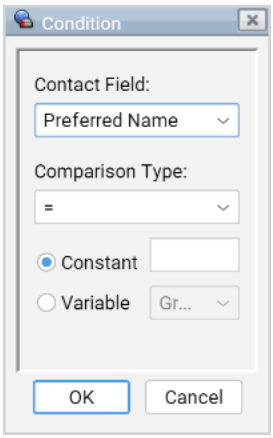
- **Lookup Record Based on Condition**: Contact field to use for the search. The menu contains a list of variables to create conditions.



- **Condition Grouping**: Method used to join conditions:
    - Any: Any defined criteria are valid. The expression 1 OR 2 is entered automatically in the Expression field.

- All: All defined criteria must be valid. The expression 1 AND 2 is entered automatically in the Expression field.
- Custom: Custom expression that describes how to use the criteria. This option enables the Expression field.

- **Expression**: Logical expression that describes how to compare the conditions.
- **Condition window**:



  - Contact field: In the expression, left variable to be compared with a constant or another variable. List of your contact fields. Names are limited to 10 characters.
  - Comparison Type: List of possible methods for comparing the variables.
  - Constant: In the expression, optional specific value to compare to the contact field.
  - Variable: In the expression, optional right variable to compare to the contact field. List of your user, contact, system, agent, call, IVR, or user CAV variables.

- **Order by**: Up to three contact fields, by default starting with the first one alphabetically.
  - Contact Field: List of your contact fields. You can change the default to any other contact field.
  - Order: Ascending or descending

- **Use Call Attached Contact Record**: Record associated with the call is used instead of searching among all contact records. For Visual IVR, if multiple contact fields exist, all are concatenated with AND.

- **Raise an Exception**: If several records match the search criteria, whether to activate the exception exit.
- **Save Number of Records to**: If several records match the search criteria, whether to save the number of matched records in the selected integer CAV variable.
- **Fetch Timeout**: Maximum number of seconds for receiving a response from the script. After the time-out, the scripts exits the module.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.

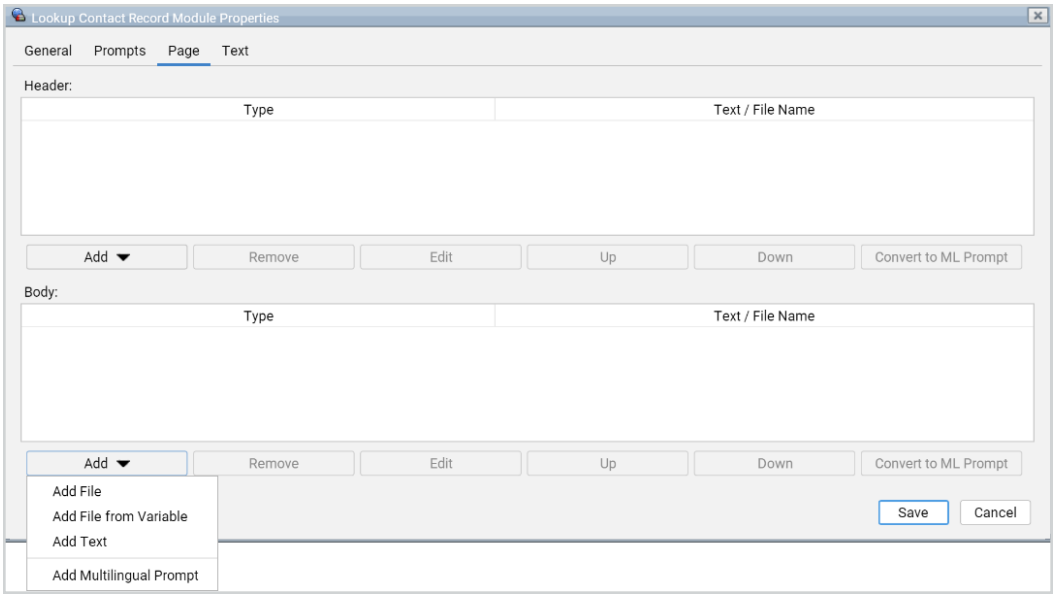
In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.

Page Tab

This tab contains the list of Visual IVR prompts that are shown visually in the customer's Web browser when a IVR script is executed.

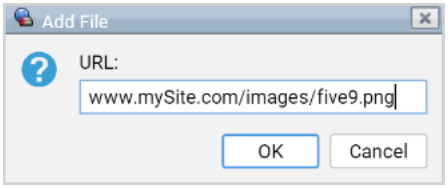
If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.

If this tab does not contain prompts, the prompts in the Prompts tab are shown.



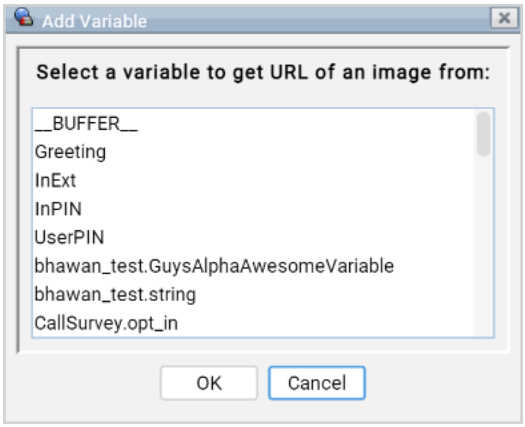
This tab enables you to add different types of prompts:

- **File**: URL of an image.

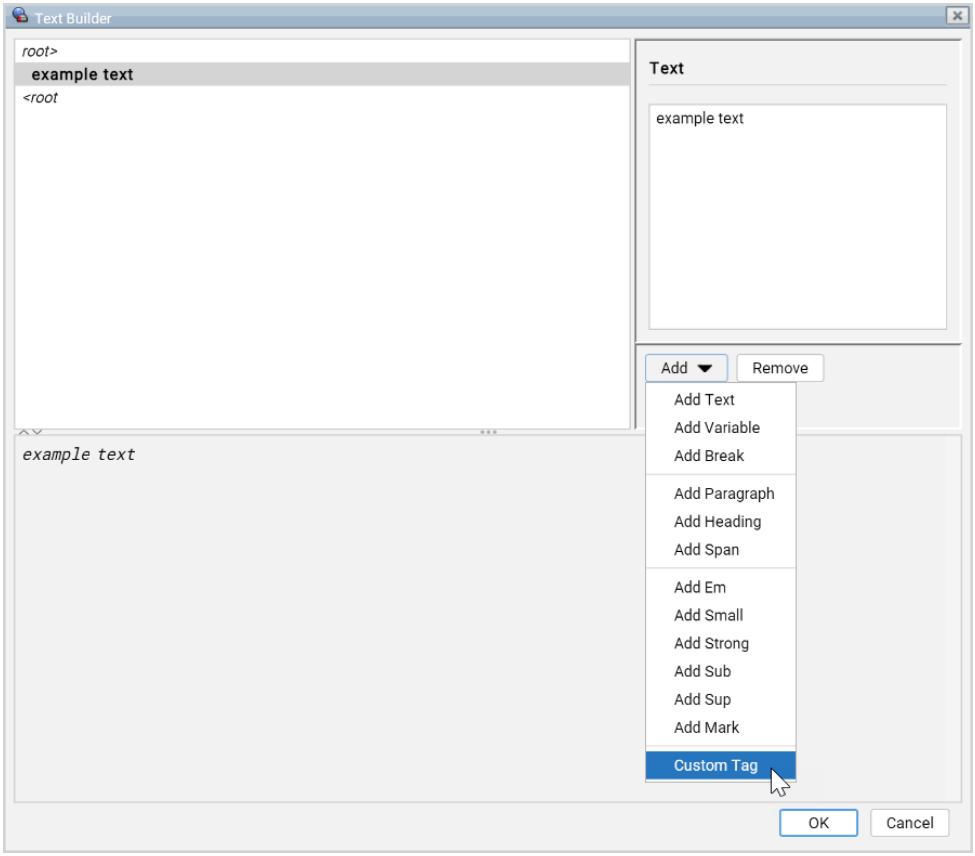


- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.

- **Variable**: Variable that contains the URL of an image.

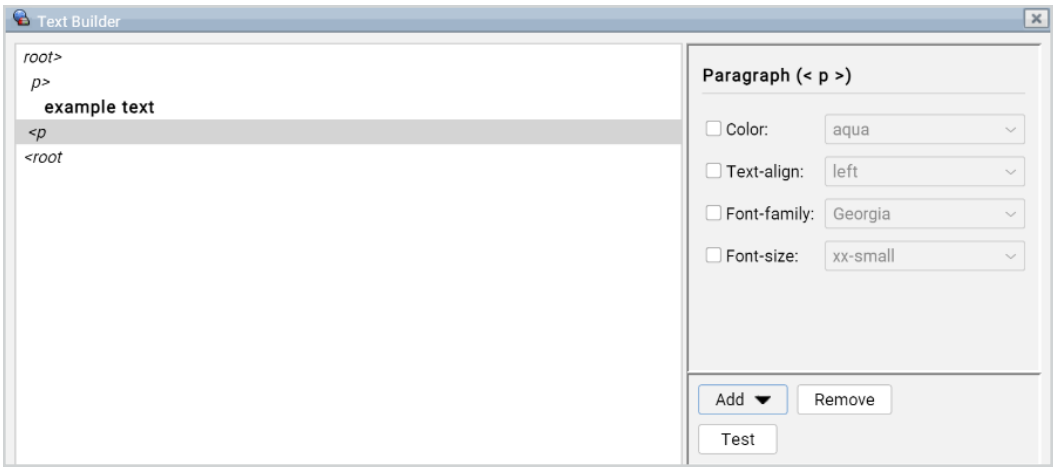


- **Custom Tag**: See detailed usage information in [Using the Visual IVR URL].



The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in

the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break. The Test button enables you to preview the HTML text.

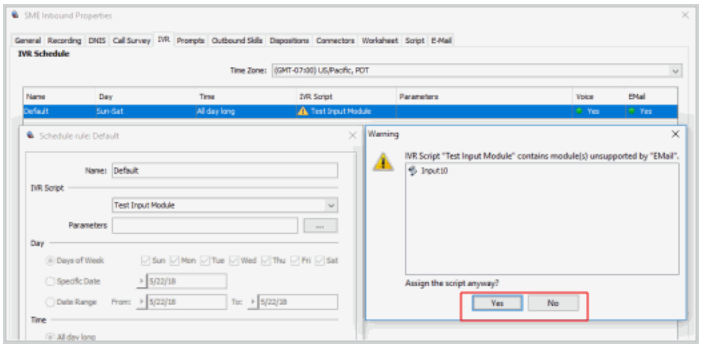


Menu Module

This module enables you to configure multiple exit branches (one branch for each case) depending on the caller's selection. The text spoken by the caller is analyzed with grammar different from the grammar used by the Input Module. The result is compared to phrases expected by the module.

Digital Channels

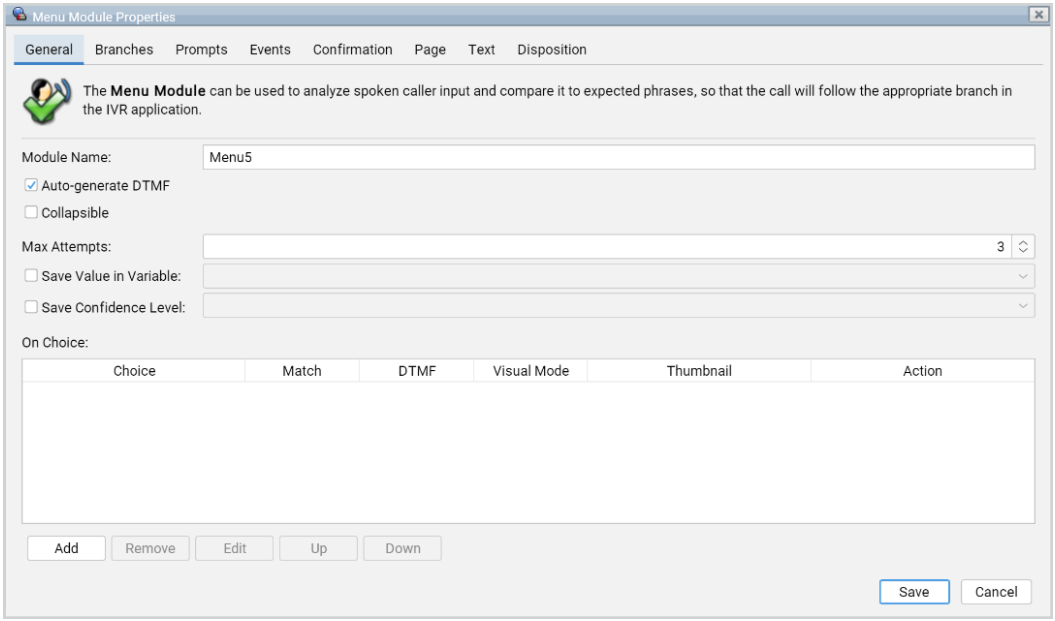
This module is not compatible with digital channels. If your domain is enabled for digital channels, you see a warning when you use IVR scripts that contain this module in inbound campaigns. If you choose to use the script, a warning icon is displayed in the schedule description. The IVR schedule still works, but these incompatible modules are skipped.



Properties

The Menu module is equivalent to the Get Digits module followed by the Case module.

[General Tab](#)
[Branches Tab](#)
[Prompts Tab](#)
[Events Tab](#)
[Confirmation Tab](#)
[Page Tab](#)
[Dispositions Tab](#)



General Tab

- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.

- **Use Speech Recognition**: Whether to enable the speech recognition.

  > **Note:** If you need speech recognition features, contact your Five9 account director.

- **Auto-Generate DTMF**: Whether to use of phone keys to choose menu items.

  The Menu module supports DTMF and speech input. However, in some cases, you should use only one type of input.

  - Enabled: Use user-defined key assignment, or delegate the assignment (0-9, #, or *) to the module (<Auto>).
  - Disabled: No DTMF is accepted; speech only.

- **Record User's Input as Audio File**: Whether to save the voice input as audio file to access from reports. This is useful for evaluating how well your grammar matches callers' spoken phrases. The recording is available in reports but is not sent to agents or skill groups. See also **Using Recorded Files**.

- **Collapsible**: Visual IVR feature that applies to all types of prompts. Whether to concatenate all the prompts in the module whether they are played (standard prompts) or displayed (Visual IVR prompts) to callers.
  - Enabled: Concatenate prompts. Callers see at once all the prompts in the same window.
  - Disabled: Do not concatenate prompts. Callers hear or see each prompt after performing the requested action.

- **Max Attempts**: Maximum number of unsuccessful attempts at recognizing the speech, after which an module exit exception activates. When a NoInput or NoMatch error occurs, the prompt repeats for up to the set number of times. Exceeding this number exits the module using the No Match branch. This limits the number of recording attempts. You must link the error branch to subsequent IVR modules to handle the error.

- **Save Value in Variable**: Whether to save the recognized input in an IVR or CAV string variable.

- **Save Confidence Level**: Whether to save the returned confidence level.

  A confidence value variable is associated with every speech recognition attempt. A successful recognition indicates than your confidence threshold has been met. An unsuccessful recognition also returns the highest scoring choice and the associated confidence value in separate variables. Both variables are available in Five9 reports. For more information, see the Dashboards and Reports User's Guide.

- **On Choice**: Required option: At least one Leave Module option

  List of grammar items from which callers can select.

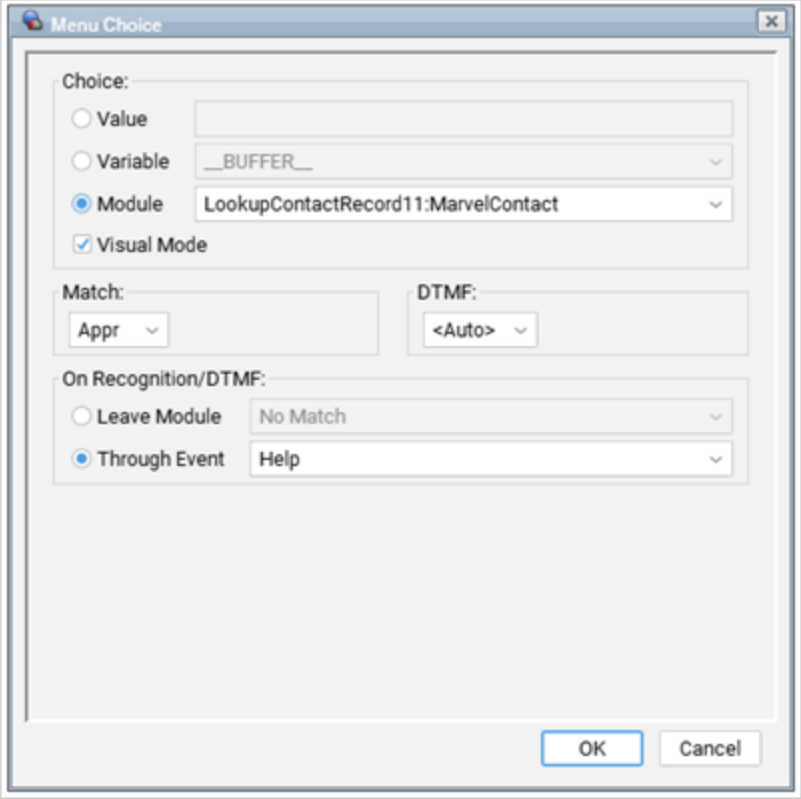
  - Choice: Grammar phrases that activate the actions. The grammar can be text, variables, or the results of the Query and Contact Lookup modules specified by a module name and field. The phrases can be used in generated prompts to create speech recognition grammar.
  - Match: Whether the match to the grammar can be approximate or must be exact.
  - DTMF: Phone key that corresponds to the grammar phrase. You can use a keypad options or automatic assignment.
  - Visual Mode: Whether the branch is enabled in the Visual IVR script.
  - Thumbnail: If Visual Mode is enabled, URL of the thumbnail image.
  - Action: Module exit that is activated when the speech is recognized. You can specify only one exit for each item. If you need additional branches, use a Case module after the Menu module.

  To add or modify a grammar item, click **Add** or **Edit**.

- **Menu Choice**: Menu that enables you to create or modify the grammar items that appear in the table of the General tab.

  Important

  Before using this menu, create the branches (see the Branches Tab) that you need to exit the module.



- **Choice**: Grammar item.
  - Value: Possible values, such as apples, cherries, and plums. Use this option as follows:
    - DTMF: Keep the caller's choice for further branching.
    - Speech recognition: Verify the caller's words, for example: *You have chosen {*`apples`*}. Is this correct?*
  - Variable: Name of IVR or CAV variable. The value is obtained from the variable.
  - Module: This option displays only when an IVR script contains Contact Lookup or Query modules to refer back to the results of the Contact Lookup or Query modules.
  - Visual Mode: Enable this feature so that your customer sees the image that you added to the script. However, in some cases, you may want to not show an image, especially if is not relevant, such as when your customers want to use a voice IVR version of the script to reach your Support organization or when you create a master script that you customize for voice and Visual IVR campaigns.

- **Match**: Whether the match should be exact or approximate.
  - Appr: Additional words after the grammar item are allowed if the required words are recognized, for example: The prompt [*For apple juice, say Apple or press 1. For orange juice, say Orange or press 2.*] enables callers to say *Apple, please* or *Apples of course* instead of only *Apple*.
  - Exact: Grammar items must be recognized completely.

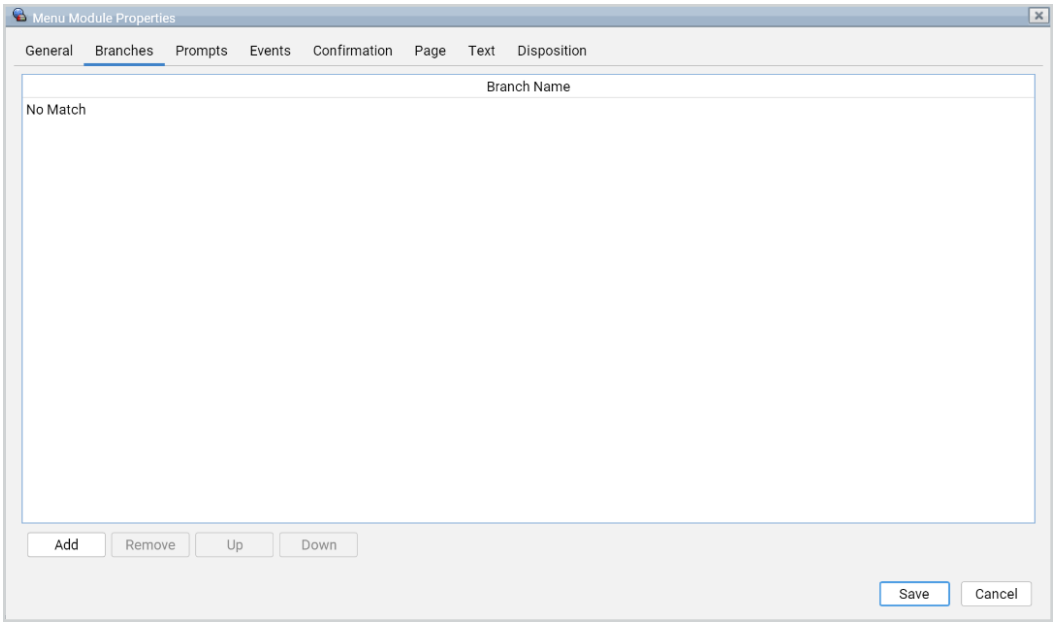
- **DTMF**: Phone key that corresponds to the grammar phrase. You can use any keypad option or automatic assignment. With automatic assignment, each option corresponds to the previous option plus 1. For example, with the prompt [*For apple juice, say Apple or press 1. For orange juice, say Orange or press 2.*], 1 and 2 are assigned automatically if you select <Auto>.

- **Thumbnail URL**: Optional URL of a thumbnail image to appear in that branch.
  - Value: Specific value.
  - Variable: Name of variable. The value is the URL of the image.

- **On Recognition/DTMF**: Branch to use for each successful or failed event.
  - Leave Module: Content of the Branches tab and the No Match branch, which is used when the comparison does not match one of the options, such as when the prompt specifies 1 or 2, but the caller presses 3 or nothing. If the number of attempts is exceeded, the exception NOT_ ENTERED occurs, and the script proceeds to the next module.
  - Through Event: List of events described in the Events Tab.

Branches Tab

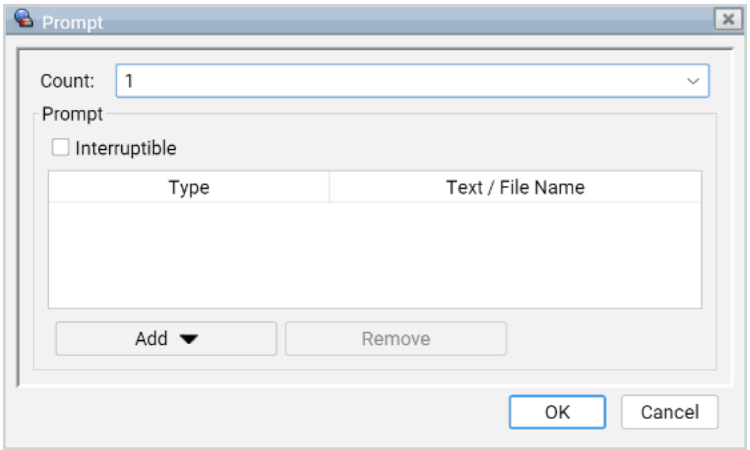
List of branches that exit the module. For example, when a caller speaks a phrase that contains the word *support*, the module exits the module through the Support branch. After you have created the exit branches, return to the General tab to create the grammar items.



Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.

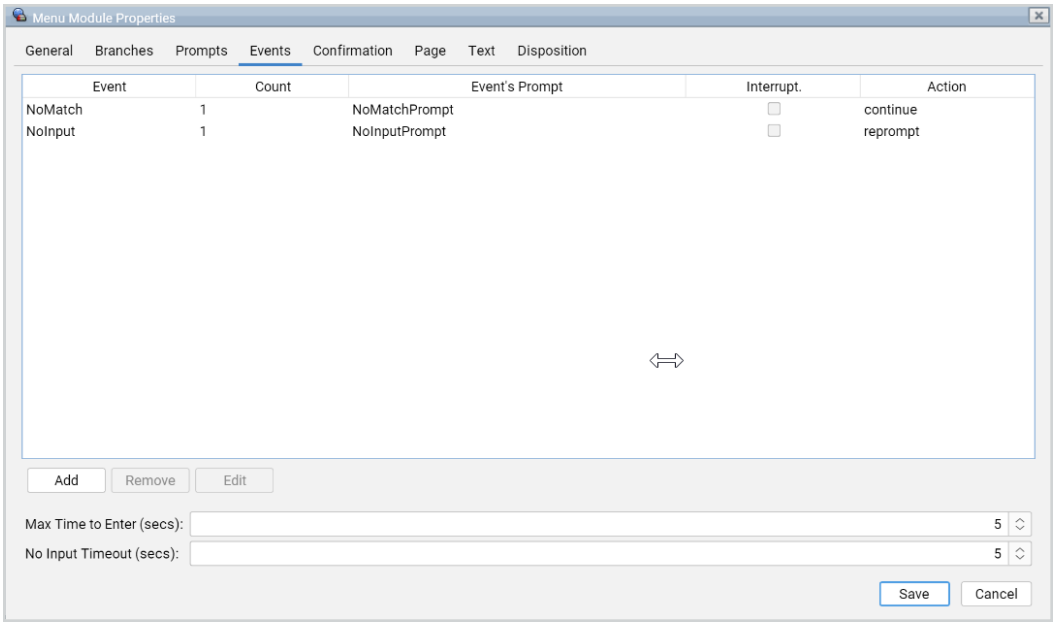
In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.



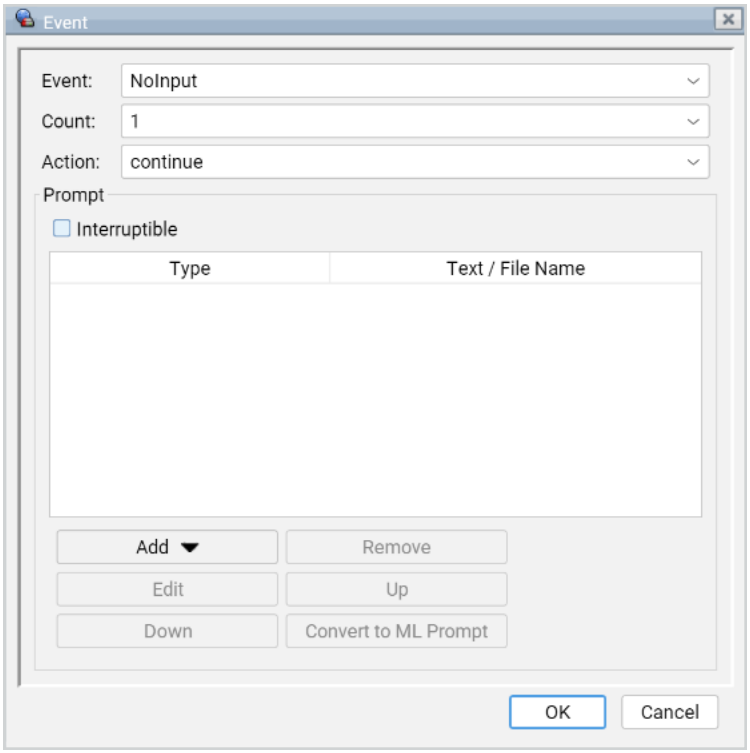
- **Count**: Minimum number of times that the user must speak for the prompt to be played. The default is 1.
- **Interruptible**: Whether to stop playing the prompt as soon as the caller has completed the requested action.
  - Enabled: Stop playing the prompt as soon as the caller has completed the action.
  - Disabled: Continue and finish playing the prompt even if the caller has completed the action.

Events Tab

List of event handling options. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in a specific sequence.



- **Event**: List of possible events:



  - NoMatch: Generated if the speech recognition engine cannot find a match in the grammar.
  - NoInput: Generated if the speech recognition engine does not hear any caller input before the time-out.
  - Help: Generated if the caller presses the Help button.

- **Count**: Number of possible instances (1–13) for an action, which enables you to handle differently multiple errors of the same type. The count is increased regardless of the event.

  Example: NoMatch event. The module repeats the prompt to the caller. If the number of attempts is exceeded, the exception NOT_ENTERED occurs, and the script proceeds using the No Match branch to the next module.

- **Action**: Action taken when the specified event occurs.

- Reprompt: Repeat the prompt listed in the Prompts tab.
- Continue: Proceed to next attempt without playing the prompt listed in Prompts tab.
- Exit: Exit by the NoMatch branch at the bottom of the module. This event can occur even if the maximum number of attempts has not been reached. The NoMatch branch must be linked to subsequent IVR modules to handle the error.

- **Interruptible**: Whether to stop playing the prompt as soon as the caller has completed the requested action.
  - Enabled: Stop playing the prompt as soon as the caller has completed the action.
  - Disabled: Continue and finish playing the prompt even if the caller has completed the action.

- **Max Time to Enter**: Number of seconds that the module waits for callers to finish entering the information. If callers exceed the time, the IVR script proceeds to the next module or repeats the current module. The default is 15 seconds.

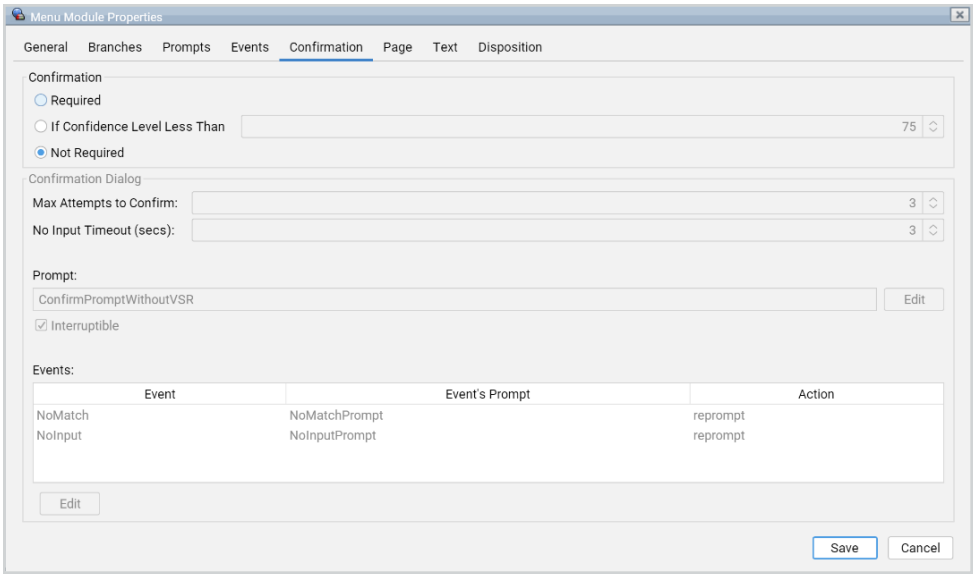
- **No Input Timeout**: Number of seconds allowed for the caller to provide no input. After the time-out, the NoInput event occurs. If the number of attempts is exceeded, the exception NOT_ENTERED occurs, and the script proceeds to the next module using the No Match branch.

- **Recognition Confidence Threshold**: Percentage confidence level that the system can recognize the caller's input, which can depend on the caller's accent, the quality of the phone connection. This threshold indicates when to consider the speech recognition successful or invalid. The default is 60%. If you set the threshold too high, the number of no matches may be artificially too high.

Confirmation Tab

Prompt used to verify that the system recognized the speech correctly. If the caller confirms the input, the script proceeds to the next module. Otherwise, the prompts are repeated.

- Required: Confirmation prompt is played after each caller's input. This option enables all others on this page.
- If Confidence Level Less Than: Confirmation prompt played only if the confidence level is low. This option enables all others on this page.
- Not Required: Confirmation prompt disabled. This option disables all others on this page.

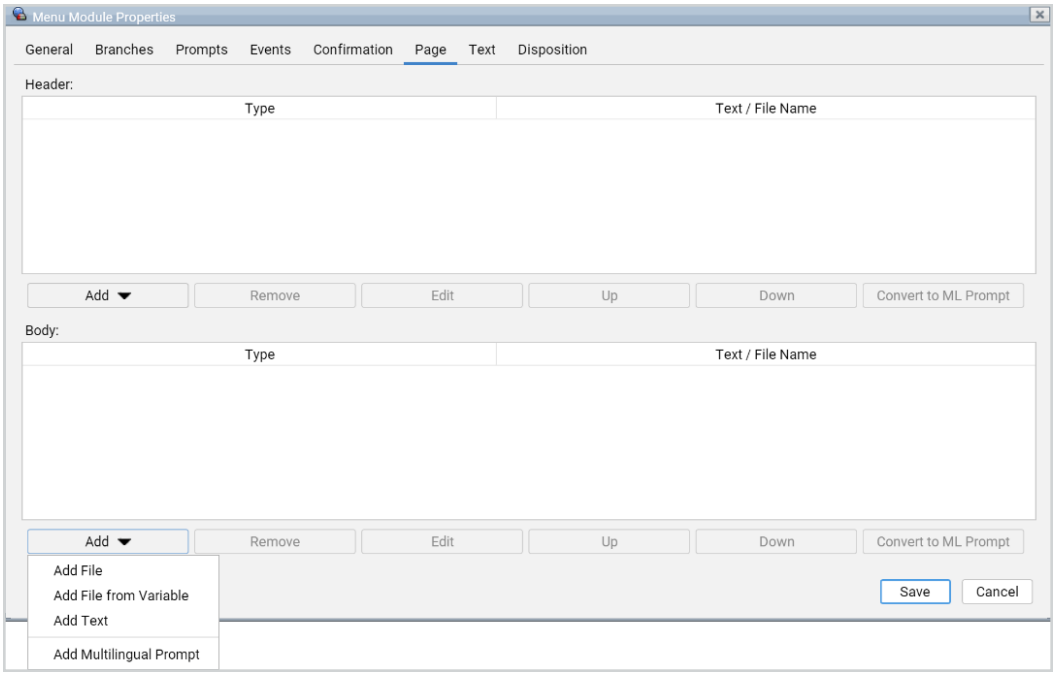


- **Max Attempts to Confirm**: Maximum number of times allowed to enter the confirmation answer. For example, the caller may say 1 or presses 1. If the number of attempts is exceeded, the exception NOT_ENTERED occurs, and the script proceeds to the next module.
- **No Input Timeout**: Number of seconds allowed for the caller to provide no input. After the time-out, the NoInput event occurs.
- **Prompt**: Prompt that describes the confirmation options. The local module variable $SWI_LITERAL is used to repeat the caller's input as it was recognized.
- **Events**: List of possible confirmation events:
  - NoMatch: Generated if the speech recognition engine cannot find a match in the grammar.
  - NoInput: Generated if the speech recognition engine does not hear any caller input before the time-out.
  - Help: Generated if the caller presses the Help button.

Page Tab

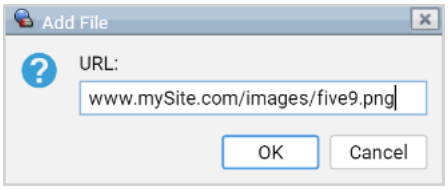
This tab contains the list of Visual IVR prompts that are shown in the customer's browser when a IVR script is executed. You may add images to pages and menus to enhance your brand or to describe a product or service, but you cannot add links to images. Prompts are shown as follows:

- If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.
- If this tab does not contain prompts, the prompts in the Prompts tab are shown.

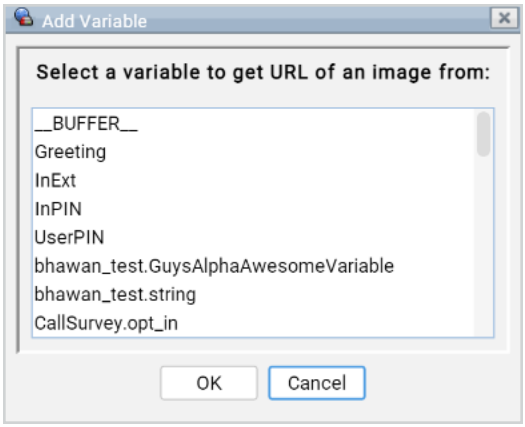


This tab enables you to add different types of prompts:

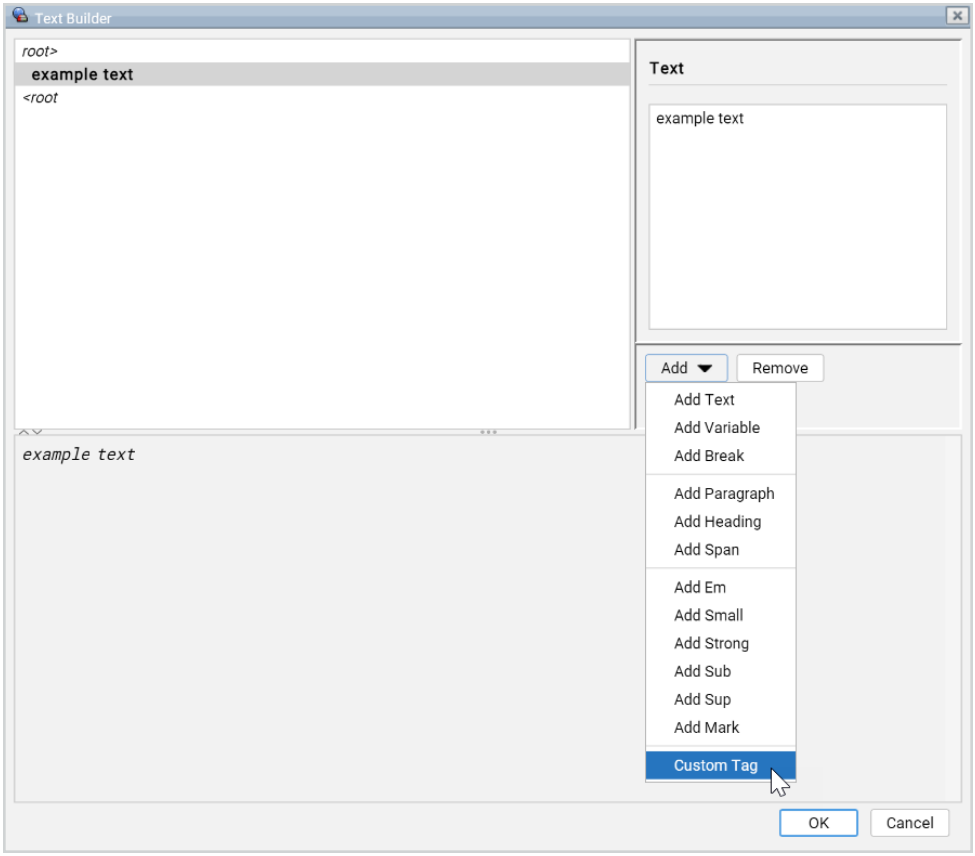
- **File**: URL of an image.



- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.
- **Variable**: Variable that contains the URL of an image.

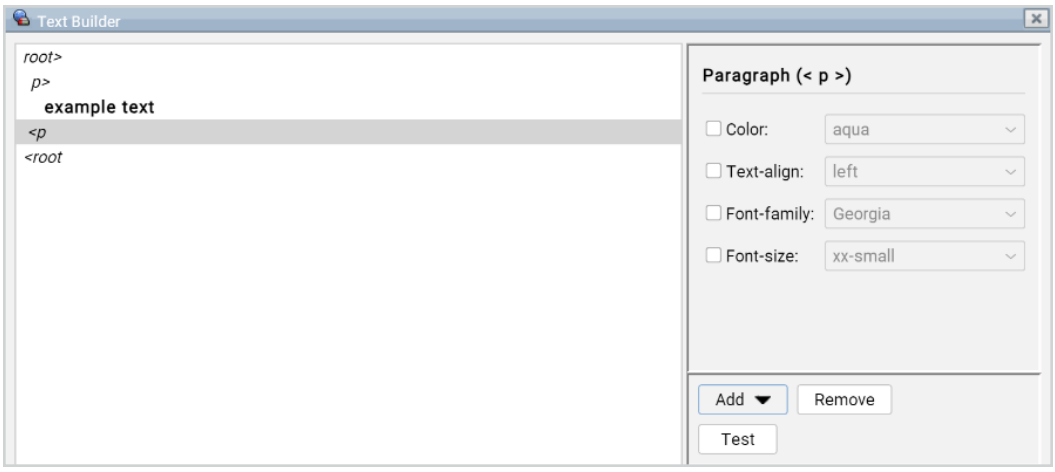


- **Custom Tag**: See detailed usage information in [Using the Visual IVR URL](#).



The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in

the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break. The Test button enables you to preview the HTML text.



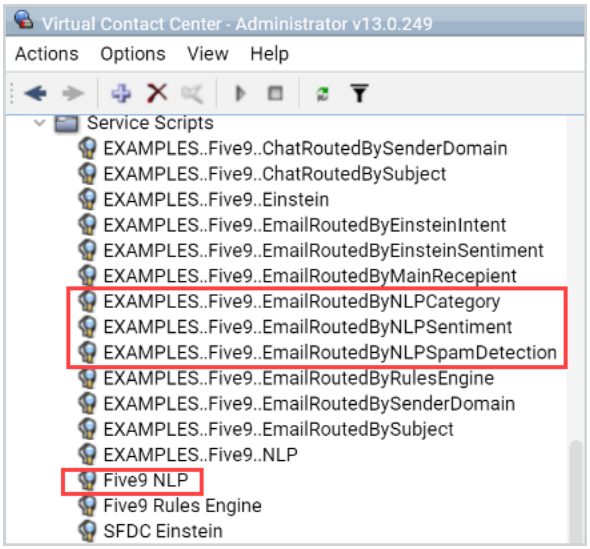
Dispositions Tab

The default disposition is Caller Disconnected. For more information, see **Selecting Dispositions**.

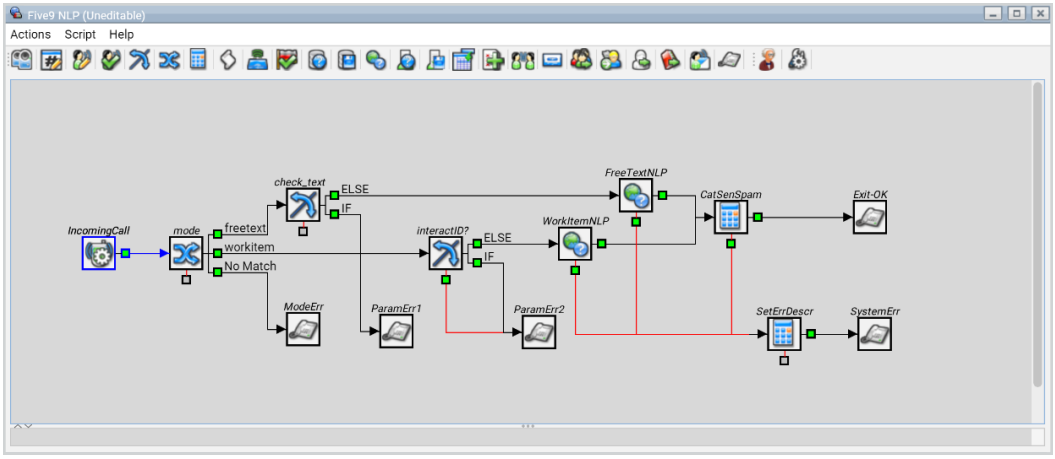
Natural Language Processing Module

The Five9 Natural Language Processing (NLP) module enables you to harness the power of natural language processing in your IVR script. This section details using the Five9 NLP engine to identify sentiment, spam, and sentiment to provide enhanced routing decisions. Using natural language processing requires training the NLP engine for your specific needs. Further information about natural language processing can be found in the Digital Engagement Administrator's Guide .

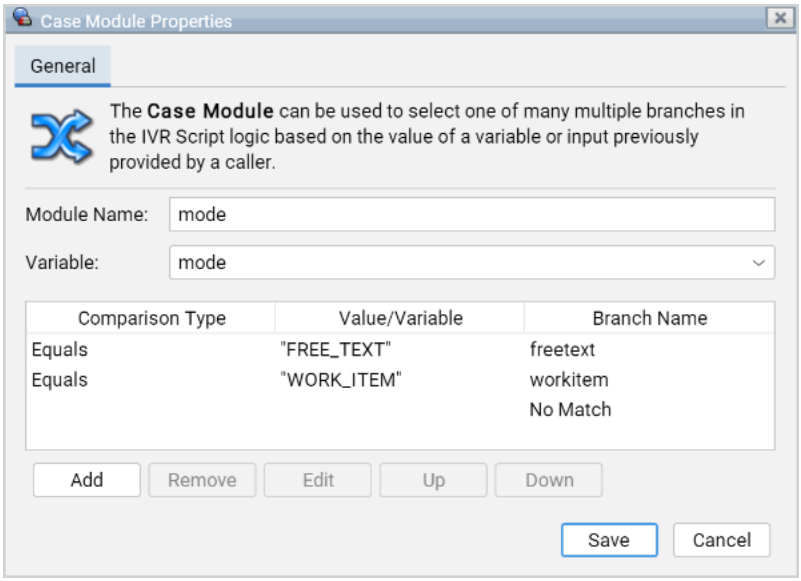
You can access the NLP module for non-editable viewing at **IVR Scripts > Service Scripts > Five9 NLP**. To edit any service script file, right-click the script name and select make a copy, then rename and save or go directly into the IVR builder.



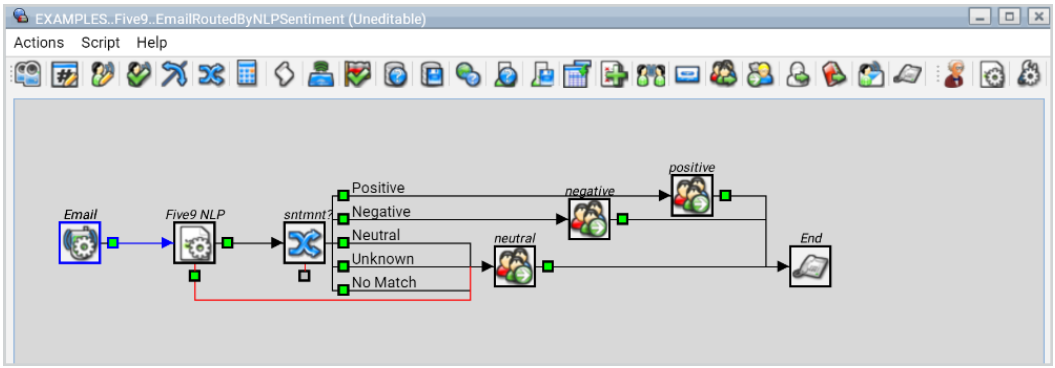
The Five9 NLP module is a pre-packaged IVR script within a module. The example file is shown below.



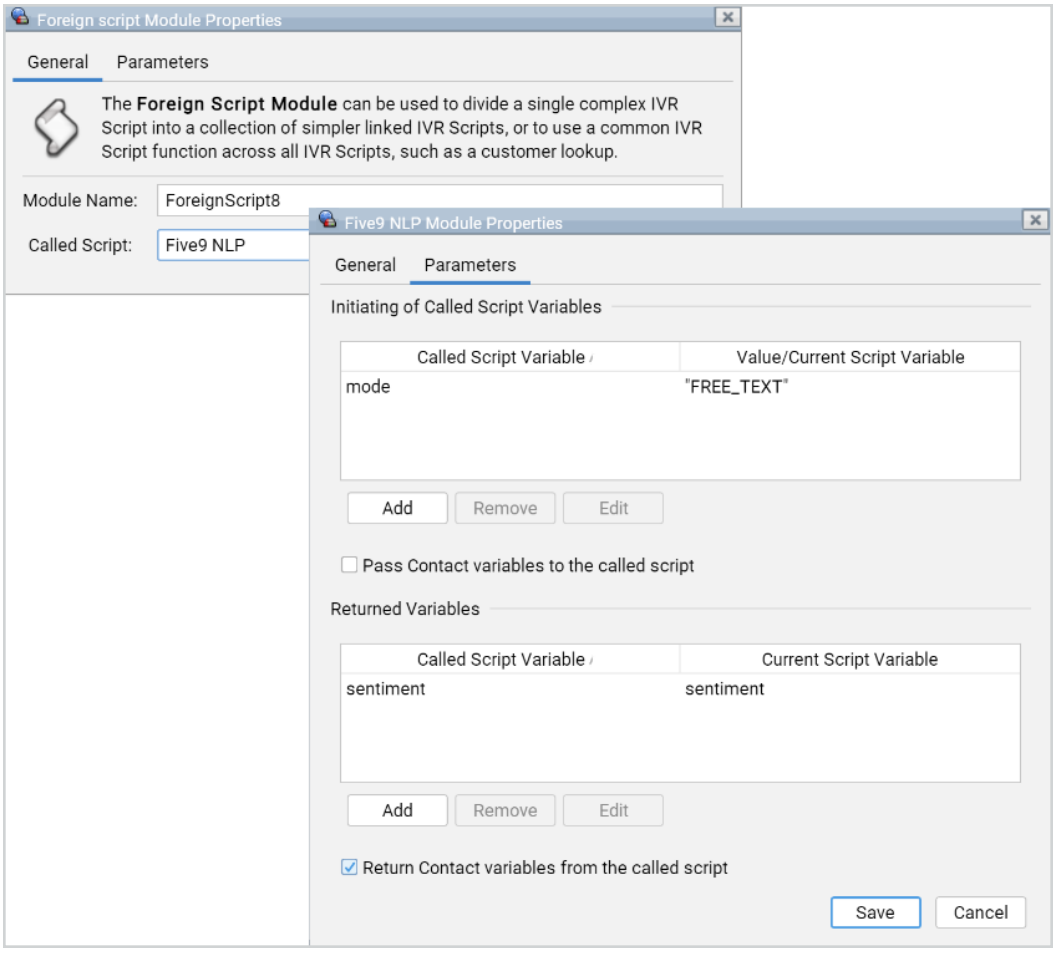
You can view each module used within the script. For example, opening the properties for the first Case module within the script shows the distribution for free text or work item evaluation.



You can drag the NLP module directly to your canvas, or create a duplicate of a prepared script and substitute your domain-specific information. The example below shows a script designed to route by NLP sentiment. More information about NLP sentiment, spam detection, and training can be found in the Digital Engagement Administrator's Guide.



Once you have made a duplicate script, or otherwise introduced the NLP module to your IVR script, right-click or double-click to access the module properties.

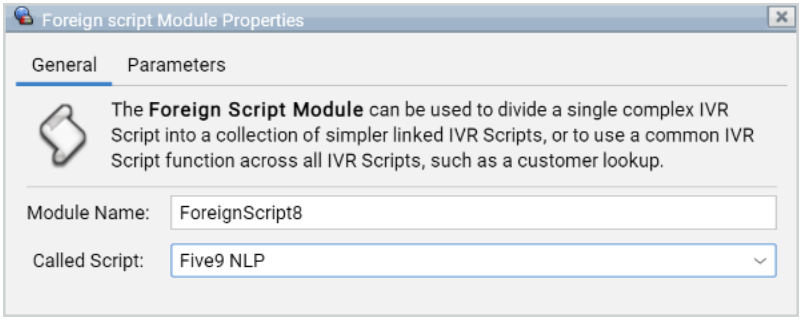


You can rename the module in the **General** tab and assign your specific parameters in the **Parameters** tab.

Properties

General Tab
Parameters Tab

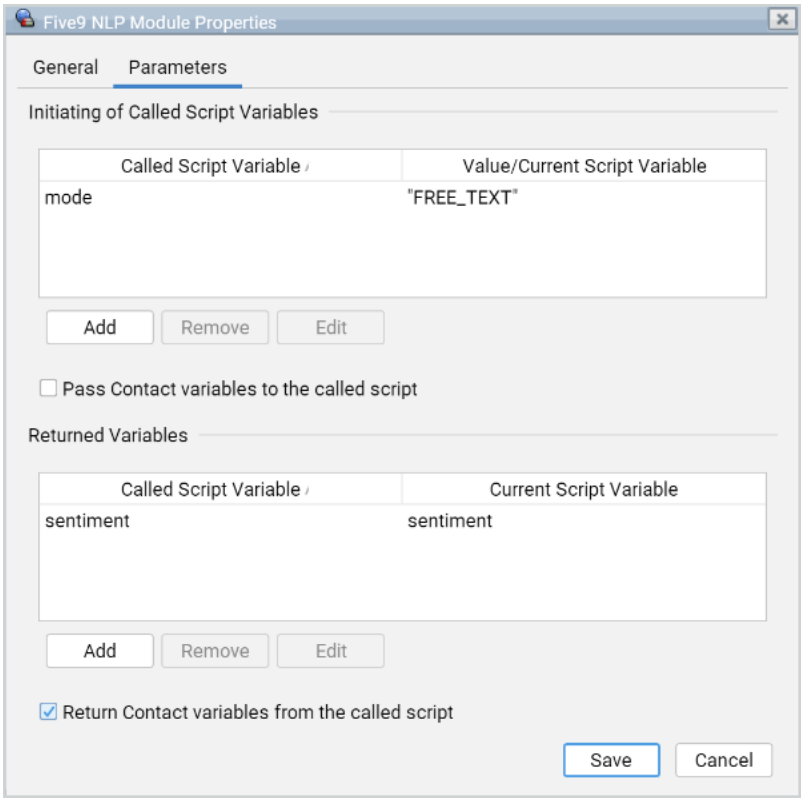
General Tab



- **Module Name**: Name shown in IVR builder.

Parameters Tab

- **Input Parameters**: Contains called script with variable parameters:



  - **mode**: Determines whether NLP engine evaluates free text or Five9 work item. Default is free text.

- Select check box to pass contact variables to the called script.

- **Possible Errors**:
  - **91**: System errors; incorrect input variables.
  - **92:** Error returned by the NLP system.

Example IVR Scripts with Five9 NLP Module

To see a working example before you create your own, you can open any of the example NLP files listed under the **IVR > Service Scripts** subfolder.

Example

Examples..Five9..EmailRoutedByNLPCategory: Routes an email based on Five9 NLP categorization. Input parameters:

- **category**: Name of the NLP category. This value may be omitted for the main category.
- **Skill2CategoryMapping**: Key-value list {"`valueX":"skillX`, ..."}, where `valueX` are the possible values of the category and `skillX` are the names of corresponding queues for routing.
- **general_skill**: Name of queue for uncategorized emails.

Example

Examples..Five9..EmailRoutedByNLPSentiment: Routes an email based on Five9 NLP sentiment. Input parameters:

- **positive_skill**: Name of a queue used for routing email interactions with positive sentiment.
- **negative_skill**: Name of a queue used for routing email interactions with negative sentiment.
- **general_skill**: Name of a queue used for routing email interactions with neutral or undefined sentiment.

Example

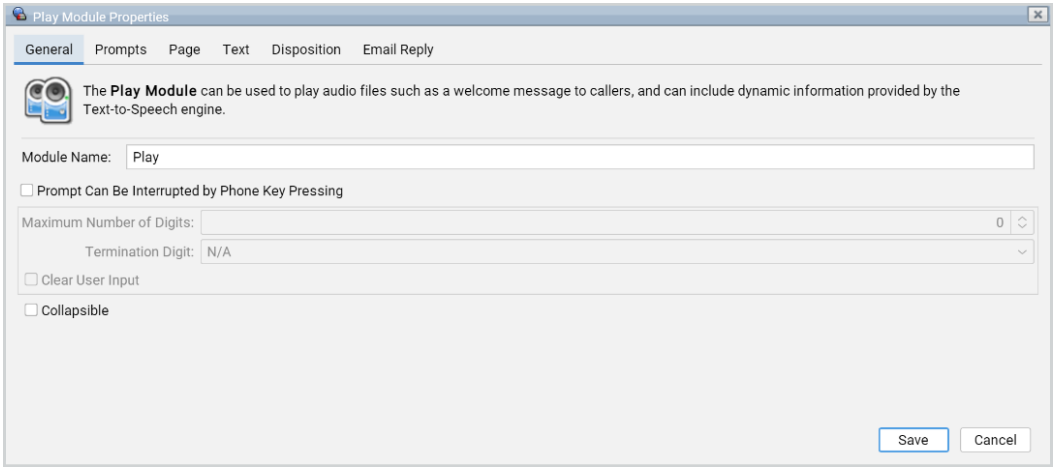
Examples..Five9..EmailRoutedByNLPSpamDetection: Filters out spam based on Five9 NLP categorization. Input parameters:

- **general_skill**: Name of the queue that will receive non-spam emails.

Play Module

The Play module enables you to play prompts and greetings anywhere in the script. For an example, see **Creating an IVR Script** and **Using an Agent Extension in an IVR**.

When using Visual IVR scripts, you may also add images to pages and menus to enhance your brand or to describe a product or service. However, you cannot add links to images. For more information, see Page Tab.



Properties

General Tab
Prompts Tab
Page Tab
Dispositions Tab
Email Reply Tab

General Tab

- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.

- **Prompt can be interrupted by phone key pressing**: Select this option when your prompt asks for input from the caller, such as *press 1 for sales* or when you want to allow a termination digit. When using this option, follow the Play module with

the Get Digits or Input module.

> **Note**
> When you expect caller input, Five9 recommends that you use the Get Digits module instead of the Play module.

This option activates the other options below.

- **Maximum Number of Digits**: Available only when using interruptible prompts. Represents the number of digits that the caller may press. When the digits are entered, the prompt stops, and the script proceeds to the next module. For example, if your prompt is *press 1 for sales*, *2 for Support, or 3 for Billing,* the maximum number of digits is 1. If you are asking for a four-digit extension, the maximum number of digits is 4.

- **Termination Digit**: Option for callers to exit the module without entering an extension by pressing the key specified.
  - Enabled: the possible options are # (pound) and * (star).
  - Disabled: the value N/A disables the option.

- **Clear User Input**: Whether to erase the information entered by the caller before reaching this module.
  - Enabled: delete all user input before this module.
  - Disabled: Do not enable if, before this module, you have a prompt that provides instructions, such as pressing a key (termination digit) to exit the queue.

- **Collapsible**: Visual IVR feature that applies to all types of prompts. Whether to concatenate all the prompts in the module whether they are played (standard prompts) or displayed (Visual IVR prompts) to callers.
  - Enabled: Concatenate prompts. Callers see at once all the prompts in the same window.
  - Disabled: Do not concatenate prompts. Callers hear or see each prompt after performing the requested action.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.

In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.

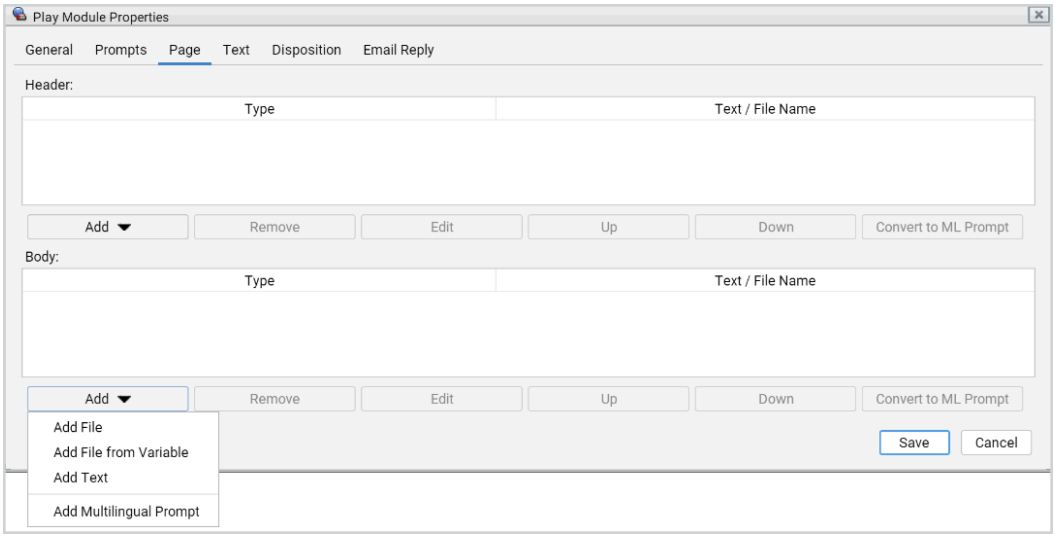
- **TTS Say As Options**: Described in the table following this one.

Page Tab

This tab contains the list of Visual IVR prompts that are shown visually in the customer's Web browser when a IVR script is executed.

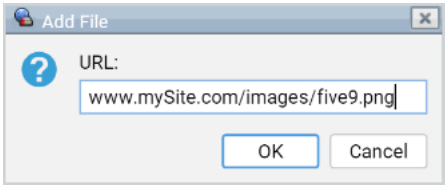
If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.

If this tab does not contain prompts, the prompts in the Prompts tab are shown.

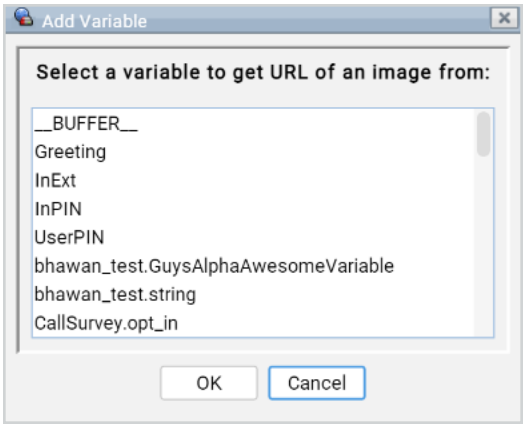


This tab enables you to add different types of prompts:

- **File**: URL of an image.

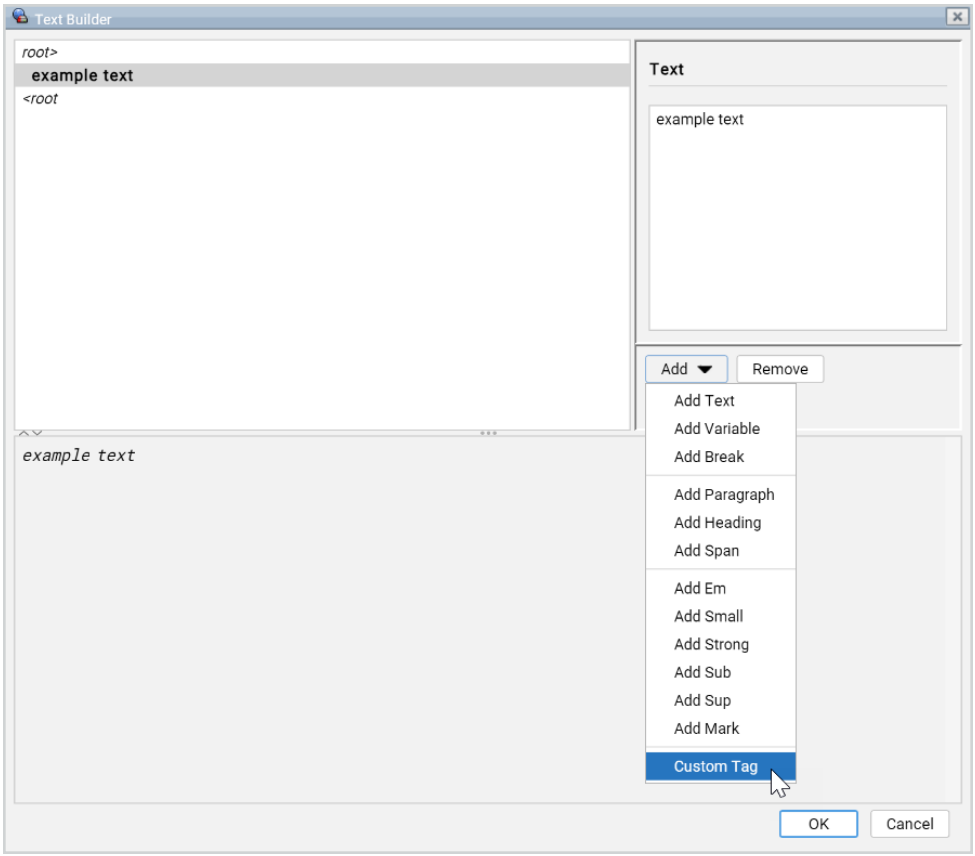


- Variable: Variable that contains the URL of an image.

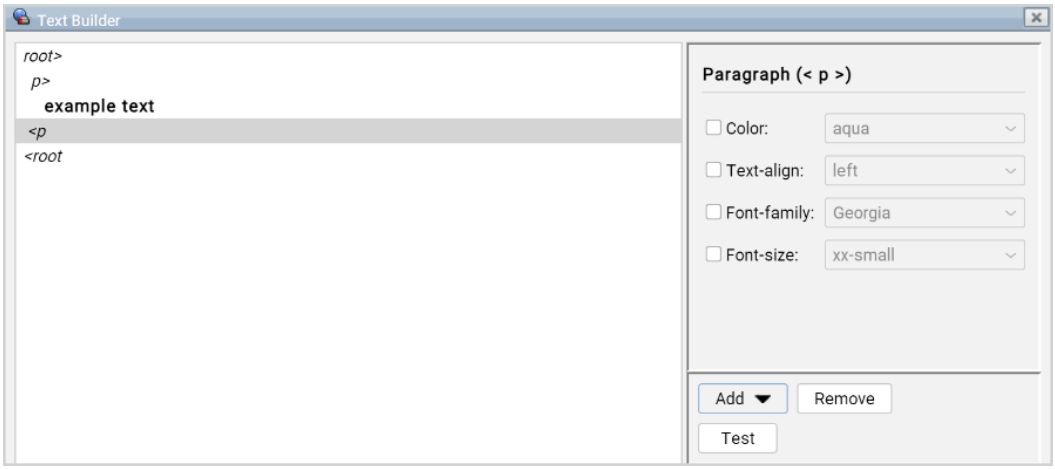


- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.

- Custom Tag: For detailed usage information, see [Using the Visual IVR URL](#).



The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break. The Test button enables you to preview the HTML text.



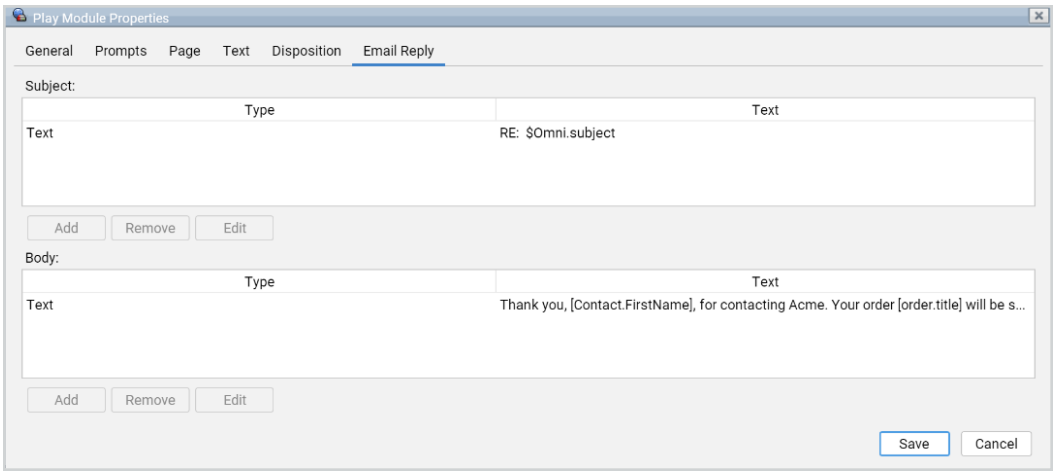
Dispositions Tab

The default disposition is Caller Disconnected. For more information, see **Selecting Dispositions**.

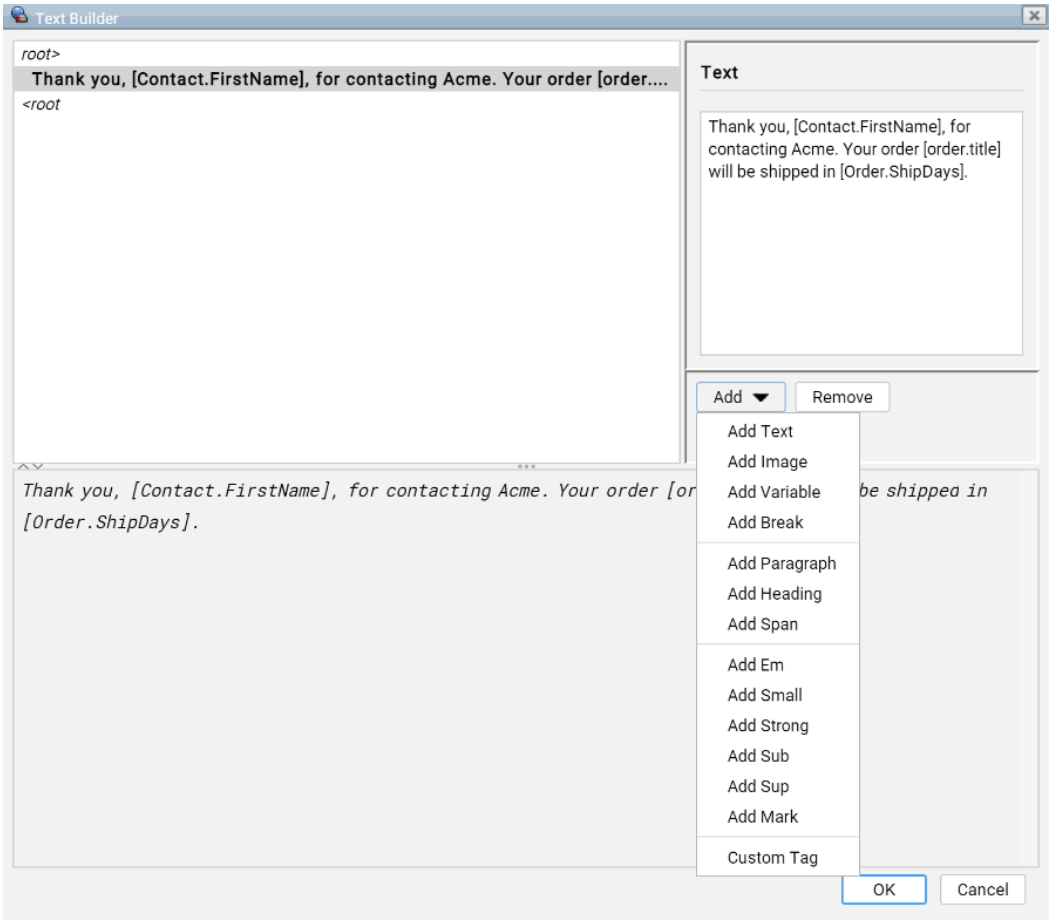
Email Reply Tab

Use this tab with Five9 Engagement Workflow to create a rich text automatic response or by using the IVR Text Builder to send an acknowledgment. The reply subject is pre-populated and editable.

You can specify a single reply for each Play module that you use and configure.



To create the body of your reply using the IVR Text Builder, click **Add**.

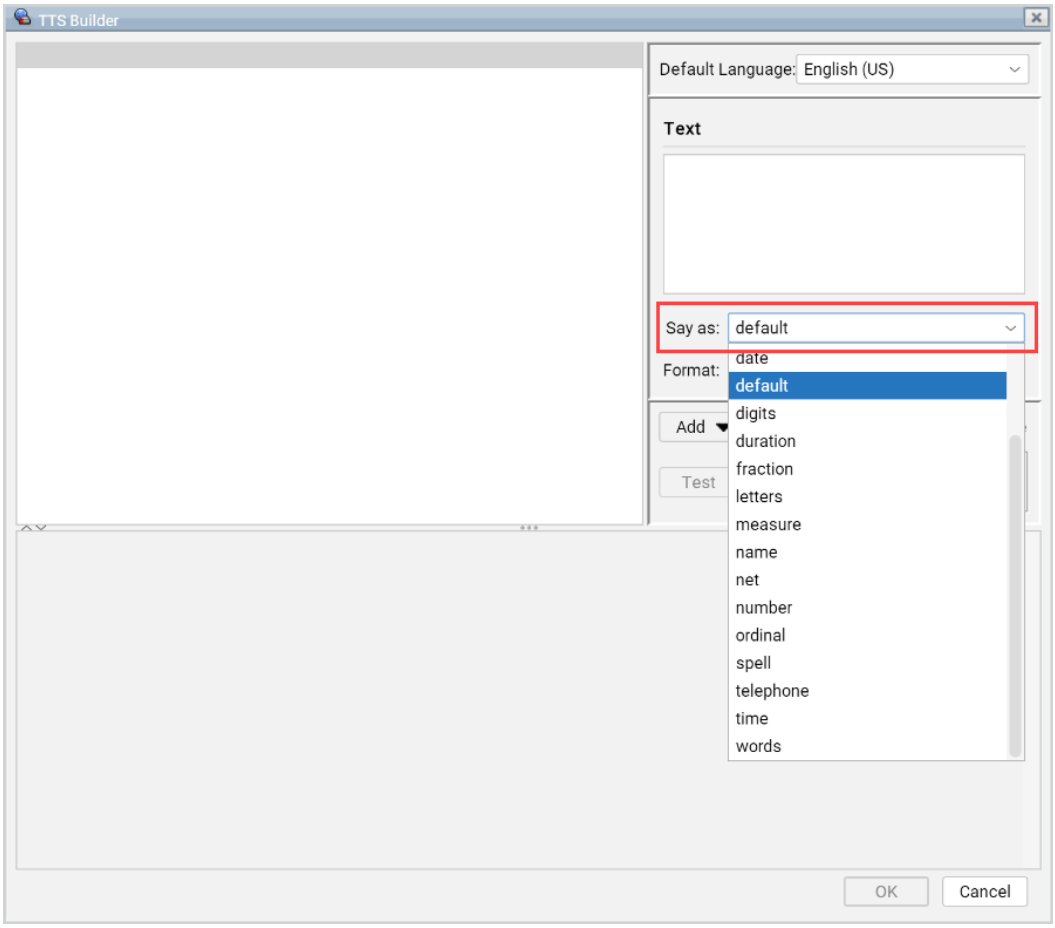


- **Type**: Reply format.
- **Text:** The email body of your reply may include up to 24KB in the form of: HTML, call variables, and embedded images.

Example

Thank you, [Contact.FirstName], for contacting Acme. Your order [order.title] will be shipped in [Order.ShipDays].

Text-to-Speech *Say As* Options



The Text-to-Speech (TTS) ***Say as*** options enable you to play words or phrases to your customers in a contextual format. In certain instances, the text should be split apart if it contains words that require special treatment. For example, phone numbers that are part of a larger phrase should be split out into a separate text element so that you can apply the ***Say as telephone*** rule to it. The descriptions and data types are detailed below.

Say as...	Format	Description	Data Type
Acronym	N/A	Sequences of letters and digits are spoken as words when this is considered natural in the target language, such as NATO or UNESCO for English. Otherwise, letters	STRING

Say as...	Format	Description	Data Type
		and digits are pronounced individually, like API for English.	
Address	N/A	Used for postal addresses. **Note:** Regional localization for **Languages** improves accuracy in speaking addresses. For example, English (GB) is better able to accurately reference United Kingdom addresses than English (US).	STRING
Cardinal	N/A	Supported if relevant in the target language. Roman cardinals are often supported.	INTEGER, STRING
Currency	N/A	For text that is a currency amount the currency symbol may be present in the enclosed text. This mode supports currencies commonly specified in the country target language, such as $ and ¢ for US English.	CURRENCY, NUMBER, INTEGER, STRING
Date	d, dm, dmy, m, md, mdy, my, y, ym, ymd	Use for date strings.	DATE, STRING
Decimal	N/A	Same as number with format decimal. Use of the separator for the integral part is optional. For example, 123456.123 and 123,456.123 are pronounced in the same way for US English.	INTEGER, NUMBER
Digits	N/A	Numbers must be read digit by digit. Decimal periods or commas should be pronounced. Same as number with format digits.	NUMBER, INTEGER
Duration	h, hm, hms, m, ms, s	Duration with format hms is read as <h> hour(s), <m> minute(s), and <s> seconds.	INTEGER, TIME, STRING
Fraction	N/A	Same as number; with format fraction. This mode will pronounce 1/3 as one	STRING

Say as...	Format	Description	Data Type
		third.	
Letters	N/A	Pronounce alphanumerical strings as a sequence of individual letters and digits. For true spelling of all readable characters, use the ***Say-as*** value spell.	STRING
Measure	N/A	Variety of units, like km, hr, dB, lb, MHz are supported; the units may appear immediately next to a number, such as 1cm, or be separated by a space, as in 15 ms.	STRING
Name	N/A	Interpret a string as a proper name if possible.	STRING
Net	email, uri	May be used for email addresses.	STRING
Number	Cardinal, decimal, digits, fraction, ordinal, telephone	Only formats relevant in the target language are supported. All the format values are supported as interpret-as values as well, behaving the same for either syntax.	INTEGER, NUMBER, STRING
Ordinal	N/A	Only formats relevant in the target language are supported. This mode will adhere to specified rank or series.	INTEGER
Spell	N/A	Characters in the text string are pronounced as individual characters.	STRING
Telephone	N/A	Supports telephone numbers commonly specified in the country corresponding to the target language.	INTEGER, STRING
Time	h, hm, hms	Hour should be less than 24, minutes and seconds less than 60. AM/PM is read only if explicitly specified.	TIME, STRING
Words	N/A	Words are read instead of pronouncing them as strings of individual letters and digits. The characters of a word may still be uttered individually for particularly difficult to pronounce character sequences. This mode is also meant for acronyms to be read as words.	STRING

Query Module

The Query module enables you to obtain database information from an external Web site, access third-party Web services, or integrate an external source of contact data. You can send GET or POST requests in which input parameters are appended to the request URL or XML Web service POST requests.

When using Visual IVR scripts, you may also add images to pages and menus to enhance your brand or to describe a product or service. However, you cannot add links to images. For more information, see Page Tab.

Types of Database
Properties
Use Case

This chapter is intended for developers who understand these technologies and protocols:

- Client-server architecture
- XML and Web Services
- HTTP protocol
- Web programming languages, such as ASP, Perl, PHP, Java, or Ruby

Types of Database

The flow of information differs depending on the type of database that you access:

- If the database supports Web APIs, you can access information directly with the Query module.

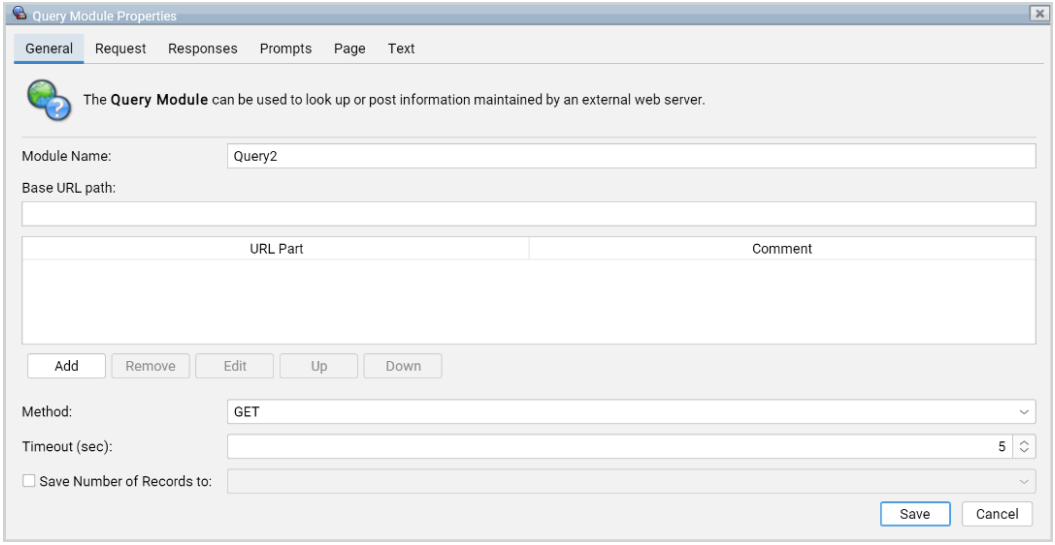
- If the database, such as MySQL™, does not support Web APIs, you can use a Web server as a proxy for the database:
  - **a** Send an HTTP request from the Query module to your Web server. To create a secure connection, use basic access authentication.
  - **b** Add a script to your Web server. The script returns the data in the format specified in the script.

Properties

The URL standard contains a port specification, for example: www.domain.com means http://www.domain.com:80. The default port is generally omitted. Five9 URLs use only port 80.

General Tab
Request Tab
Response Tab
Prompts Tab
Page Tab
Text Tab

General Tab



- **Base URL Path**: HTTP or HTTPS request URL. For secure connections, use certificates when the external Web server uses a root certificate (unsigned/self-signed public key certificate). You can import CRT files or enable Accept All Certificates. To configure certificates go to **Actions > Configure > Certificates**.

> **Important:** If your parameters contain sensitive data, use secure URLs and the POST method. You cannot save a query that contains sensitive data with a non-secure URL or the GET method.

- **URL Part**: Specify portions of the intended URL by using variables to form either part or all of the URL path. The URL should have this format:

  ```
  <BaseURL>/<URLPart1>/..../<URLPartN>/
  ```

  GET parameters should have this format:

  ```
  <BaseURL>/<URLPart1>/..../<URLPartN>/?<param1>
  =<value1>&...&<paramM>=<valueM>
  ```

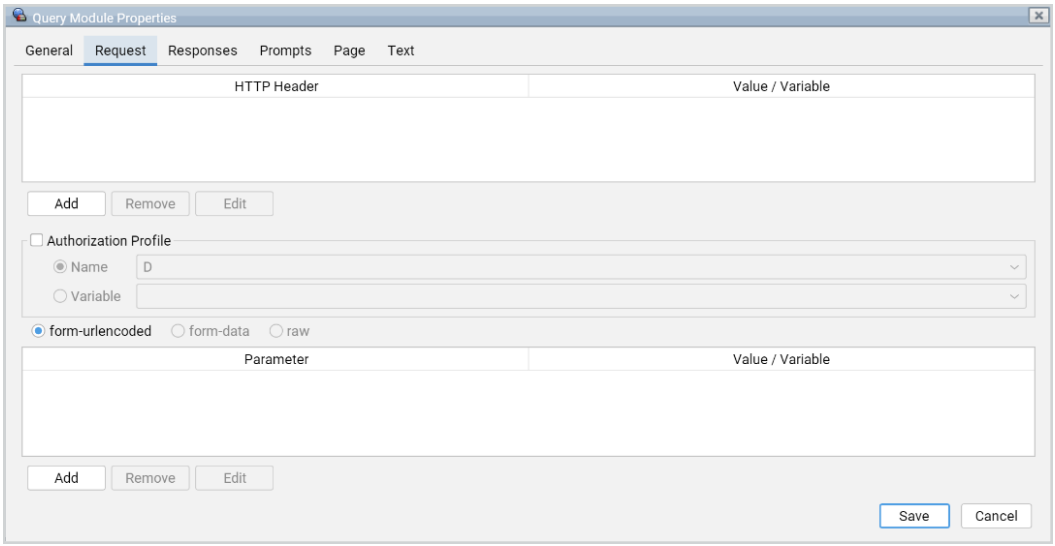
- **Method**: Request method:
  - GET
  - POST
  - PUT
  - DELETE

- **Fetch Timeout**: Maximum number of seconds for receiving a response from the script. The default is 5 seconds. After the time-out, the script exits the module.

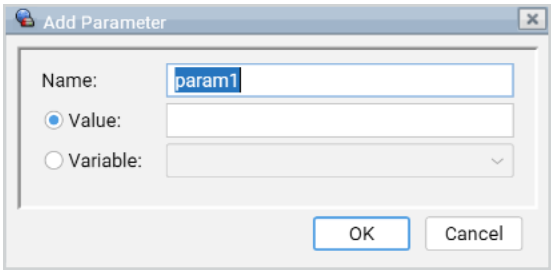
- **Save Number of Records to**: If several records match the search criteria, whether to save the number of matched records in the selected integer CAV variable.

Request Tab

Contains a query string parameter area to define part(s) of the URL containing data that does not fit conveniently into a hierarchical path structure:



- **Parameters**: You can import a file that contains your request code, and you can add variables. All parameters are encoded and separated by an ampersand (&). Supports `multipart/form-data`.



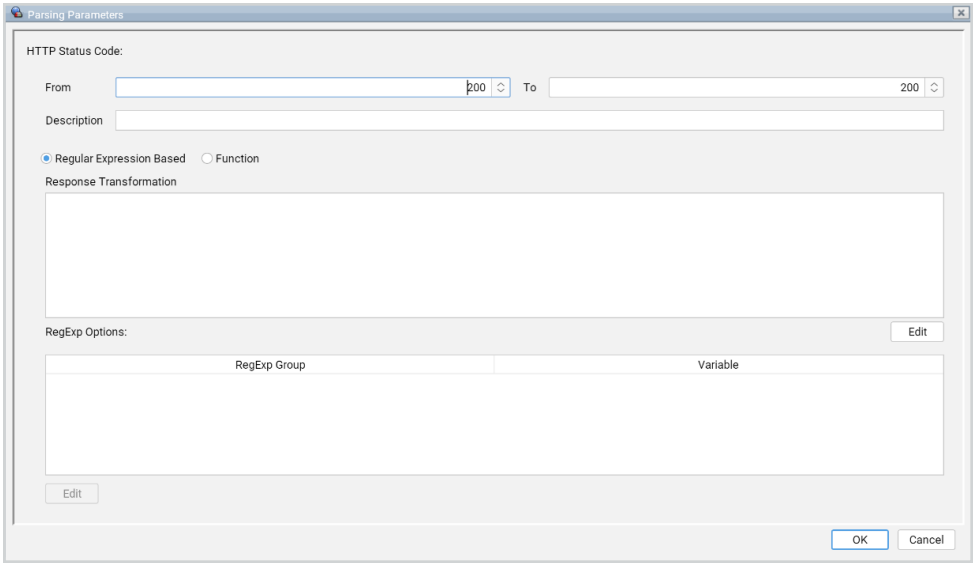
- **Authorization Profile**: Name of authorization profile for validation.

Response Tab

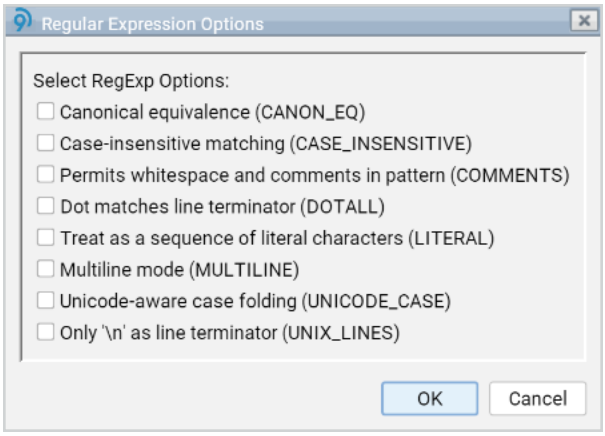
The Response tab enables you to configure several sets of parsing parameters. The parsing parameters correspond to one or more http status codes or their ranges. Route the call to the appropriate following branch:

- Success: Data retrieved successfully.
- Timeout: Query exceeded time allowed.
- Failure: No records found.
- **HTTP Parsing**: Add RegEx or function to parse the returned parameters.

  Returned HTTP Status Code (INT) and Reason Phrase (STRING) may be saved in variables.



- **Regular Expression Based**:



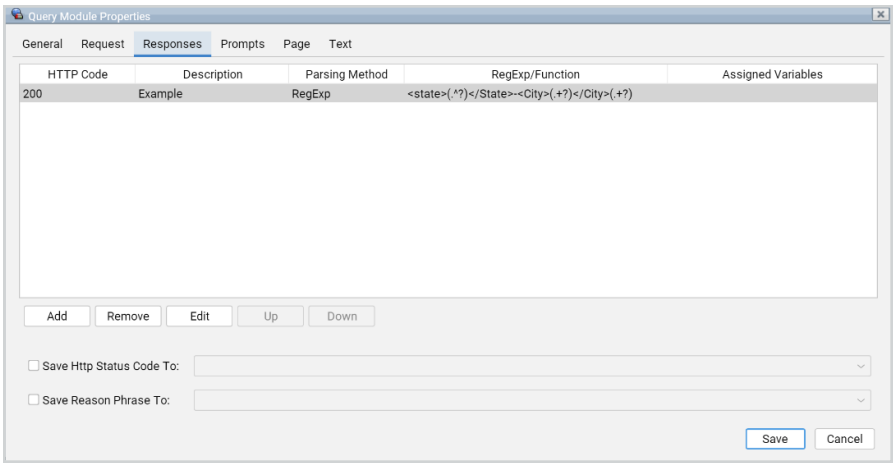
  - Response transformation field: Add regular expressions enclosed in parentheses. Regular expressions are automatically added to the RegExp Group field.

    Example

    `<State>(.^?)</State>-<City>(.+?)</City>(.+?)`

    This expression matches the first instance of one or more characters, stops matching, and returns the result.

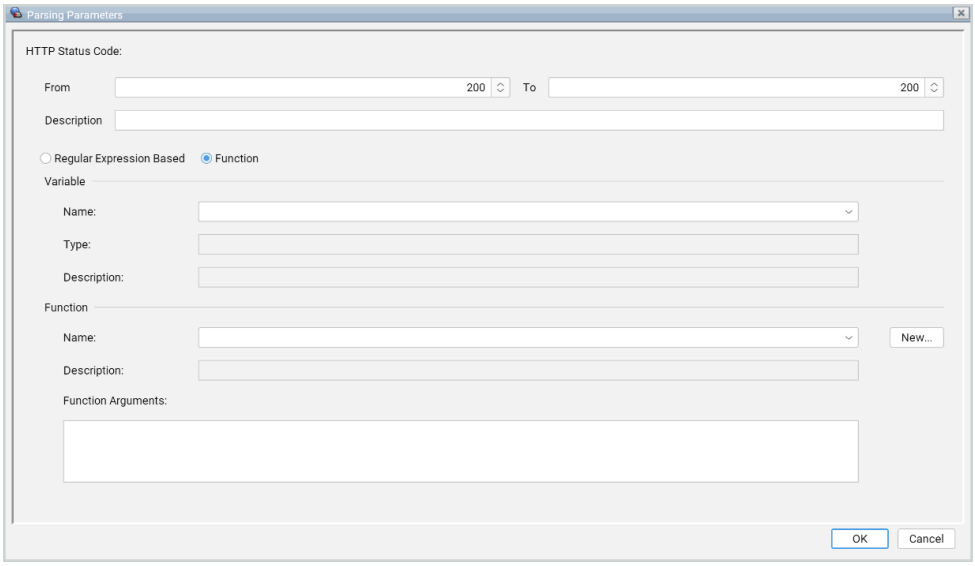
  - Map the expressions to IVR variables in the RegExp Group field. Assign the result to a variable. In this case, the result is assigned to the `City` variable.



  - **From** and **To** fields contain 3-digit integers.

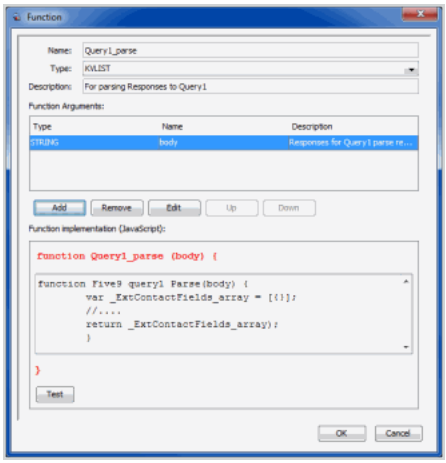
  - Parsing rules may overlap by code ranges. In this instance, the top rule applies.
  - Rule order may be changed using Up/Down buttons.
  - If the status code of a response matches a rule, the main exit of the Query module is activated. Otherwise, an exception occurs.

- **Function**: Enables you to apply any function for parsing the query response.



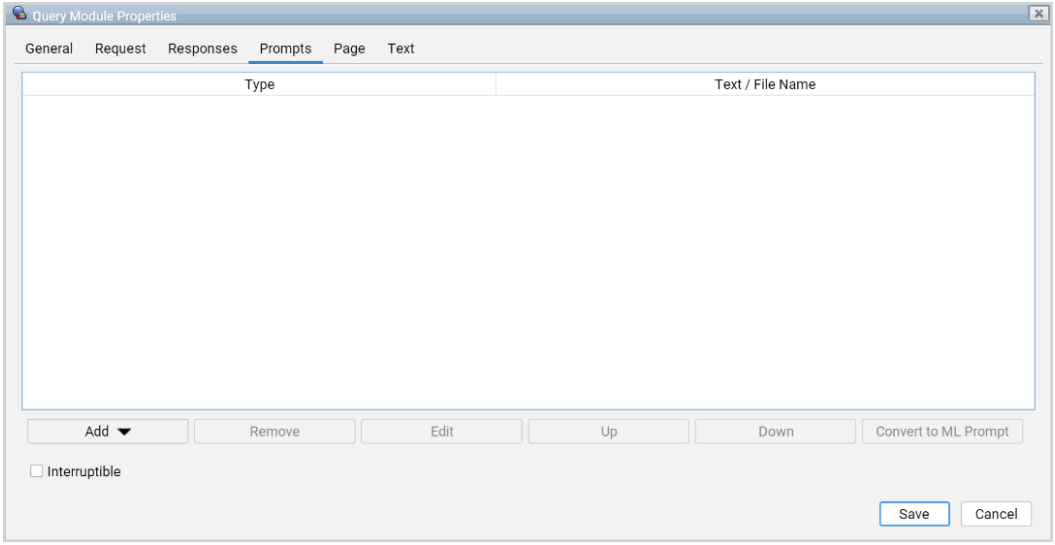
  - Variable
    - Name: Variable source, such as __BUFFER__, or __ ExtContactFields__.
    - Type: Variable type, such as: String, KVList.
    - Description: Variable description.
  - Function: Use canned functions or define a new function and (JavaScript) implementation.
    - Name: Defined functions, such as: concat, substring, ...
    - Description: Function description.
    - New (function): Enables function creation.

New Function Example



Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt can be interruptible.



- **Interruptible**: Whether to stop playing the prompt as soon as the requested operation is completed.

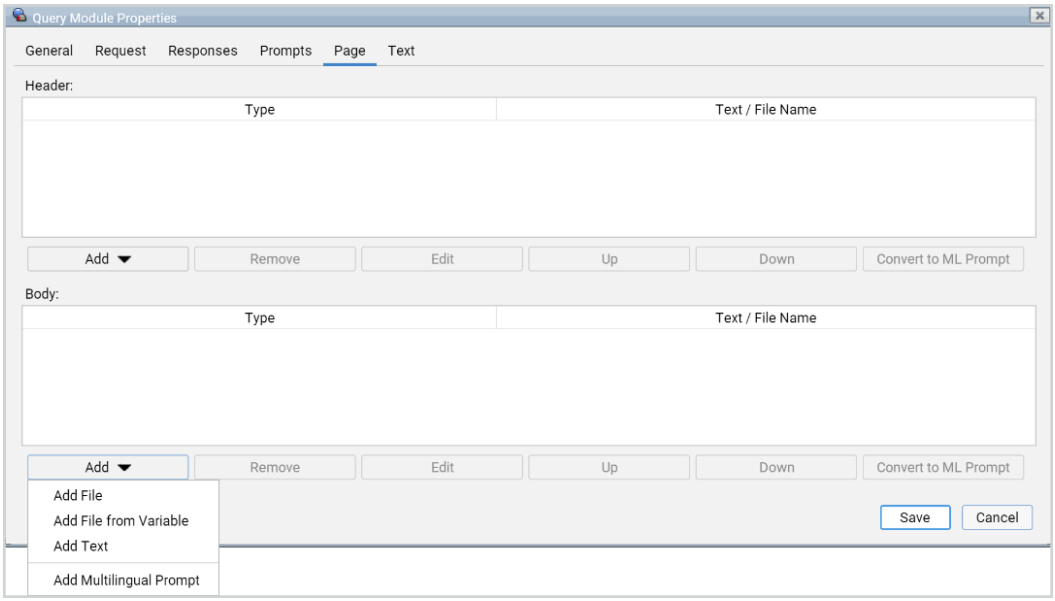
- Enabled: Stop playing the prompt as soon as the caller has completed the action.
- Disabled: Finish playing the prompt even if the caller has completed the action.

Page Tab

This tab contains the list of Visual IVR prompts that are shown visually in the customer's Web browser when a IVR script is executed.

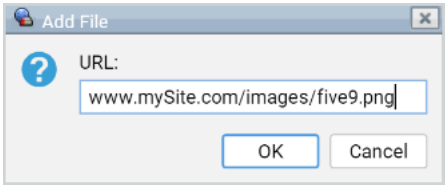
If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.

If this tab does not contain prompts, the prompts in the Prompts tab are shown.

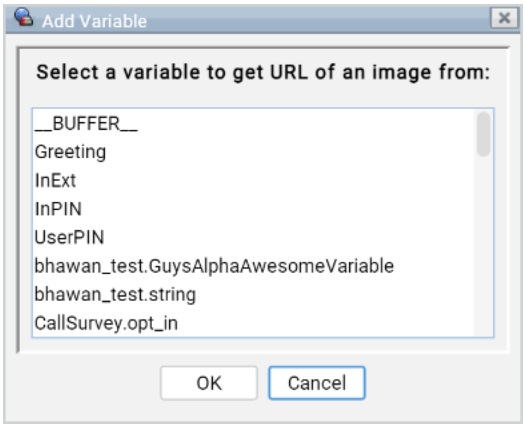


This tab enables you to add different types of prompts:

- **File**: URL of an image.



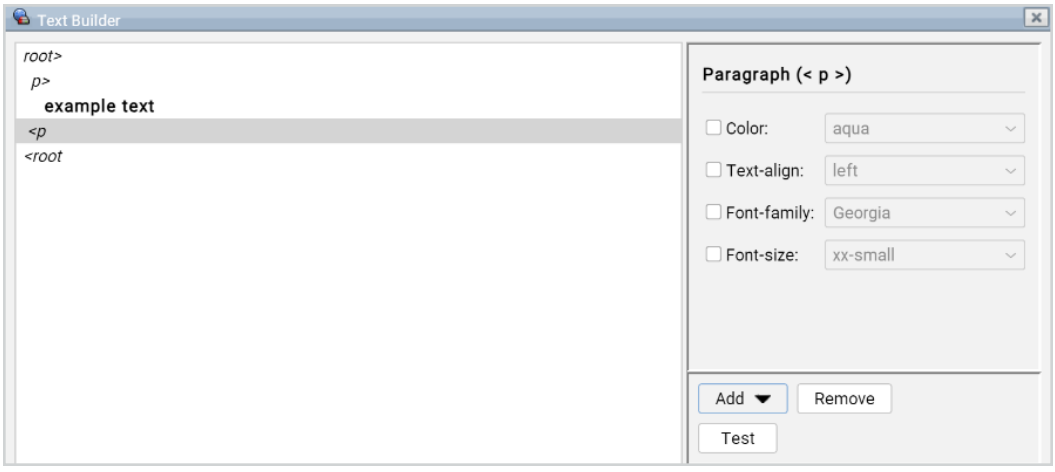
- **Variable**: Variable that contains the URL of an image.



- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.

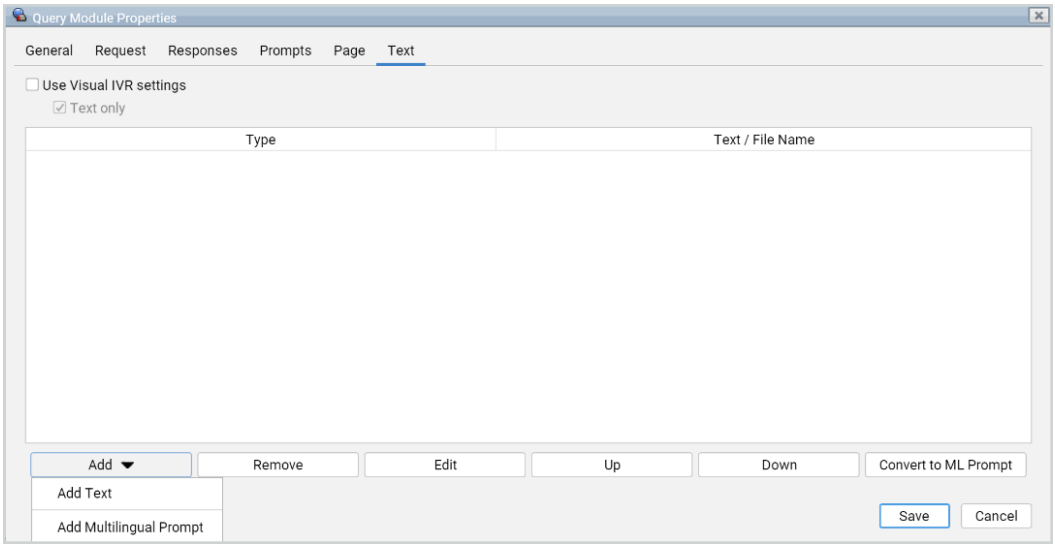
The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break.

The Test button enables you to preview the HTML text.



Text Tab

This tab enables configuration options for chat, SMS, email, and integration channels.



- **Use Visual IVR Settings**:
  - Enabled: digital engagement interactions receive the data configured in the Page tab.

    Text only: If enabled, the XML/HTML are removed from the data received from in the Page tab configuration.
  - Disabled:
    - Text only box is disabled.
    - The grid and grid buttons enable configuration of a separate prompt for digital engagement interactions.
    - The same items can be added as for Page/Body.
    - Add Text: Text and variables can be added. The same control as is used for a Query/POST request may be used here.
    - Add Multilingual Prompt: Only multilungual prompts with the type TEXT may be used here.

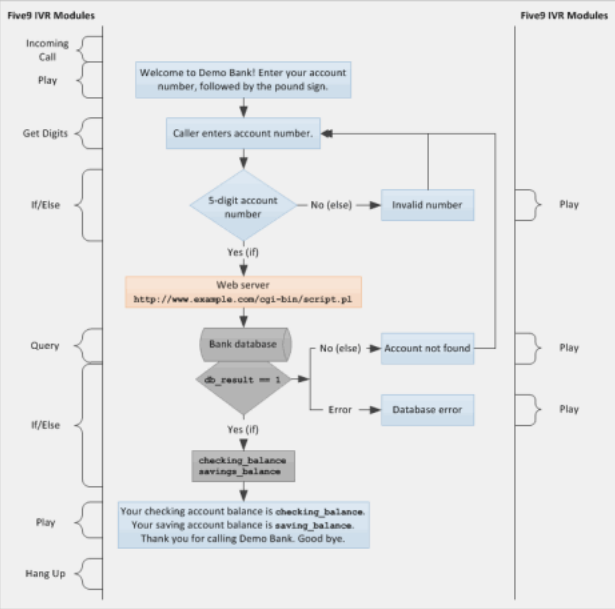
Use Case

If you develop and maintain the database and all the code necessary to access the database, import banking.five9ivr into the IVR workspace to see a working example.

This example shows how to query a database that you develop and maintain.

Preparing Your Database
Creating Script Variables
Configuring the Query Module
Customizing the Script
Testing Your Implementation

This figure shows the flow if information between the IVR modules, your Web server, and the database when a customer calls to obtain account balances.



Preparing Your Database

Define the variables for the request, the response, and the Query module.

Create a database table with these columns:

- `account_number`: 5-digit number provided by the customer.
- `checking_balance`: account balance and currency returned by the search.
- `savings_balance`: account balance and currency returned by the search.

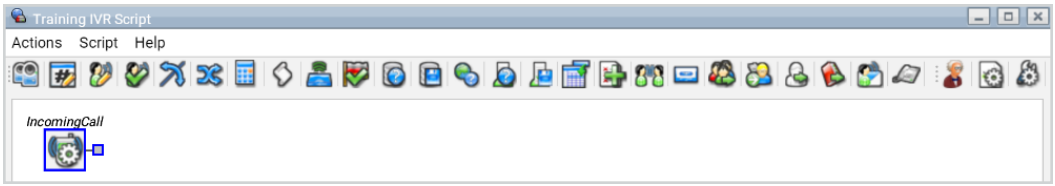
Example

```
CREATE TABLE accounts (
```

```
    account_number INTEGER(5),
    checking_balance DECIMAL(10,2),
    saving_balance DECIMAL(10,2)
)
```

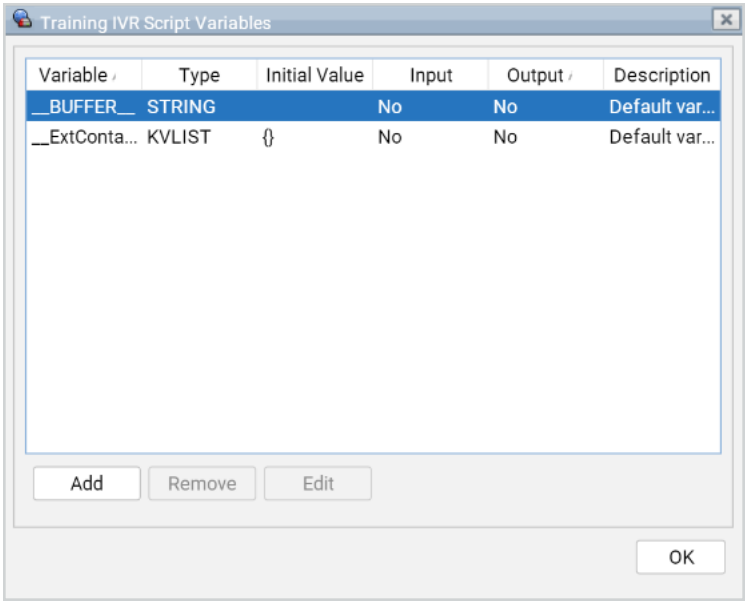
Creating Script Variables

Prepare the variables that you will use in the query. In this case, `account_number` is the only variable.

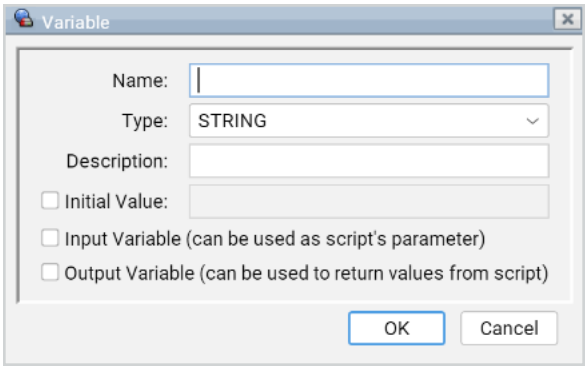


1 In the IVR workspace, select **Script** > **Variables**.

The Variables window contains a default variable that you cannot modify or delete.



2 To start creating variables, click **Add**.



3 Name and describe the variable.

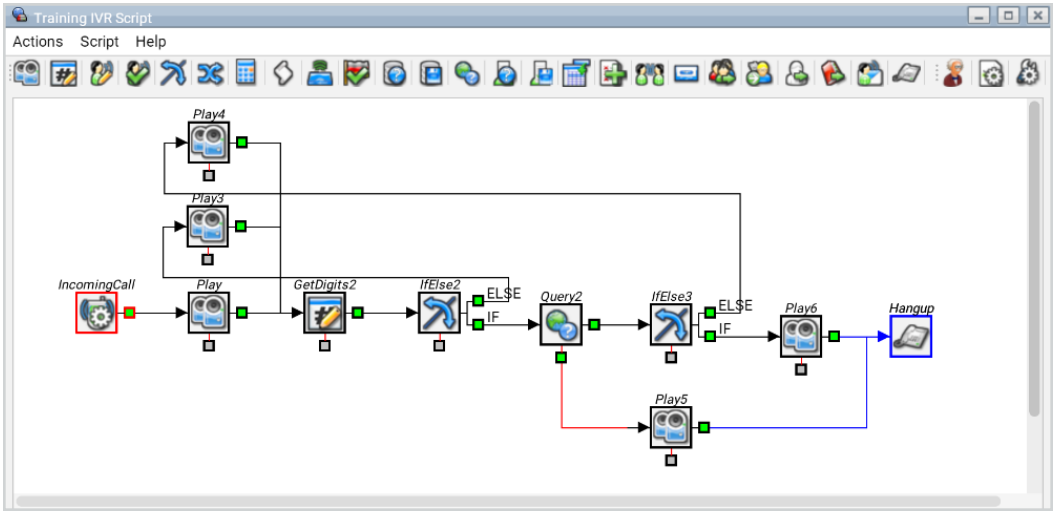
4 Click **OK**.

5 When done creating variables, click **OK**.

Configuring the Query Module

General Tab
Request Tab
Response Tab
Prompts Tab
Page Tab
Text Tab

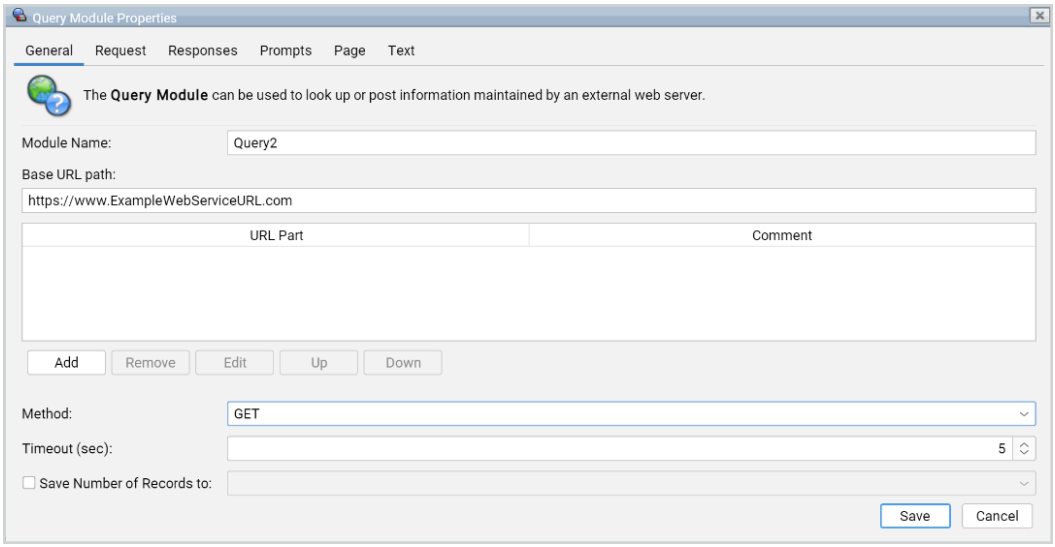
The modules in this figure correspond to those in the flowchart above. The Query module is highlighted in red. Of the modules shown, we describe only how to configure the Query module.



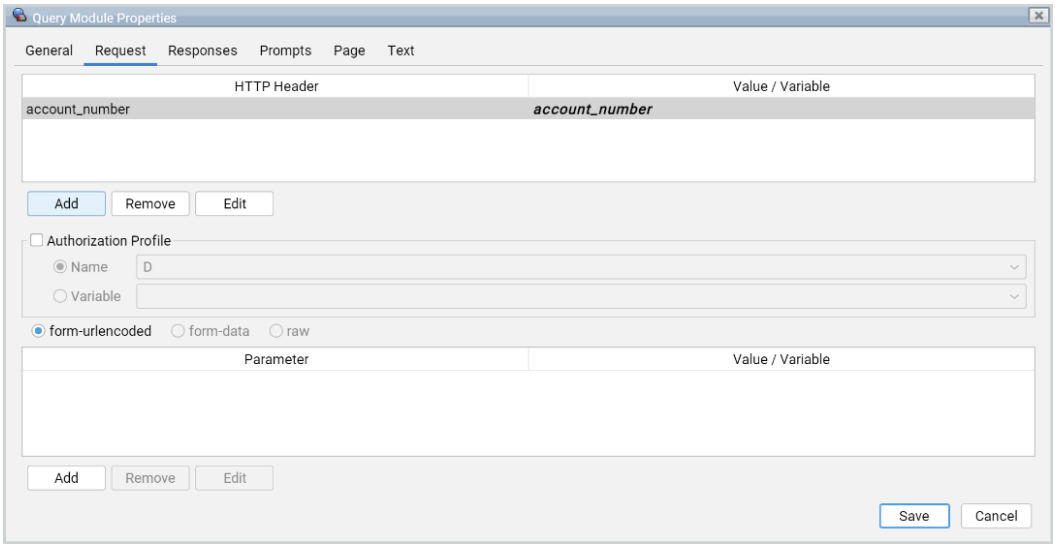
To open the properties window, double-click the module.

General tab. Enter basic information about the module:

- **URL**: Request URL of the Web server. You can use a secure TLS connection.
- **Method**: URL-encoded GET



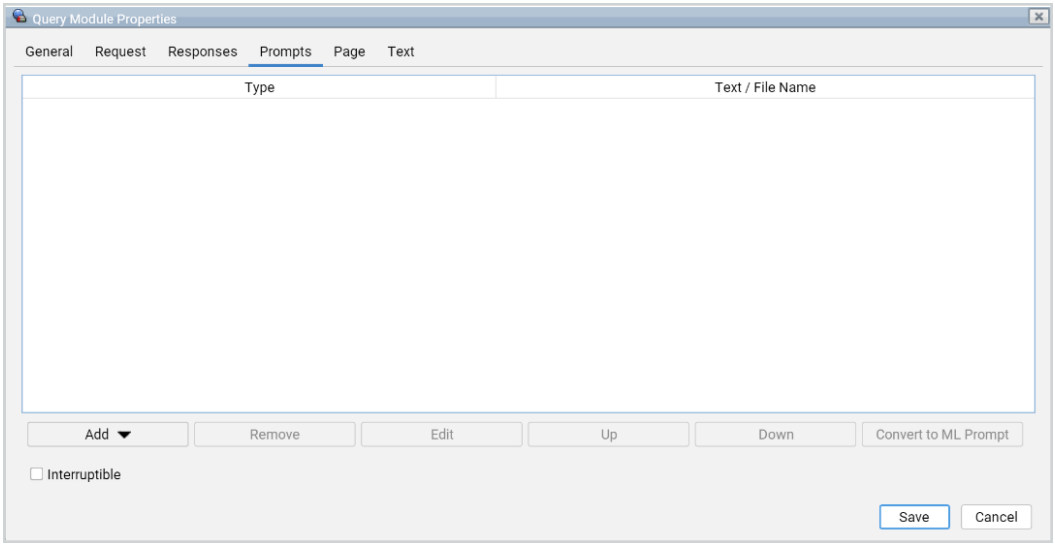
Request tab. Enter the input variables as parameters and the HTTP headers that you want. In this case, the only variable is the account number.



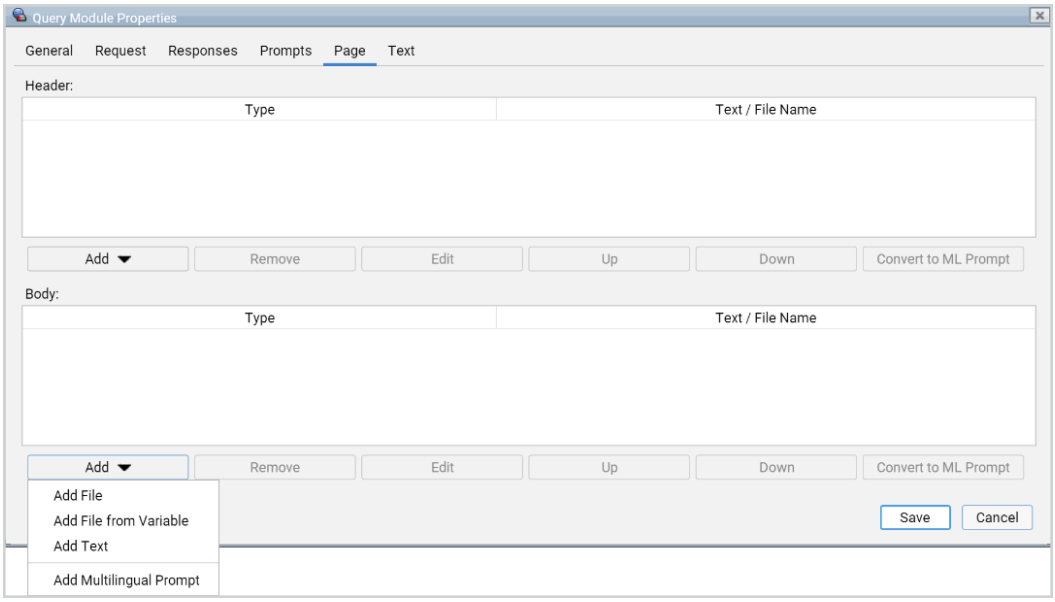
Response tab. Select XML Element Attributes, and enter these parameters:

Parameter	Variable
checking	checking_balance
DB_result	DB_result
saving	saving_balance

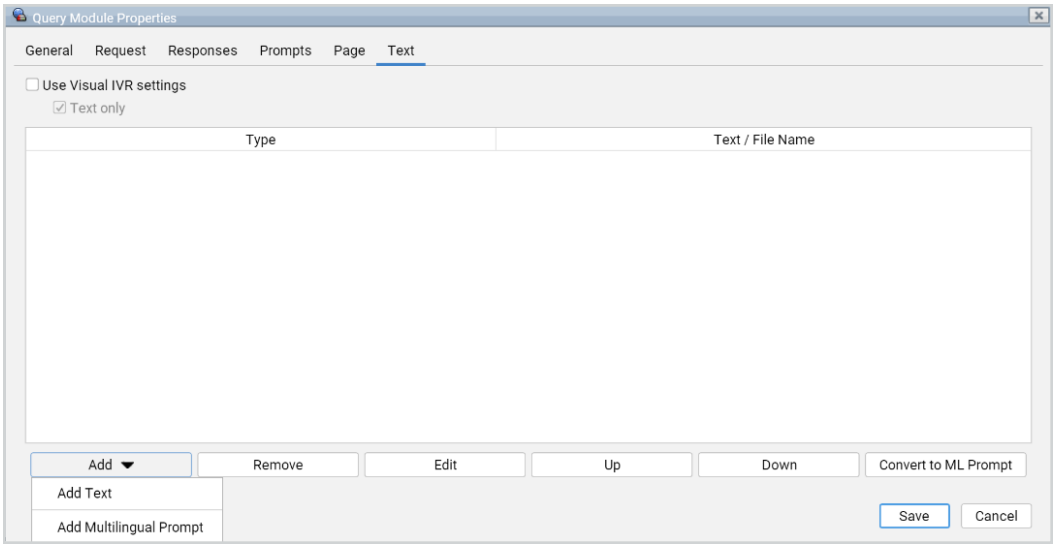
Prompts tab. This section is optional. Instead you can configure a Play module to play a prompt while the customer is waiting, or you can omit playing a prompt.



Page tab. Ignore this tab.



Text tab. Ignore this tab.



Customizing the Script

The generated script contains the input and output parameters that you added in the Request and Response tabs. This section describes how to customize parts of the script. The complete script (Query4.pl) is included in the ZIP file.

> **Important:** Five9 does not correct or accept incorrect specification of the content-type header, such as `content-type: text/xml; charset=”utf-8”`. Instead, we require standard use (without using quotation marks). **Example**: `content-type: text/xml; charset=utf-8`.

Error Codes
Use Query
Output Variables

Error Codes. This section describes how errors are indicated. ERR_CODE__="0" corresponds to a successful request.

Example

Use case

```
#! /usr/bin/perl
#=========================================================
# Generated by ScriptGen v6.1 (build 0, "OS_BUILD")
# at Mon Jun 17 14:46:32 PDT 2020
#=========================================================
use warnings;
use strict;
use CGI qw(:all);
$|++;
my $cgi = new CGI;
#Variables ERR_CODE__ and ERR_DETAILS are reserved for errors
indication
my $ERR_CODE__="0";
my $ERR_DETAILS__="";
```

Use Query. This section is the only one that you need to modify because the module generates only a commented section. You need to add the code to access and search the database for the variables specified in the comments. In this example, the database is MySQL. The example code that we added is **highlighted**.

```
#=================================================================
#=== PLEASE INSERT THE CODE HERE FOR ASSIGNING THE REAL VALUES
#=== TO THE FOLLOWING VARIABLES:
#=== checking, saving, DB_result
#=== SET $ERR_CODE__ = "5" ("User Defined Error")
#=== AND $ERR_DETAILS__ TO EXPLANATION STRING IF A WRONG CONDITION
#=== SHOULD ARISE. #=== {{{{{
#=== For more information on using Perl with MySQL, see this website:
#=== http://www.sitepoint.com/access-mysql-database-perl/use DBI;

#=== Set the connection information and credentials to access the
#=== database. In Perl, the datasource name is in this format:
#=== $dsn = ""dbi:<SQL Platform>:<database_name>:<host_name>:<port>;
#=== The default port for MySQL is 3306.
```

```
my $dsn = 'dbi:mysql:example_test:localhost:3306' ;
my $user = 'test_user ;
my $password = 'test_password' ;
#=== Connect to the database.
my $dbh = DBI->connect($dsn, $user, $password) ;

#=== Prepare and execute the query.
if ($dbh)
{my $sth = $dbh->prepare("SELECT checking_balance, saving_balance
FROM accounts WHERE number=$account_number");
 IF ($sth && $sth->execute ())
 { $DB_result = 1;
 if (!(($checking, $saving) = $sth->fetchrow_array())) ($DB_result = 2;
 ($checking, $saving) = (0.00, 0.00)};

 }

#=== Disconnect from the database.
 $dbh->disconnect();

}

#=== }}}}}
```

Output Variables. This section contains the checks to verify the data format of the variables (currency and integer) for the parameters to be returned. The print statements describe the format for the parameters, which is an XML structure, as you specified in the Response tab.

```
#====================================================================
# Output variable checking.
#====================================================================
if (!defined $checking && isvalidcurrency($checking))) {
 $ERR_CODE__ = "3";
 $ERR_DETAILS__ = "Invalid value '$checking' for parameter 'checking' "
;
}
if (!(defined $saving && isvalidcurrency($saving))) {
 $ERR_CODE__ = "3";
 $ERR_DETAILS__ = "Invalid value '$saving' for parameter 'saving'
}
if (!(defined $DB_result && isvalidinteger($DB_result))) {
 $ERR_CODE__ = "3";
 $ERR_DETAILS__ = "Invalid value '$DB_result' for parameter 'DB_result'
}
print qq|Content-Type: text/xml\n\n|;
print qq|<?xml version="1.0"?>;
print qq|<response>|;
print qq| <variable>|;
print qq| <var name="DB_result" expr = "| . convert2vxml($DB_result) .
qql" />|;
print qq| <varname="checking" expr = "| . convert2vxml($checking) . qql"
```

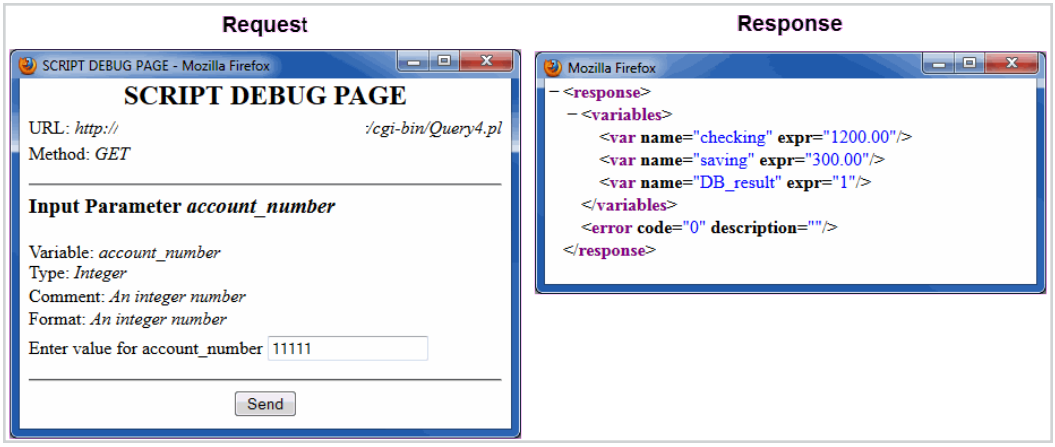
```
/>|;
print qq| var name="saving" expr = "| . convert2vxml($saving) . qq|"
/>|;
print qq| </variables>|;
print qq| <error code="| . convert2vxml($saving) . qq|" description = "|
. convert2xml($ERR_DETAILS__) . qq|" />|;
print qq|</response>|;
```

Testing Your Implementation

When done with all configuration, test your implementation with valid and invalid input.

Code Script. The HTML file included in the package enables you to debug the code, for example:

- If you send a valid account number, such as 11111, you receive the successful response on the right. In the XML, the `var` elements correspond to the parameters that you entered in the Response tab of the Query module.
- If you send an invalid account number, such as 1111 or 1111a, you receive error messages.



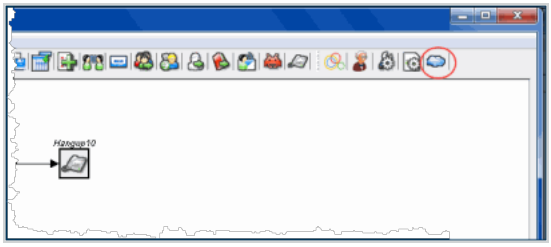
IVR Script. To ensure that the complete flow works as expected, be sure to test your IVR script.

Five9 Salesforce Module

The Five9 Salesforce IVR module enables you to manage interactions and workflow between the IVR and Salesforce. Salesforce must be enabled for your domain to access

the Salesforce module and the associated service scripts. Contact your Five9 representative for additional information.

You can define a Salesforce Object Query Language (SOQL) query, enabling the IVR module to pass the request and return the response with any associated error messaging. The query response is treated as an object that you can route as an interaction. The Five9 Salesforce module is available from the IVR builder toolbar, seen with the Salesforce cloud icon in the figure below.

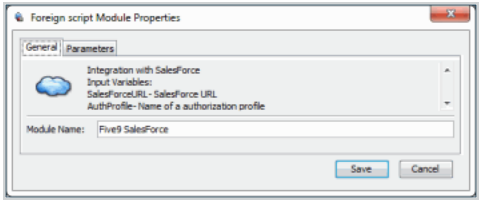


You can drag the Salesforce module to your canvas to build your IVR script, or you can choose one of the predefined **Service Script** examples to use as a template. Right-click or double-click to access the module properties.

You can rename the module in the **General** tab and assign your specific parameters in the **Parameters** tab.

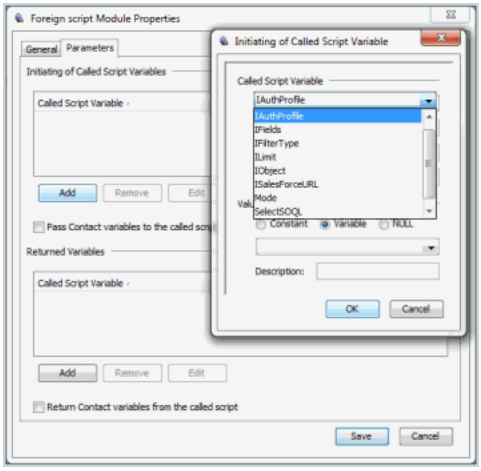
Properties

General Tab



- **Module Name**: Name shown in IVR builder.

Parameters Tab



- **Input Parameters**: Contains authorization profile and called script with variable parameters:
    - **IAuthProfile**: Name of an authorization profile configured for Salesforce Gateway in VCC.
    - **IFields**: KVList of the object's fields to receive. Keys are the field names. If a value is not empty, it is used for filtering records. All case field's ID included with **Omni.external_id** by default. This field is optional.
    - **IFilterType**: KVList of comparison module operation modifiers. This field is optional.
        - ILimit: Maximum number of returned records. Default is 1.
        - IObject: (Optional) Default is **Case**. Salesforce object name.
        - ISalesForceURL: URL of the Salesforce SOQL REST API.
        - Mode: **Simple** (default value) or **Advanced**. Advanced mode uses SOQL.
            - **Simple**: Default value. Simple mode uses **IObject**, **IFields**, and **IFilterType**.
            - **Advanced**: Uses a **SelectSOQL** string containing an executable SOQL query.
        - SelectSOQL: Executable SOQL for **Advanced** mode.

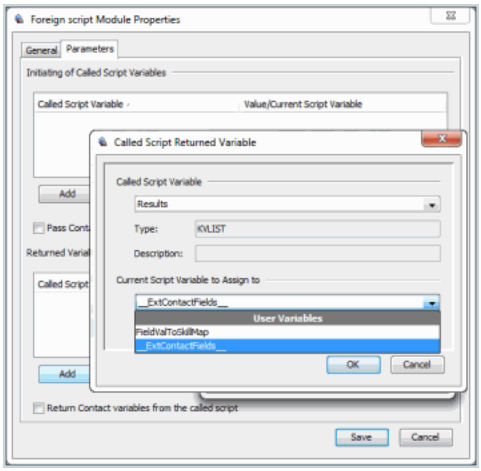
      Select check box to pass contact variables to the called script.

      Example

      ```
      SELECT Id, Name, BillingCity FROM Account LIMIT 3
      ```

For more information about creating SOQL queries, see Introduction to SOQL and SOSL.

- **Returned Variables**:



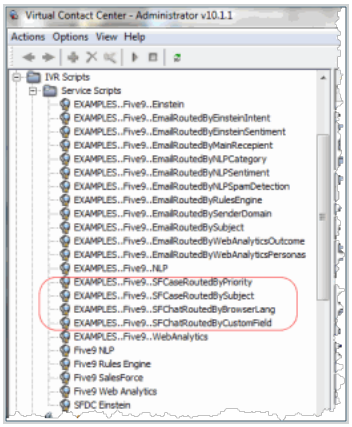
  - **Results**: Resulting KVList from query response.
    - __ExtContactFields__ is the default variable for data exchange with third-party systems.
    - FieldValToSkillMap enables additional data mapping.

- **Possible Errors**:
  - **CUSTOM_ERR_1**: Salesforce error.
  - **CUSTOM_ERR_2:** Bad input parameters.
  - **CUSTOM_ERR_3**: Authorization error.

Example IVR Scripts with Salesforce Module

To see a working example before you create your own, navigate to the **IVR > Service Scripts** subfolder to find the following sample scripts:

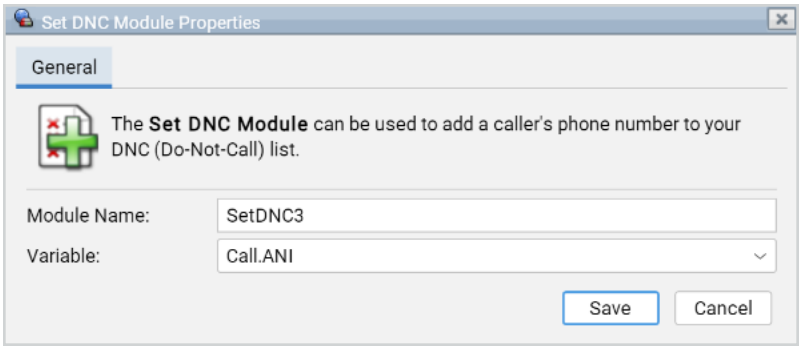
- SFCaseRoutedByPriority
- SFCaseRoutedBySubject
- SFChatRoutedByLang
- SFChatRoutedByCustomField



Set DNC Module

The Set DNC module places a single phone number in your local Do Not Call list. To place the many phone numbers of a single contact in your DNC list, attach the contact record to the call, and select one of these options:

- Use one Set DNC module for each phone number (maximum three modules).
- Create an IVR script that contains post-processing steps, such as a disposition that adds all the contact's numbers to the list.



Use this module as follows:

- If an inbound campaign receives return calls from an outbound campaign, give the caller the option to be placed on your Do Not Call list so that your agents do not need to spend time to process DNC requests.
- For autodial campaigns, provide to contacts an option to opt out of future campaigns.

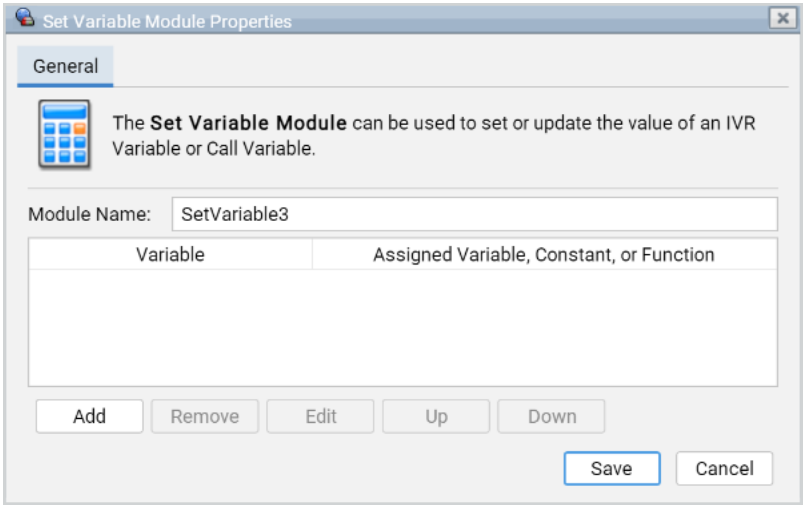
The Variable menu contains a list of all your variables. Select the string variable that contains the phone number to add to your DNC list.

Set Variable Module

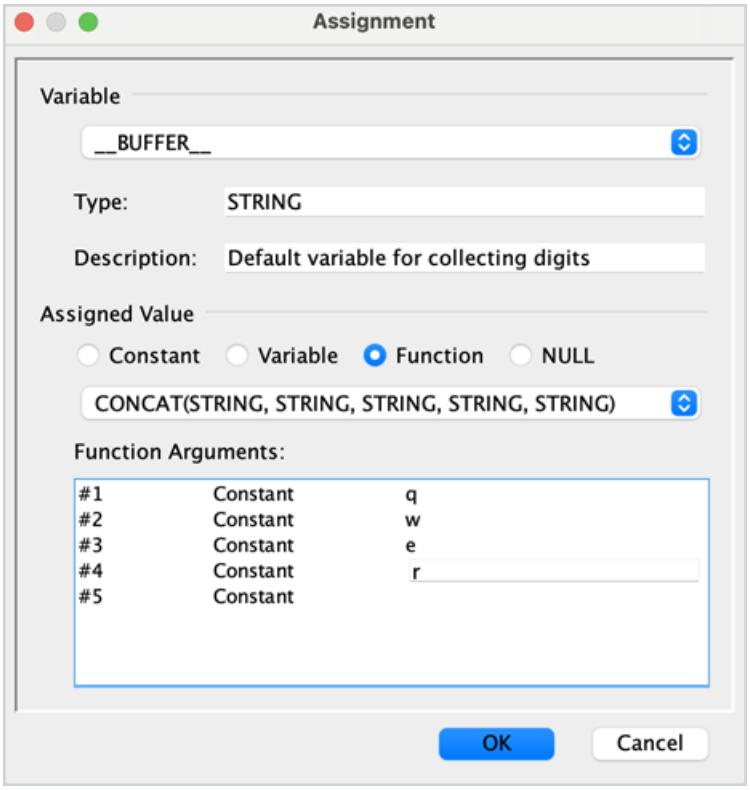
The Set Variable module enables you to assign specific values to variables. Typically, use this module to test the value of one variable in the If/Else or Case modules. You assign a value to another variable with the Set Variable module for a subsequent Web request or call routing decision.

Variables are subject to these size limitations: 1M characters for script variables and 2040 characters for call/reporting variables. For an example of the Set Variable module following the If/Else module, see Simple Campaign Script for Post-Call Surveys.

Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.



Click **Add**, and select your options.



The required data types for your arguments display for each selected function.

- **Variable**: List of your user, contact, IVR and user CAV variables. When you select a variable, the type, such as string, and description are automatically populated.

  To ensure that you can save the module variable, follow these rules about sensitive information:

  - If you select a variable that does not contain sensitive information, you may assign only a variable or function value **not** containing sensitive information.
  - If you select a variable that contains sensitive information, you may assign any type of variable or function value.

- **Assigned Value**: Type of value to assign to the variable.
  - **Constant**: Single specified value.
  - **Variable**: List of your contact, system, agent, IVR and user CAV variables. When you select a variable, the description is automatically populated.

- **Function**: List of functions. For more information, see the tables below.
- **NULL**

When using Constant and Function values, you must enter phone numbers according to your domain and VCC configuration:

- If your domain is enabled for the E.164 format, you may need to enter phone numbers in your national format or phone numbers up to 15 digits, starting with the plus (+) sign and the country code. See your administrator.
- If your domain is enabled for the E.164 format, you may need to enter phone numbers in your national format or phone numbers up to 15 digits, starting with the plus (+) sign and the country code. See your administrator.
- If your domain is not enabled for the E.164 format, you must enter 10 digits to conform to the North American Numbering Plan (NANP).

This table contains the possible operations for each data type.

Left Variable Type	Function	Description	Argument Types	Exceptions
INTEGER	DIFFERENCE	Number of days between two dates.	DATE, DATE	Arg2>Arg1, Arg1 or Arg2 is NULL
	DIFFERENCE	Number of seconds between two times.	TIME, TIME	Arg2>Arg1, Arg1 or Arg2 is NULL
	DIFFERENCE	Subtracts second argument from first one.	INTEGER, INTEGER	Arg2>Arg1, Arg1 or Arg2 is NULL
	LEN	Returns the number of characters of the specified string expression, excluding trailing blanks.	STRING_EXPR	Arg1 is NULL
CURRENCY	SUM DIFFERENCE	Adds or subtracts arguments.	CURRENCY, CURRENCY	Arg1 or Arg2 is NULL
	PRODUCT	Multiplies the currency by an integer.	CURRENCY, INTEGER	Arg1 or Arg2 is NULL

Left Variable Type	Function	Description	Argument Types	Exceptions
	QUOTIENT	Divides the currency by an integer.	CURRENCY, INTEGER	Arg1 or Arg2 is NULL
DATE	ADD	Adds Arg2 days to Arg1 date.	DATE, INTEGER	Arg1 or Arg2 is NULL
INTEGER	LOCATE	Returns the position of the first occurrence of *substring* within *string*.	SUBSTRING, STRING	Arg1 or Arg2 is NULL
	PRODUCT	Multiplies arguments.	INTEGER, INTEGER	Arg1 or Arg2 is NULL
	QUOTIENT	Divides first argument by second one.	INTEGER, INTEGER	Arg2=0, Arg1 or Arg2 is NULL
	SUM	Adds arguments.	INTEGER, INTEGER	Arg1 or Arg2 is NULL
	TOINTEGER (CURRENCY($))	Converts value into USD currency integer.	STRING_EXPR	Arg1 is NULL
	TOINTEGER (CURRENCY(£))	Converts value into GBP currency integer.	STRING_EXPR	Arg1 is NULL
	TOINTEGER (CURRENCY(€))	Converts value into Euro currency integer	STRING_EXPR	Arg1 is NULL
	TOINTEGER (DATE)	Converts date to integer	DATE_EXPR	Arg1 is NULL
	TOINTEGER (NUMBER)	Converts number to integer. Use this to convert floating-point values, such as 31.2, to an integer.	NUMBER_EXPR	Arg1 is NULL
	TOINTEGER (STRING)	Converts string expression to integer. Use this to convert whole numbers, such as 31, to integer.	STRING_EXPR	Arg1 is NULL
	TOINTEGER (TIME)	Converts time expression into integer.	TIME_EXPR	Arg1 is NULL
NUMBER	SUM DIFFERENCE PRODUCT QUOTIENT	Adds, subtracts, multiplies, or divides arguments.	NUMBER, NUMBER	Arg1 or Arg2 is NULL

Left Variable Type	Function	Description	Argument Types	Exceptions
	LEN	Returns the number of characters of the specified string expression, excluding trailing blanks.	STRING_EXPR	Arg1 is NULL
	RANDOM	Returns numeric value between 0 (inclusive) and 1 (inclusive). The result can be assigned to Numeric IVR variables or NUMBER call variables.	None	
STRING	BASE64DECODE	Decodes STRING IVR or call variable.	STRING	STRING is NULL
	BASE64ENCODE	Encodes STRING IVR or call variable.	STRING	STRING is NULL
	CONCAT	Concatenates up to five strings.	STRING, STRING, STRING, STRING, STRING	Any of Arg1 through Arg5 are defined by Variable having a NULL value
	GET	Returns the value to which the specified key is mapped, or null if this kv-pair contains no mapping for the key.	KVLIST, STRING	Arg1 or Arg2 is NULL
	GET_KEY	Returns nth key of kv if 0 ≤ nth < SIZE(kv). Activates exceptional exit otherwise.	KVLIST, INTEGER	Arg1 or Arg2 is NULL
	HASHBYTES	Hash the string using algorithm method: MD2 | MD4 | MD5 | SHA | SHA1 | SHA_256 | SHA_512	<algorithm>, STRING	Arg1 is NULL or incorrect method
	LEFT	Returns the leftmost characters of a string.	STRING_EXPR, LENGTH	Arg1 is not a STRING IVR or call variable Arg2 is negative
	PAD	Pads a string to a new length extending the string to the right.	STR, INT (Length), STR	Arg1 or Arg2 is NULL

Left Variable Type	Function	Description	Argument Types	Exceptions
		Example: PAD(“1234”,10,”X”) results in: “1234XXXXXX”	(Padstring)	
	PUT	Associates the specified value with the specified key. Returns an old value if the key existed before the function’s invocation, or NULL otherwise.	KVLIST, STRING (key), STRING (value)	Arg1 is not in KVLIST Arg2 is invalid Any Argument is NULL
	RIGHT	Returns the rightmost characters of a string.	STRING_EXPR, LENGTH	Arg1 is not a STRING IVR or call variable Arg2 is negative
	SUBSTRING	Returns string value which can be assigned to a STRING IVR variable or a STRING call variable expression.	EXPRESSION, START, LENGTH Indexed starting at zero (0), from left.	Arg1 is not a STRING IVR or call variable Arg2 is greater than number of characters Arg3 is not a positive or whole number
	TO_E164PHONES	Returns country code of phone number in E164 domains.	STRING, STRING	Arg1 or Arg2 in NULL or CAV is UNDEFINED
	TOSTRING (CURRENCY($))	Converts value to USD currency string.	STRING	Arg1in NULL
	TOSTRING (CURRENCY(£))	Converts value to USD currency string.	STRING	Arg1in NULL
	TOSTRING (CURRENCY(€))	Converts value to USD currency string.	STRING	Arg1in NULL
	TOSTRING(DATE)	Converts date value to string.	DATE	Arg1in NULL
	TOSTRING(DATE, STRING)	Converts date value to string.	DATE, STRING	Arg1 or Arg2 is NULL
	TOSTRING (INTEGER)	Converts INTEGER value to string.	INTEGER	Arg1 is NULL

Left Variable Type	Function	Description	Argument Types	Exceptions
	TOSTRING (KVLIST)	Converts KVLIST to string.	KVLIST	Arg1 is NULL
	TOSTRING (NUMERIC)	Converts numeric value to string value.	NUMERIC	Arg1 is NULL
	TOSTRING(TIME)	Converts TIME value to string value.	TIME	Arg1 is NULL
	TOSTRING(TIME, STRING)	Converts TIME value to string value.	TIME, STRING	Arg1 or Arg2 is NULL
	TO_UTC_TIME (TIME, STRING)	Converts TIME to local time; that is, the GMT setting for your Time Zone in the IVR schedule of the campaign properties.	TIME, STRING	Arg1 or Arg2 is NULL
TIME	ADD	Adds Arg2 seconds to Arg1 time.	TIME, INTEGER	Arg1 or Arg2 is NULL

Converting Integers

To change a data type, use the data transformation methods in this table. Numbers with decimals are not converted to integers.

Variable Type	Function	Arguments	Comment	Exceptions
INTEGER	TOINTEGER	NUMBER	Fraction truncated.	Arg is NULL
	TOINTEGER	CURRENCY	Fraction truncated.	Arg is NULL
	TOINTEGER	STRING	Until first non-digit; can be empty.	Arg is NULL or contains non-digit characters.
	TOINTEGER	DATE, STRING	Second argument: d, such as 31 m, such as 12 y, such as 2007	Arg1 or Arg2 is NULL Wrong Arg2
	TOINTEGER	TIME, STRING	Second argument: h, such as 18 m, such as 45	Arg1 or Arg2 is NULL. Wrong Arg2
NUMBER	TONUMBER	INTEGER		Arg is NULL
	TONUMBER	CURRENCY		Arg is NULL
	TONUMBER	STRING	Period (.) for decimals.	Arg is NULL
CURRENCY	TOCURRENCY	INTEGER	.00 for fractions.	Arg is NULL
	TOCURRENCY	NUMBER	Fraction truncated to 2 digits.	Arg is NULL
	TOCURRENCY	STRING	Period (.) for decimals.	Arg is NULL

Variable Type	Function	Arguments	Comment	Exceptions
STRING	TOSTRING	INTEGER		Arg is NULL
	TOSTRING	NUMBER		Arg is NULL
	TOSTRING	CURRENCY		Arg is NULL
	TOSTRING	DATE	yyyy-mm-dd = ymd	Arg is NULL
	TOSTRING	DATE, STRING	Second argument: d, such as Monday dmy, such as 31/12/2007 m, such as June md, such as June, 14 mdy, such as 12/31/2007 ymd, such as 2007-12-31	Arg1 or Arg2 is NULL wrong Arg2
	TOSTRING	TIME	hh:mm = hm24	Arg is NULL
	TOSTRING	TIME, STRING	Second argument: hm12, such as 6:45 PM hm24, such as 18:45	Arg1 or Arg2 is NULL. wrong Arg2
DATE TIME	TODATE TOTIME	STRING		Arg is NULL, unsupported transformation
WAV Files	WAV2BASE64 WAV2BASE64	STRING	Encodes in ASCII format.	Arg is NULL, unsupported transformation

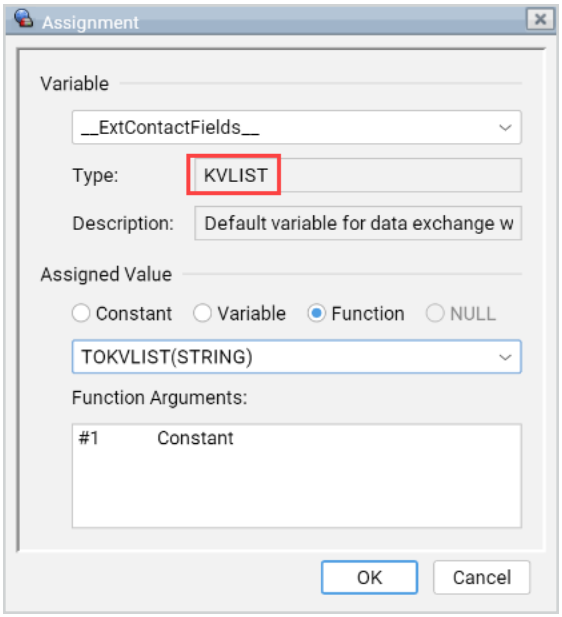
Using the KVLIST Data Type Functions

To pass sets of data fields to and from IVR, use collections of values with functions for accessing, adding, and deleting elements with keys. You can iterate all elements in the collection and convert the collections to strings to send/receive them to/from external systems. To do so, use the KVLIST data type, which uses collections of string key-value pairs instead of elementary data.

Defining a KVLIST Collection
Using KVLIST Variable Functions

Defining a KVLIST Collection

You can introduce a KVLIST collection by defining a variable with KVLIST data type selected. For information on adding or creating variables, see **Adding Variables**.



These variables may have an initial value defined as a JSON-formatted string with a collection of key-value pairs, where both keys and values are strings.

Example

A variable named `Person` contains key-value pairs that describe a person:

```
Person = {"last_name": "Jones", "first_name": "Betty", "age":
"31", "phone": "650.321.4800"}
```

`"last_name"`, `"first_name"`, `"age"`, and `"phone"` are keys for values `"Jones"`, `"Betty"`, `"31"`, and `"650.321.4800"`.

KVLIST variables without a default value are considered empty variables.

Assignment {} is an empty KVLIST but a non-empty variable.

Using KVLIST Variable Functions

Specific functions are used in conjunction with the KVLIST data type to return a JSON string of key-value pairs enabling you to store multiple data elements in a single IVR

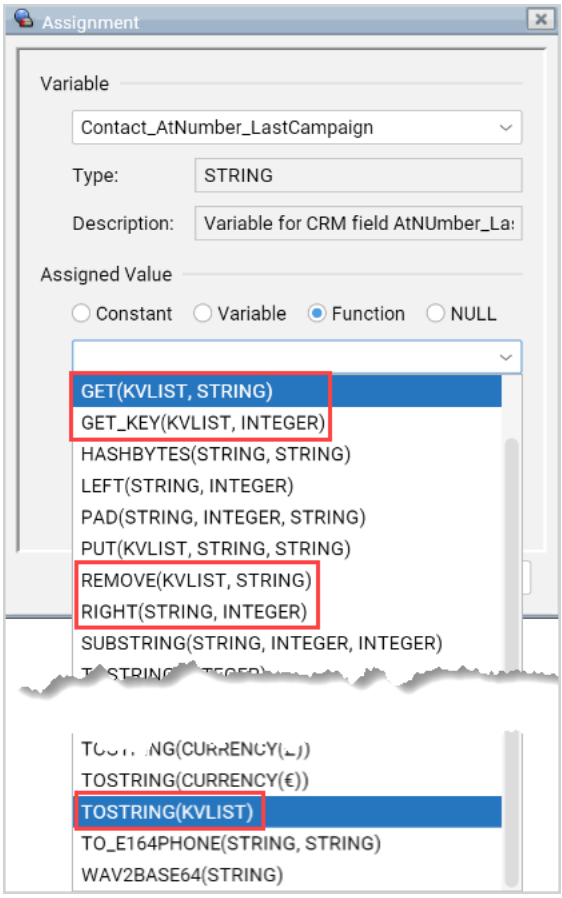
variable. Benefits of using the KVLIST data type include:

IVR can dynamically expand or contract the volume of variables, or data elements, used rather than manually storing every possible variable value.

JSON response to IVR Query module requests can be more easily parsed than standard elementary pairing with string pattern matches.

Specific functions (see function descriptions below) with a KVLIST data type return a JSON string of key-value pairs, enabling you to store multiple data elements in a single IVR variable:

- To GET the *value* of a key.
- To GET a *key* according to index, or position.
- To PUT, or write, a new key-value pair.
- To REMOVE a KV pair from a KVLIST.
- To TRANSFORM a KVLIST to a regular string.
- To return the SIZE of a KVLIST as an integer.
- To TRANSFORM a string to a KVLIST.



You can use the KVLIST of variables only with these functions:

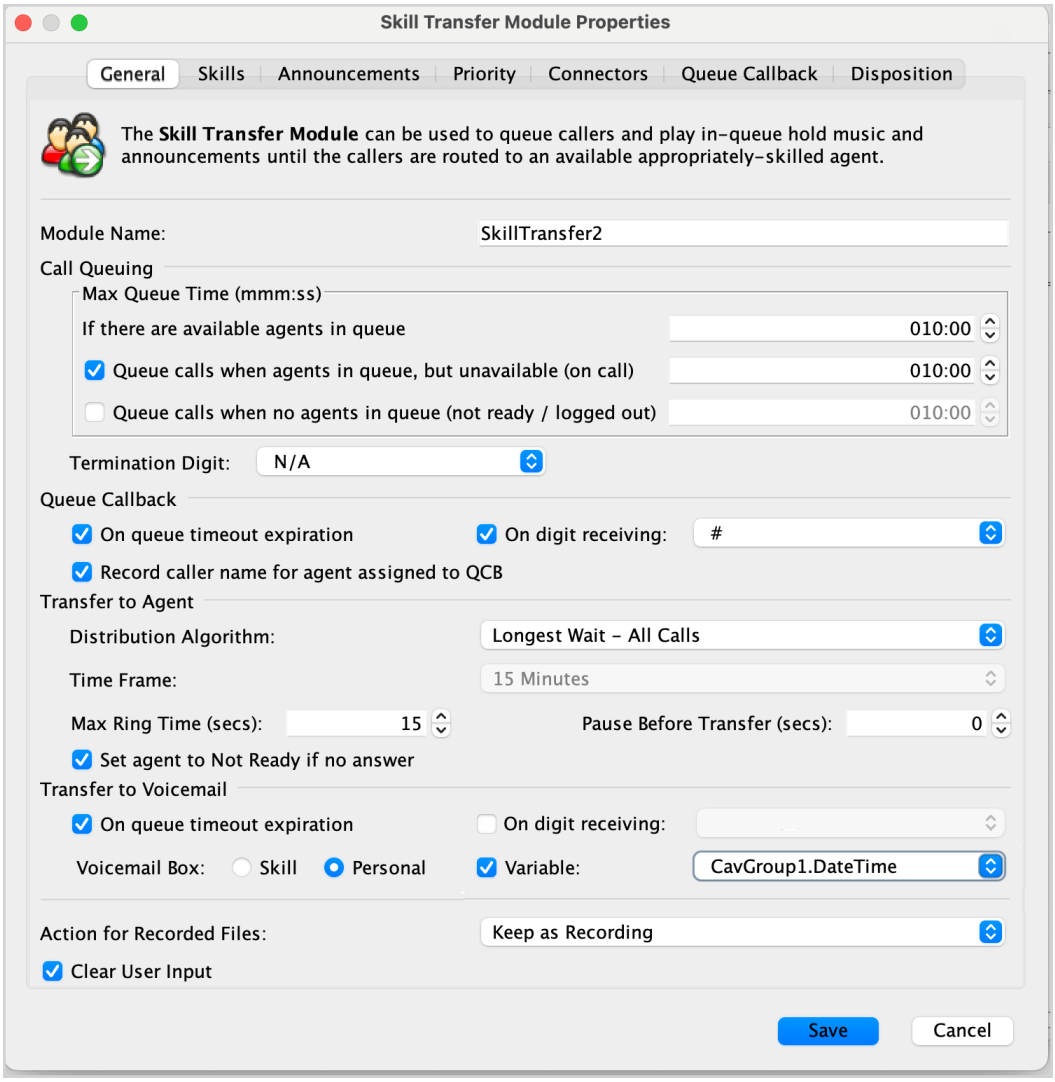
Returns	Function	Description
STRING	GET (KVLIST kv, STRING key)	Returns the value for mapping the specified key or NULL if this key-value pair contains no mapping for the key.
	GET_KEY (KVLIST kv, INTEGER nth)	Returns nth key of `kv` if 0 =< nth < `SIZE(kv)`. Activates an exception exit otherwise.
	PUT (KVLIST kv, STRING key, STRING	Associates the specified value with the specified key. Returns an old value if the key existed before the function's invocation or NULL.

Returns	Function	Description
	value)	
	REMOVE (KVLIST kv, STRING key)	Removes the mapping for a key from kv if it is present. Returns removed value or NULL if not present.
	TO_STRING (KVLIST kv)	Returns JSON representation of `kv`. Activates an exception exit if `kv` is NULL.
INTEGER	SIZE (KVLIST kv)	Returns the number of key-value mappings in `kv`.
KVLIST	TO_KVLIST (STRING arg)	Parses `arg` to receive `KVLIST`. Activates an exception exit if `arg` is in the incorrect format.

Skill Transfer Module

Use the Skill Transfer module to transfer calls to skill groups and configure the queue according to agent availability. When you add multiple skills to this module, any agent with one of the skills can receive calls from the module. After the call transfers to an agent, the IVR script is complete.

General Tab
Skills Tab
Announcements Tab
    Estimated Wait Time
Priority Tab
Connectors Tab
Queue Callback Tab
Dispositions Tab
Disposition Flow


Skill Transfer Module Properties
General
Skills
Announcements
Priority
Connectors
Queue Callback
Disposition
The Skill Transfer Module can be used to queue callers and play in-queue hold music and announcements until the callers are routed to an available appropriately-skilled agent.
Module Name:
SkillTransfer2
Call Queuing
Max Queue Time (mmm:ss)
If there are available agents in queue
010:00
Queue calls when agents in queue, but unavailable (on call)
010:00
Queue calls when no agents in queue (not ready / logged out)
010:00
Termination Digit:
N/A
Queue Callback
On queue timeout expiration
On digit receiving:
#
Record caller name for agent assigned to QCB
Transfer to Agent
Distribution Algorithm:
Longest Wait - All Calls
Time Frame:
15 Minutes
Max Ring Time (secs):
15
Pause Before Transfer (secs):
0
Set agent to Not Ready if no answer
Transfer to Voicemail
On queue timeout expiration
On digit receiving:
Voicemail Box:
Skill
Personal
Variable:
CavGroup1.DateTime
Action for Recorded Files:
Keep as Recording
Clear User Input
Save
Cancel

General Tab

- **Max Queue Time**: Maximum time allowed for calls in a queue. The default is 10 minutes for each setting. The maximum is 999 minutes and 99 seconds.
    - If there are available agents in queue: Agents are logged in but do not answer the call or the station is not connected.
    - Queue calls when agents in queue but unavailable (on call): Agents are currently logged in but busy with other calls. If you enable this option, the minimum value is 00:01 second.
    - Queue calls when no agents in queue (not ready / logged out): Agents are logged in but not ready, or all agents are logged out. If you enable this option, the minimum value is 00:01 second.

  Afterward, depending on the settings below, calls are transferred to an agent or to voicemail according to the IVR flow.

- **Termination Digit**: Phone key that enables callers to exit the queue. Afterward, depending on the settings below, calls are transferred to an agent or to a voicemail module.
    - Enabled: #, *, and digits from 1 through 9.
    - Disabled: N/A.

- **Queue Callback**: Phone key that enables callers to receive a callback. Callers retain their position in the queue without staying on hold. The Queue Callback feature is disabled when both Queue Callback options are disabled.
    - **On queue timeout expiration**:
        - If the caller chose a queue callback, the call remains in the queue and is processed as queue callback.
        - If the caller declined the queue callback, the call either returns to IVR or is transferred to voicemail.
    - **On digit receiving**: Number callers press to receive a callback. If enabled: #, *, and digits from 1 through 9.

      To prevent errors, the user interface does not display the Termination Digit in the Queue Callback Digit menus.
    - **Record caller name for agent assigned to QCB**: Caller can record a name that is forwarded with the queue callback request. Before agents return the call, the recording is played for agents when Automatic Answer is on. This enables agents to announce the name of the person who left the queue callback to the person who answers the call. Agents can also replay the recording to the person who answers the phone if clarification is

needed.

Contact your Five9 account representative for additional information.

- **Distribution Algorithm**: Method used by the ACD to select the agent who receives the call:
  - **Longest Wait - All Calls**: Agent with the longest idle time since the last call.
  - **Longest Wait - Non-Manual**: Agent with the longest idle time, excluding manual calls, such as callbacks.
  - **Round Robin**: Agent with the longest idle time among those logged into the queue. When agents log into the queue, they have the shortest idle time. The first queued call goes to the agent with the highest idle time. This agent is removed from the list. The process continues from the highest to the shortest idle time.
  - **Min Calls Handled**: Agent who handled fewer queued calls than other agents during the selected interval.
  - **Min Handle Time**: Agent with the lowest total call handle time in the queue during the selected interval.
- **Time Frame**: Interval (15 minutes to 24 hours) for the Distribution Algorithm option.

  Note: We recommend setting this interval to 24 hours.

- **Max Ring Time**: Maximum number of seconds allowed for the agent to answer a call.
- **Pause Before Transfer**: Number of seconds before transferring a call to an agent.
- **Set Agent to Not Ready if No Answer**: Whether to change the status of the agent to Not Ready if the agent doesn't answer a call within the maximum ring time allowed.
- **On queue timeout expiration**: Whether to transfer calls to voicemail when the maximum queue time has expired. This option activates the type of voice mailbox: personal or skill.
- **On digit receiving**: Number callers press to activate the transfer to the voicemail box: #, *, or digits from 0 through 9. This option activates the type of voicemail box: personal or skill.

- **Voicemail Box**: Type and voice mailbox to activate for the transfer:
  - **Skill**: list of all skills in the domain.
  - **Personal**: list of all users who have permission to receive transfers.
  - **Variable**: list of defined variables. Select this option to obtain the value for Skill or Personal from the selected variable.

- **Action for Recorded Files**: Method for handling the recorded files gathered by the previous modules. See also **Using Recorded Files**.
  - **Keep as Recording**: Save recorded files as a recording to access from reporting. The recorded files are not sent to the agents or skills.
  - **Send to Agent**: Routes recorded files to the agent. If agents are not available and the voicemail option is enabled, the recorded files become part of the voicemail message.

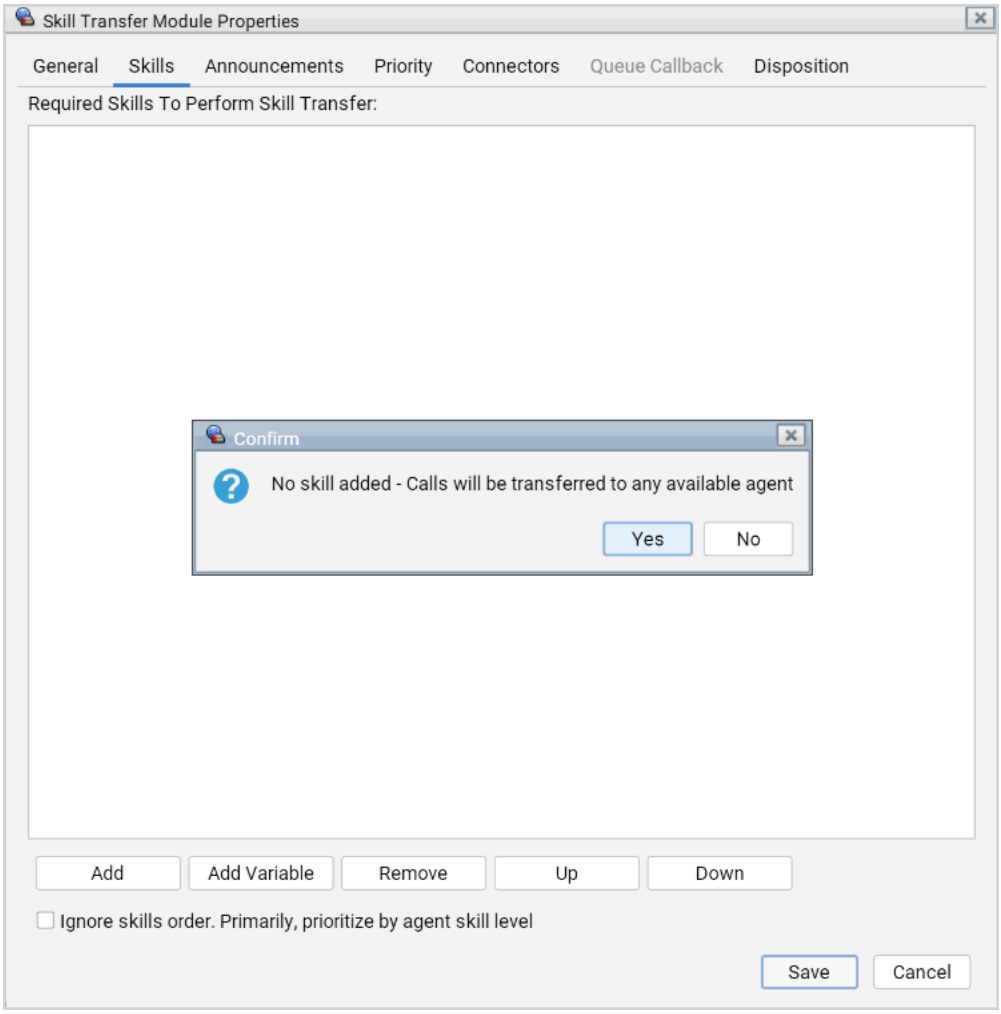
- **Clear User Input**: Whether information entered by the caller before reaching this module is erased.
  - **Enabled**: Delete all user input before this module.
  - **Disabled**: Do not enable if you have a prompt that provides instructions, such as pressing a key (termination digit) to exit the queue, before this module.

Skills Tab

List of queues and variables for call transfers. To obtain useful reports, Five9 recommends that you add only one queue in each module. You can prioritize the list as needed.

- Select one or more queues by name.
- Select one or more variables that contain the name of a queue as a string. If a variable contains the name of an invalid queue, the call will not transfer.

If you don't select queues, calls route to users not assigned to a queue.



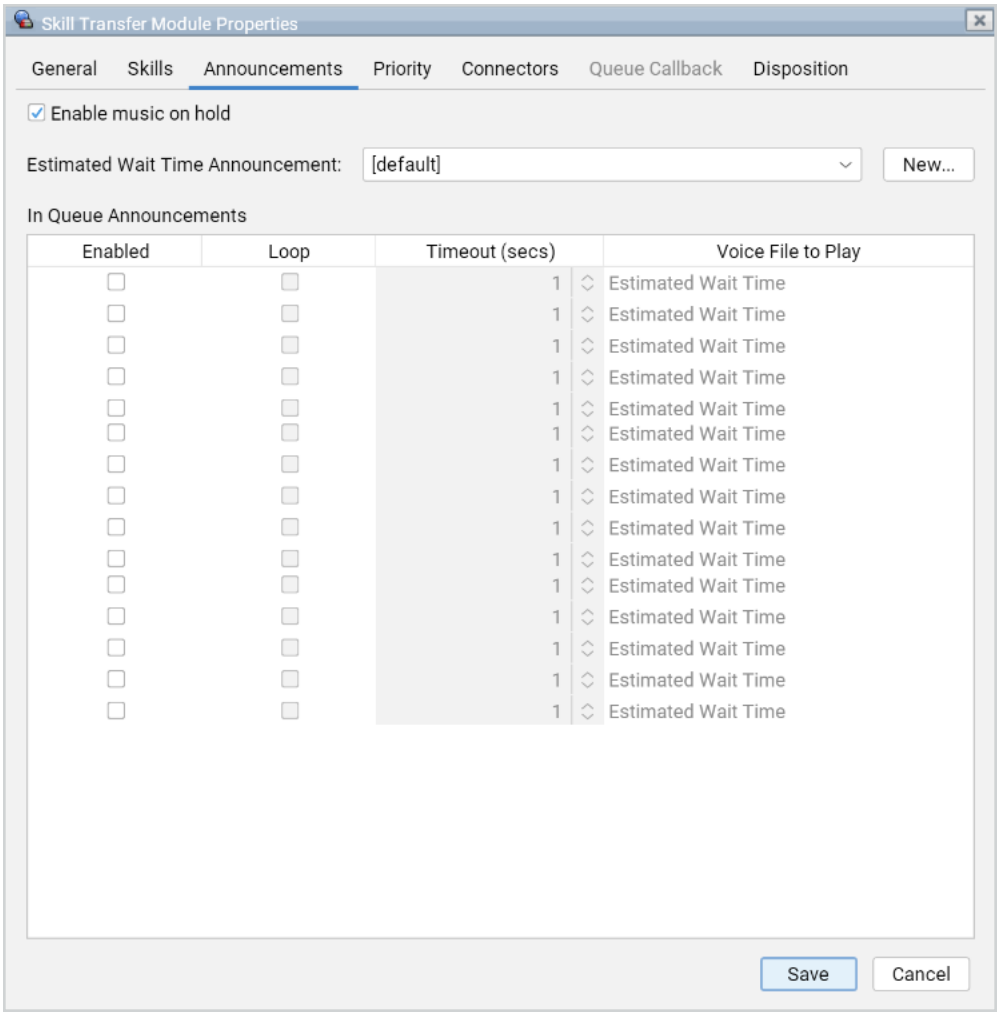
The unassigned queue is labeled Default in the softphone. This feature enables you to use a default queue to send calls to agents and supervisors not assigned queues or when agents assigned a particular queue are not available.

Announcements Tab

Recorded set of greetings or custom prompts played until one of these events occur:

- Agent answers.
- Call queue timeout expires.
- Customer enters termination digit.
- Call transfers to voicemail.

You can enable up to fifteen recordings.



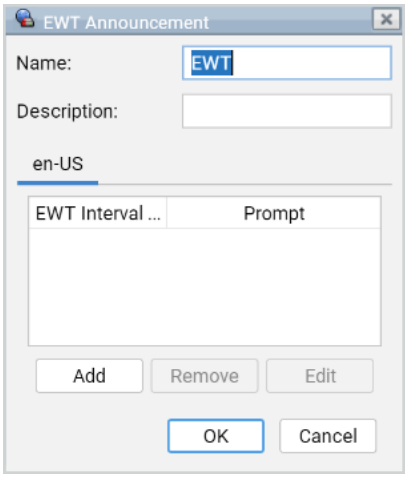
Create an announcement to play a prompt or precede this module with a Play module that contains a prompt.

- **Enable music on hold**: Whether to enable music for callers on hold. If enabled, the default music is played between each recording.
- **Estimated Wait Time Announcement**: Message that indicates to the customer the possible waiting time (EWT) until an agent answers the transferred call. The announcement is appended to the prompt that you select.

  Each announcement is actually a set of announcements

The menu contains a default announcement or a list of announcements that you create for different durations or events.

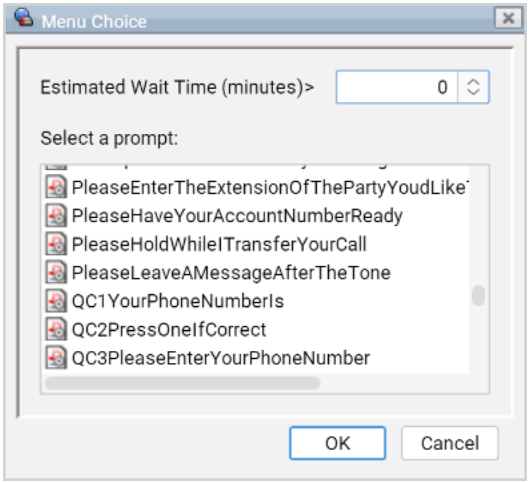
1. To customize your list of EWT prompts, click **New** > **Add**.



2. Name and describe the announcement.

   The name will be displayed in the Estimated Wait Time Announcement field of the Announcements tab.

3. Click **Add**.



4. Select a prompt and an estimated time.
5. Click **OK** twice.

- **In Queue Announcements**:
  - **Enabled**: Whether to enable the recording. When a recording is enabled, the menus for the recording are activated.

- **Loop**: Whether to play the recording multiple times.
- **Timeout**: Interval from 0 to 3600 seconds between the end of the previous recording and the beginning of the current recording. If the time-out is 0, the current recording is played without pause after the previous recording. If the Loop option is enabled, the time-out also determines the time-out from the end of the previous loop iteration. The default time-out is 1.

  The time-out for the first enabled recording is calculated from the moment that the call enters this module.
- **Voice File to Play**: Possible recording options to play:
  - Estimated Wait Time (default prompt)
  - System prompt
  - Custom prompt in your Prompts folder

Estimated Wait Time

Estimated Wait Time (EWT) uses a sophisticated algorithm to predict the wait time for callers within the skill and uses these two consistent metrics:

- EWT = The position of the caller in the queue divided by the Skill Answer Rate. EWT data is pulled from the last 15-minute interval. If the calculated EWT value is less than 60 seconds, the final value is always 60 seconds (this approach applies whether one or more skills are included in the Skill Transfer module). This default calculation applies to queues with >30 calls in the last 15 minutes.

  More granular logic is used for <15 or 15–30 calls entering the queue in the last 15 minutes.

  - Calculations for **<15 calls in the last 15 minutes**:
    - If calls are immediately assigned to an agent: EWT = 60 seconds
    - If the call is queued and there are no available agents: EWT = current Answer Rate (no less than 60 seconds) or 10 minutes (default) if no calls were in the queue in the last 15 minutes
    - If call is queued and agents are available: EWT = current Answer Rate minus the caller's elapsed Wait Time or 5 minutes minus the caller's elapsed Wait Time if no calls were in the queue in the last 15 minutes
  - Calculations for **15–30 calls entering the queue in the last 15 minutes**: the default EWT calculation minus the number of seconds since the last call entered the queue

- Skill Answer Rate: The average number of calls answered per minute, using the statistical data collected in the last 15-minute period.

Example

During the last 15-minute period, there were 45 calls answered for a specific skill. The Skill Answer Rate for that skill is 3 per minute: 45 ÷ 15 = 3

For the 6thcaller waiting in queue, EWT is 2 minutes: 6 ÷ 3 = 2

For the 9th caller waiting in queue, EWT is 3 minutes: 9 ÷ 3 = 3

Priority Tab

Amount, from 1 (lowest) to 100 (highest), that the call's base priority is increased or decreased. You can use a specific number, or a contact, system, or call variable. Calls with higher priority are answered first.

The base priority is either 10, the default, or the value that is set as Initial Call Priority in the associated campaign profile. See the Campaign Administrator's Guide for more information. The resulting value must still be within the range one to 100.

If your script has multiple IVR modules that route the calls to the same queue, the behavior is as in the following example.

- If both modules have the default priority settings, calls are prioritized by the wait time in the skill transfer module that they are in. So calls that are already waiting in SkillTransferA are routed to Skill W before a call that is just entering SkillTransferB.

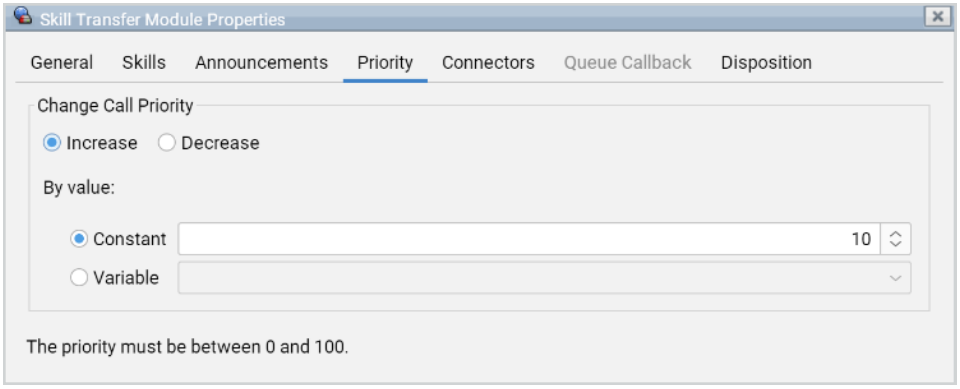
- If SkillTransferB has a higher Priority setting, all calls in SkillTransferB are routed to Skill W before any calls from SkillTransfer A are sent there. Example You have SkillTransferA and SkillTransferB, both routing calls to Skill W.

Note

The Skill Transfer module has a default Priority setting of **Increase By: 1**0. So if the campaign has no associated campaign profile and you do not alter the module's default setting, the call has a priority of 20.

Example

You have multiple IVR branches for the same agents. You want calls from one branch to be answered first. In this case, assign a higher priority to that branch.



.

Note

The priority of text items routed to agents who can manually select text interactions is the same as that for voice interactions. All interactions are created with default priority 50, which can be changed by Engagement Workflow. Filtering works as expected when items in the view contain inte...ractions that were processed with Engagement Workflow and others that did not.

Connectors Tab

List of connectors that can forward call-related data for reports. For example, a connector can send the call duration or queue time to an external URL when the call is assigned a disposition, such as when the caller abandons the queue.

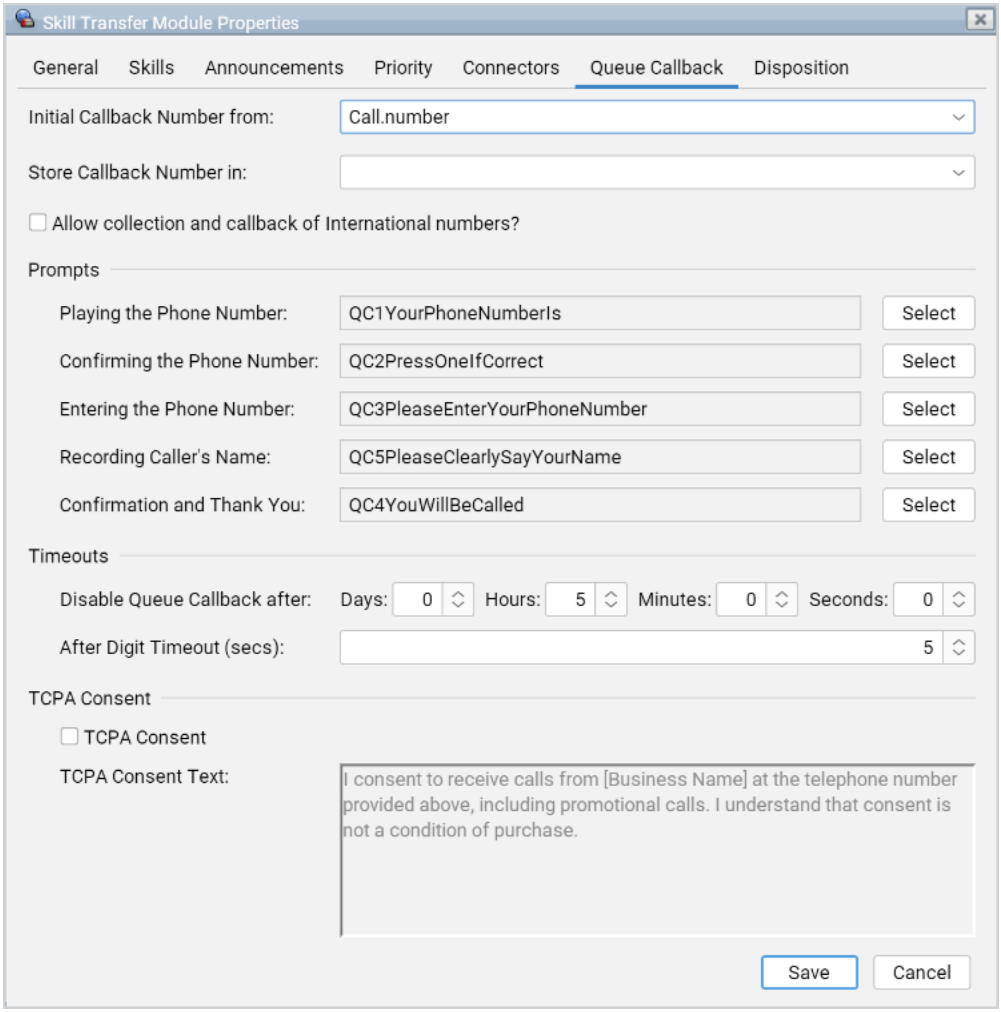
Queue Callback Tab

This tab is available when you select the Queue Callback in the General tab.

If agents are not available when customers call your company, your customers are placed in a queue. They can continue to wait in the queue, leave a voicemail message, or request a callback. You can dynamically display an estimated waiting time to customers by using Visual IVR for chat or video chat interactions.

The process starts when callers press the queue callback digit that you selected to request a callback instead of remaining on hold until an agent becomes available. For an example flow, see the Queue Callback Flow shown below.

For an example IVR, see **Creating an IVR Script with Queue Callback**.



- **Initial Callback Number from**: Variable that contains the caller's initial phone number.

  Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

- **Store Callback Number in**: Variable that contains the phone number specified by the caller for the callback.

  Important

  When caller enters their callback number, this entry must be followed by a hash symbol termination entry (#).

- **Allow collection and callback of international numbers**: Whether to store phone numbers from outside your country so that you may return those calls. If you do not enable this feature, you can return only national calls. To use this feature, you must have enabled the campaign for callbacks. For more information, see *Creating IVR Schedule Rules* in the Campaign Administrator's Guide.

- **Prompts**: Prompt that you select for each part of the process. Each menu contains the list of prompts in your Prompts folder:
  - Playing the Phone Number
  - Confirming the Phone Number
  - Entering the Phone Number
  - Confirmation and Thank You

- **Timeouts**: Expiration time for the queue callback request.
  - **Disable Queue Callback after**: Expiration day and time.
  - **After digit timeout**: Number of seconds between digits when DTMF entry is used.

- **TCPA Consent**: Whether to enable the feature. This feature applies to Visual IVR only. This option enables the text field.

  TCPA information is stored in the call log with the date, the name of the contact, and the text of the consent.

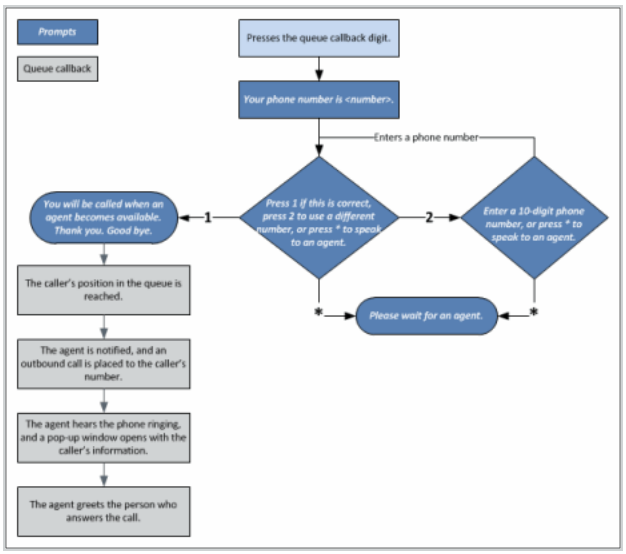
- **TCPA Consent Text**: Telephone Consumer Protection Act (TCPA) text that you may modify as needed to comply with TCPA regulations.

Dispositions Tab

The default disposition is Abandon. Be sure to create disposition codes specific to callbacks so that your agents can finish processing the call appropriately. For more information, see Selecting Dispositions.

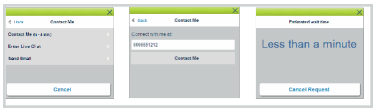
Disposition Flow

This figure shows an example queue callback flow that occurs when a customer calls, but all agents are busy. The diagram starts when the customer enters the queue callback digit.



The next available agent receives a callback request that contains the information about the caller and the call that generated the request.

This shows an example queue callback that appears as a sequence of 3 windows in a Visual IVR:



- First window: Available types of communication: queue callback, chat, and email.
- Second window: Queue callback number or chat window, for example, and Back and Forward options. The number1 contact field is displayed if it is available.
- Third window: Estimated waiting time for a queue callback or chat. The time is updated every 15 seconds until the callback occurs.

System Info Module

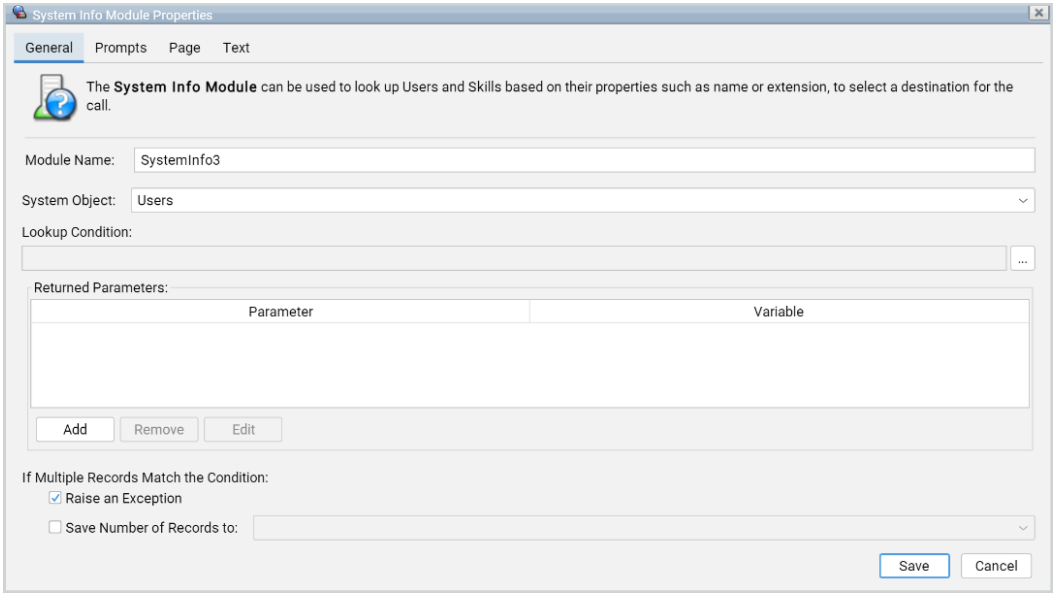
The System Info module enables you to retrieve the properties and statistics of users, skills, voicemail messages, EWT, skill groups, and campaigns. You may use the returned variables in subsequent IVR modules.

Example

You can use this module to determine the number of agents logged in to a particular queue. For a queue that is normally staffed, the absence of logged-in agents may indicate a network failure or an emergency evacuation of your contact center. In this instance, you can play an emergency prompt to your callers to explain the absence of agents. See **Defining Search Conditions** for configuration details.

When using Visual IVR scripts, you can add images to pages and menus to enhance your brand or to describe a product or service; however, you cannot add links to images. For more information, see Page Tab.

Note: You cannot delete a System Info module if the script contains an Update System Info module with a reference to the System Info module.



Properties

General Tab
Prompts Tab
Page Tab

General Tab

- **Module Name**: Name that represents the role of the module in the IVR script. In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.
- **System Object**: Available system objects:
  - Users
  - Skills
  - Voicemails
  - Statistics: EWT (see **Estimated Wait Time**)
  - Statistics: Skills
  - Statistics: Campaigns
- **Lookup Condition**: Creates a search condition. If you do not specify a condition, all objects return. This condition can contain user-defined filter criteria, logical operations, and a sort order. For more information, see **Defining Search Conditions**.
- **Returned Parameters**: Parameters and variables that contain the results. When an object is found, the module assigns the information to a variable. For more information, see **Defining Returned Parameters**.
- **If Multiple Records Match the Condition**: Options that apply to multiple matches:
  - Raise an Exception: Activates the exception exit. Enabled by default.
  - Save Number of Records to: Lists integer variables. The variable is set to the number of contact records to find.

Prompts Tab

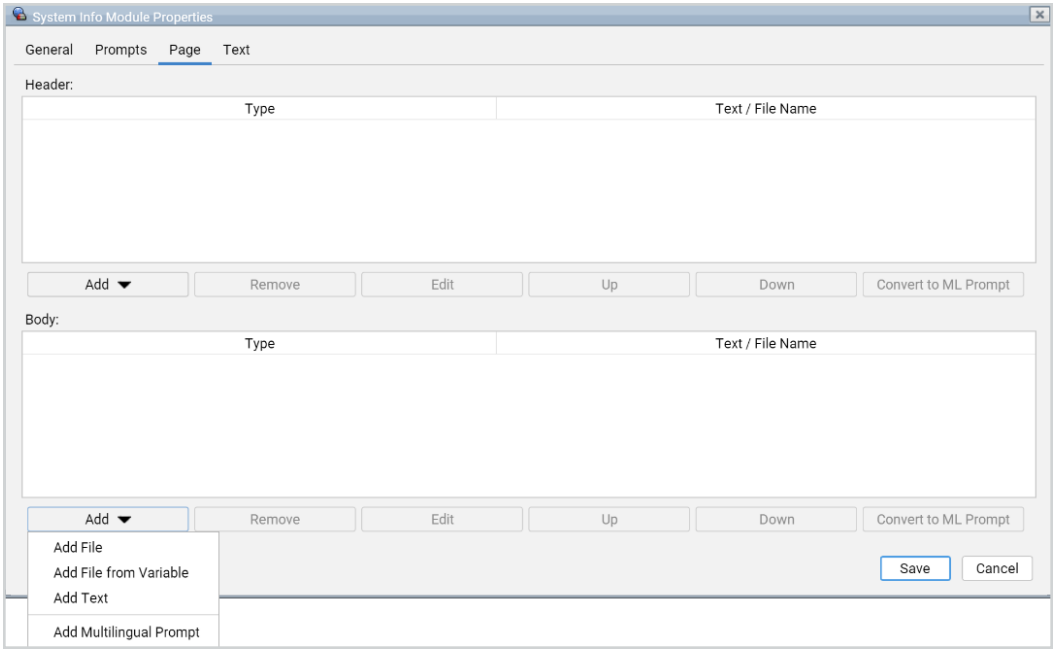
List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds). Each prompt is interruptible.

In Visual IVR scripts, TTS prompts convert to text that appears in the body of the IVR window.

Page Tab

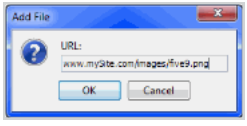
This tab contains the list of Visual IVR prompts shown in the customer's Web browser when a IVR script executes. Prompts on this tab display. Prompts listed in the Prompts tab do not display.

> **Note:** If there are no prompts on this tab, the prompts in the Prompts tab display.

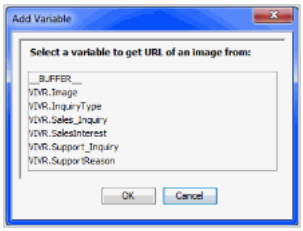


You can add different types of prompts:

- **File**: URL of an image.

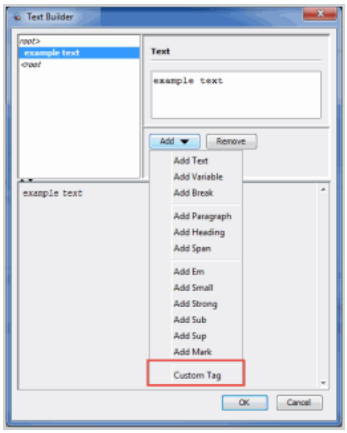


- **Variable**: Variable with the URL of an image.

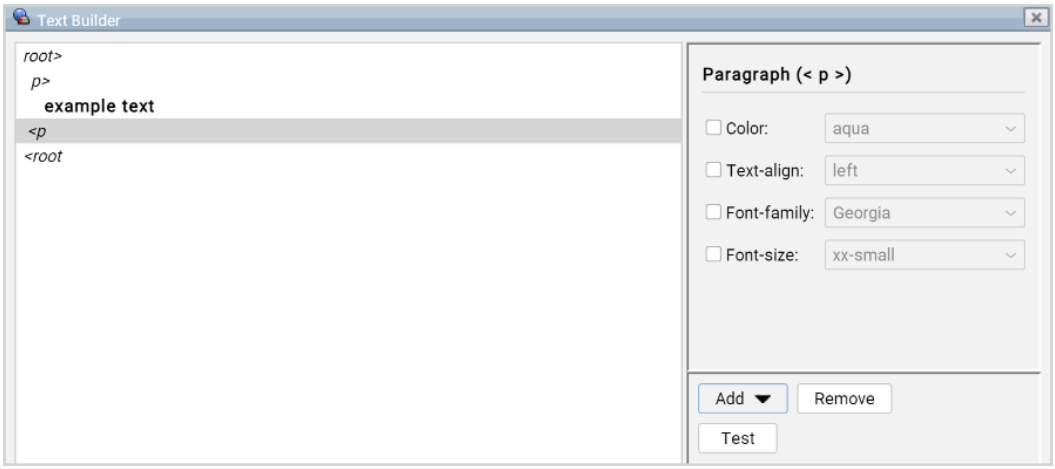


- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL displays.

- **Custom Tag**: See **Using the Visual IVR URL** for instructions on building custom tags.



In the Text Builder, you can use HTML to format text (bold, color, and emphasis) and you can insert variables. Unlike breaks in the TTS builder that are associated with speech, breaks in the Text Builder add a line or horizontal break. Click **Test** to preview the message.

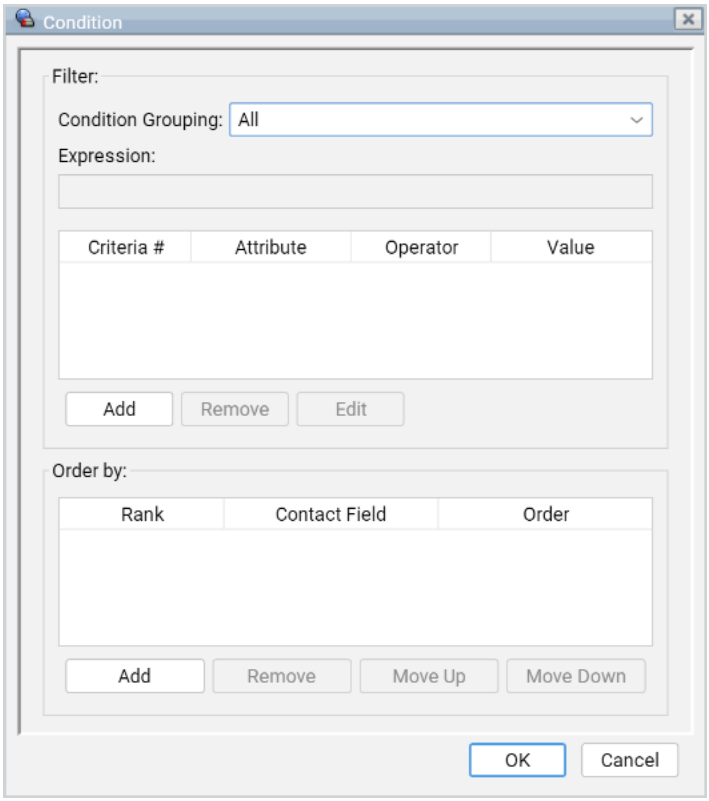


Defining Search Conditions

This example searches for users with User Can Transfer Calls permission, who belong to the Inbound Sales queue group.

1 In the **General** tab, select the more menu next to the Lookup Condition field.

The Condition window displays.



2 Select **Add**.

3 Define the following filter criteria:



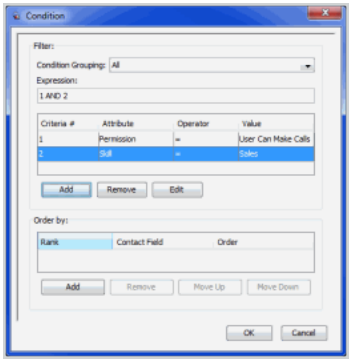
- **Attribute**: Element to compare with a constant or variable. For a list of attributes in each object, see the table below.
- **Operator**: Type of comparison. See **If/Else Module** for the comparison operations and compared value types.
- **Constant**: Available options vary depending on the attribute that you choose.

- **Variable**: List of call variables. For variables specific to this module, create a set of custom variables in the Variables tab of the IVR script properties window (see Default Properties).

4 Select **OK**.

The filter criterion item appears in the list.

5 Repeat these steps to add the Sales criteria.



6 In the **Condition Grouping** menu, select an option:

If you create more than one criteria, you can join them using logical operations.

- **Any**: Find objects that match any defined criteria.
- **All**: Find objects that match all defined criteria.
- **Custom**: Define a custom expression that describes how to use the criteria.

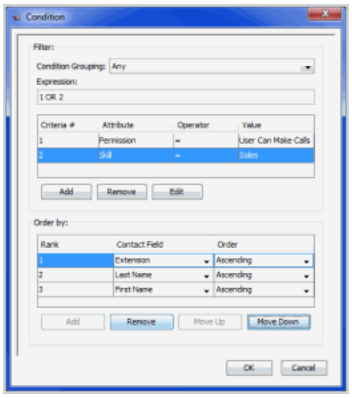
An expression automatically displays in the Expression field. For example, if you select All, the expression is 1 AND 2.

7 To define the sort order for the returned records, select **Add** (maximum three times) at the bottom.

a To select a different contact field, click the field.

b Select the order.

8 Define the sorting options:



9 Select **OK**.

These are the attributes and types of the variables for creating conditions for the system objects.

System Object	Attribute	Variable Type
Users	Active	Boolean (`true` or `false`)
	Extension (to route calls)	Number
	First Name	String
	Last Name	String
	Permission	String
	Role	String
	Skill	String
Skills	Name	String
Voice Mail	Campaign	String
	Creation date	Date
	Creation time	Time
	Extension	Number
	Is Deleted (boolean)	Number
	Is New (boolean)	Number
	Number (such as phone)	Number
Statistics: EWT (see Estimated Wait Time)	Module Name	Number
Statistics: Skills	Range	String

System Object	Attribute	Variable Type
	Skill	String
Statistics: Campaigns	Campaign	String
	Range	String

Defining Returned Parameters

For example, if a user account with a matching permission and skill is found, the user's extension is assigned to BUFFER.

1. On the General tab, select **Add**.

   The **Edit Returned Parameter** window displays.

2. Select your desired parameters and variables:

   - **Parameter**: Options that depend on the selected system object. For more information about parameters and data types, see the table below.
     - Users
     - Skills
     - Voicemails
     - Statistics: EWT (see **Estimated Wait Time**)
     - Statistics: Skills
     - Statistics: Campaigns
   - **Variable**: List of CAVs (call-attached variables). For variables specific to this module, create a set of custom variables in the Variables tab of the IVR script properties window (see **Default Properties**).

     Use BUFFER if the previous module in the flow uses the value of the buffer, for example to route to the extension.

3. Select **OK**.

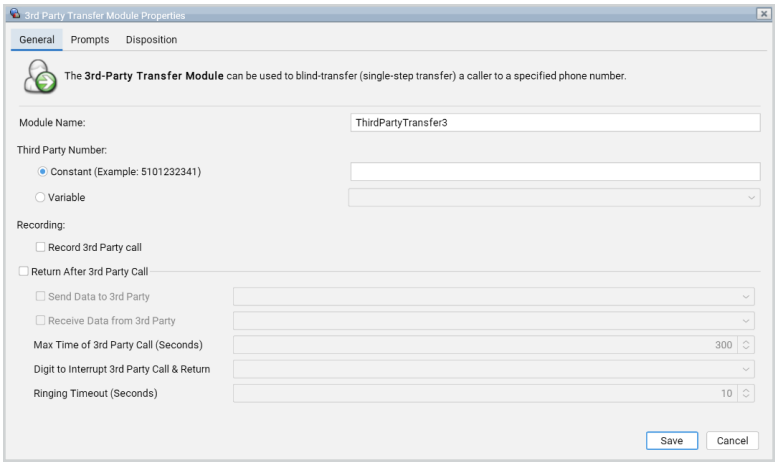
These are the parameters and variables for creating returned parameters for system objects.

System Object	Parameter	Variable Type
Users	Active	Boolean (`true` or `false` only)
	Extension (to route calls)	

System Object	Parameter	Variable Type
	First Name	Number
	Greeting (Path to greeting file)	String
	Last Name	String
	Number of new voicemail messages	String
	Number of saved voicemail messages	String
	PIN	String
Skills	Name	String
Voicemails	Campaign	String
	Creation date	Date
	Creation time	Time
	Extension	Number
	File Name	String
	Is Deleted (boolean: 1 or 0)	Number
	or `true` or `false`?	Number
	Is New (boolean: 1 or 0)	Number
	or `true` or `false`?	
	Number (such as phone)	
Statistics: EWT (see **Estimated Wait Time**)	EWT	Number
Statistics: Skills	Agents Logged In	Number
	Agents On Call	Number
	Agents Ready for Calls	Number
	Cumulative Longest Queue Time	Number
	Calls In Queue	Number
	Longest Queue Time	Number
	Queue Callbacks	
Statistics: Campaigns	Avg Handle Time	Number
	Avg Speed of Answer	Number
	Calls Abandoned	Number
	Drop Call %	Number
	First Call Resolution	Number
	Service Level (Queue)	Number
	Total Calls	Number

Third Party Transfer Module

This module enables you to transfer a call to a phone number outside your VCC.



> **Note**
>
> Error response handling while processing third party transfer actions are supported.

General Tab

- **Third Party Number**: Phone number for the transfer:
  - Constant: Entry field for the transfer phone number. Do not enter a one (1) in front of the number. Enter the number without dashes, parentheses, or other characters. You must enter phone numbers according to your domain and VCC configuration:
    - If your domain is enabled for the E.164 format, you may need to enter phone numbers in your national format or phone numbers up to 15 digits, starting with the plus (+) sign and the country code. See your administrator.
    - If your domain is not enabled for the E.164 format, you must enter 10 digits to conform to the North American Numbering Plan (NANP).
  - Variable: list of contact, agent, system, call, IVR, and user (CAV) variable that contains the voice mailbox number. This menu contains string variables only.

- **Record 3rd Party call**: Whether to record calls transferred to a third party.

  If **Set Recording Name to Session ID** is selected in the General tab of the campaign settings, third-party transfer recordings are uploaded in this file format:

  `<callSessionId>@<timeOfCreate><IVRModuleName>.ext`

  You are responsible for notifying the third party that the call is being recorded and for obtaining consent when required by law.

  Select this option to enable third party data transfer.

- **Return After 3rd Party Call**: Whether to return the call to your domain after the third-party interaction is completed.

  Select this option to enable third party data transfer.

  Data transfer requires additional configuration. Contact your Five9 representative.

- **Send Data to 3rd Party**: Enter KVList of variables to send to third party.

- **Receive data From 3rd Party**: Enter return mapping for KVList of variables from third party.

- **Max Time of 3rd Party Call (seconds)**: Configure up to 3600 seconds (sixty minutes) duration for third party calls using this transfer module.

- **Digit to Interrupt 3rd Party Call and Return**: Configure dialing pad key (0-9,*,#) to interrupt the third-party call and return that interaction to your contact center.

- **Ringing Timeout (seconds)**: Configure up to 30 seconds for maximum allowable ring time.

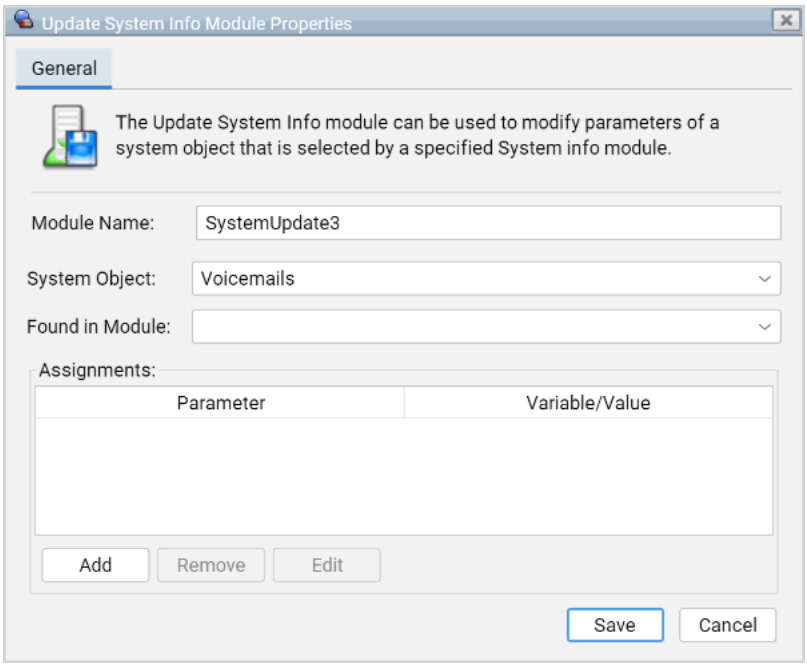
Dispositions Tab

The default disposition is **Transferred to third party**. For more information, see Selecting Dispositions.

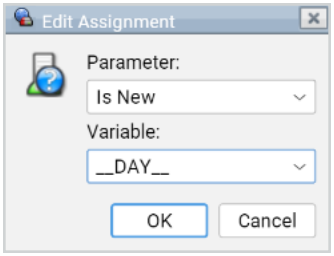
Update System Info Module

The Update System Info module updates the currently selected system object.

Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.



- **System Object**: Type of system objects: Users and Voicemails.
- **Found in Module**: List of System Info modules.
- **Assignments**: System parameters that you can update with a variable:
  - Users: You can modify the PIN.
  - Voicemails: Parameters that you can update with a variable:
    - Is New: contact, system, agent, IVR, call, and user call variables.
    - Is Deleted: contact, system, or user call variable.



Voice Input Module

After callers are prompted for information, the Voice Input module saves the speech as a recording. The recording stops when one of these conditions is met:

- The duration of the final silence is exceeded.
- A DTMF key is pressed.
- The maximum recording time is exceeded.
- The caller hangs up.

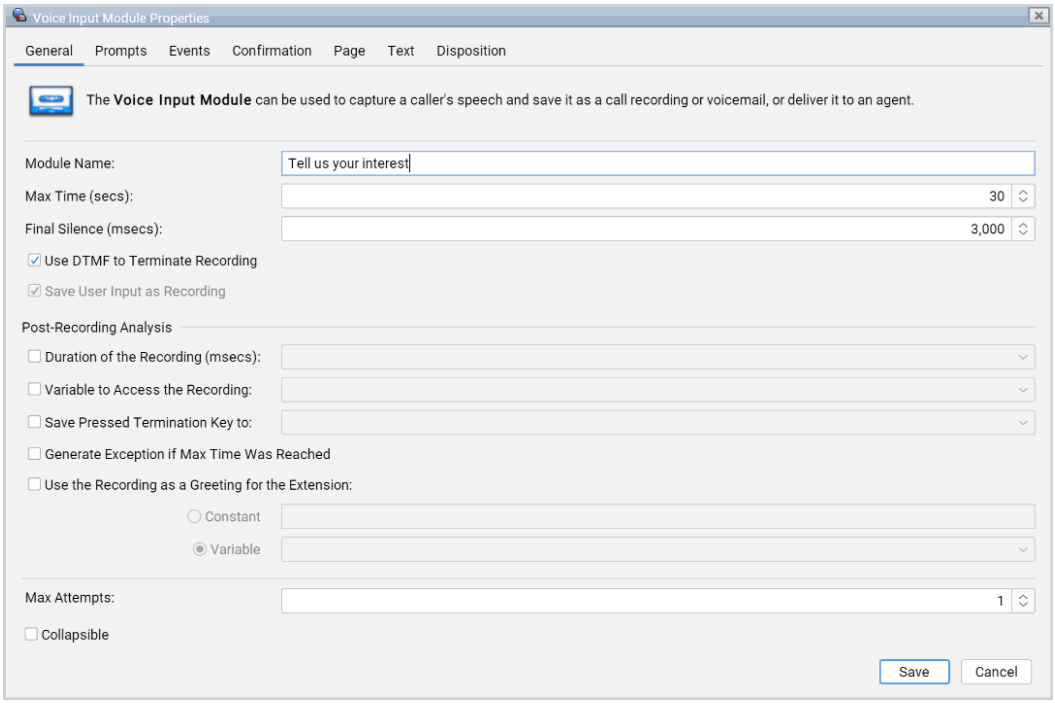
If configured accordingly, the module can play the recording to callers for confirmation, with the option to re-record the message if necessary. The Skill Transfer and Agent/Voice Mail Transfer modules have a property that controls how the recorded files are presented and stored. You can set the Action for Recorded Files option (General tab):

- Keep as Recording: an inbound campaign can collect callers' address information. The recorded file becomes available in reporting.
- Send to Agent: callers can be transferred to an agent with the Skill Transfer Module. The recorded file becomes available in the agent desktop and in reporting.

You can assign some recording characteristics to IVR script variables. You can save the following information about a recording. For more information, see **Using Recorded Files**.

When using Visual IVR scripts, you may also add images to pages and menus to enhance your brand or to describe a product or service. However, you cannot add links to images. For more information, see Page Tab.

General Tab
Prompts Tab
Events Tab
Confirmation Tab
Page Tab
Dispositions Tab



General Tab

- **Module Name**: Name of the module that represents the role of the module in the IVR script. The name also applies to the call recordings in the agent application and in reports.

  In Visual IVR scripts, the name is converted to text that appears in the heading of the IVR window.

- **Max Time**: Number of seconds allowed for the recording. The default is 30 seconds, excluding the prompt time. After that time, you may receive a NoMatch exception.

- **Final Silence**: Number of milliseconds that indicates the end of speech. The default is 3000 ms (3 seconds).

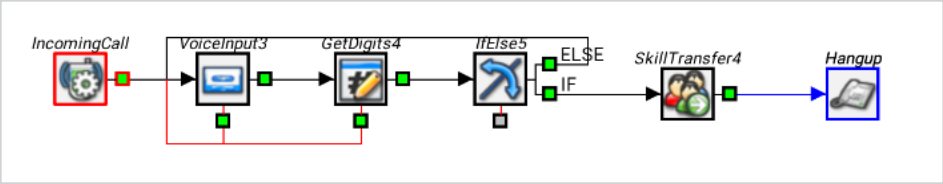
- **Use DTMF to Terminate Recording**: Whether to allow the caller to press any key to stop the recording.
  - Enabled: by default, stop the recording when the caller presses a key. Required if you want to use the **Save Pressed Termination Key to** option.
  - Disabled: do not stop the recording.

- **Save User Input as Recording**: Whether to save the caller's input as recorded files.;
  - Enabled: by default, save the caller's input as a recording.
  - Disabled: do not save the caller's input.

- **Duration of the Recording**: Number of milliseconds that indicates the length of the recording. Use a call-attached variable that is an integer.

- **Variable to Access the Recording**: Variable that contains the recording. Be sure to select a variable if you want to use confirmation with DTMF input in the Confirmation Tab shown below. Speech recognition must be configured for your account.

  Use other modules, such as Get Digits or Play, to confirm the input. For example, the Voice Input Module prompts callers to say their name, which is recorded. The next module, Get Digits, prompts callers to confirm the information or to record it again. After the information is confirmed, callers are transferred to an agent.



- **Save Pressed Termination Key to**: **Use DTMF to Terminate Recording** must be enabled.

  String variable that contains the DTMF key, such as # (pound) that terminates the recording if pressed by the caller. Otherwise, the variable is assigned to empty.

- **Generate Exception if Max Time Was Reached**: Whether to generate an exception when the number of seconds allowed for the recording (Max Time value) is reached when the IVR goes to the module connected to the Exception branch or to the next module if no exception branch exists.
  - Enabled: The system generates an exception.
  - Disabled: The system does not generate an exception but generates a NoMatch event.

- **Use the Recording as a Greeting for the Extension**: Replaces an existing greeting for a specified extension with the created recording:

- Constant: up to six-digit extension number.
- Variable: List of contact, agent, system, call, IVR, and user (CAV) variable that contains the voice mailbox number. This menu contains string variables only.

You may use this option to enable agents to play a personalized voice mailbox greeting when callers are transferred to agents.

- **Max Attempts**: Number of possible attempts to capture the caller's speech before leaving the module with error code. The default value is 1. To allow callers to re-record, the value must be greater than 1.

- **Collapsible**: Visual IVR feature that applies to all types of prompts. Whether to concatenate all the prompts in the module whether they are played (standard prompts) or displayed (Visual IVR prompts) to callers.

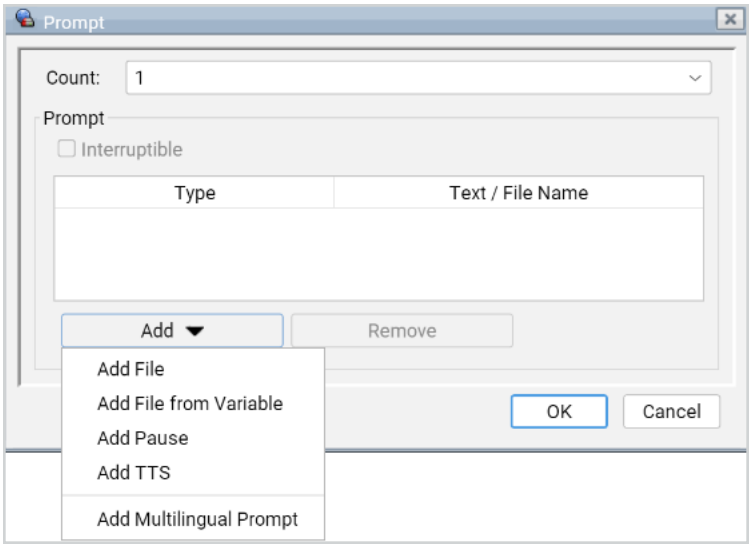
  Voice Input

  - Enabled: Concatenate prompts. Callers see at once all the prompts in the same window.
  - Disabled: Do not concatenate prompts. Callers hear or see each prompt after performing the requested action.

Prompts Tab

List of default and custom prompts in the Prompts folder. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in any sequence. Between prompts, you can add brief pauses (milliseconds).

In Visual IVR scripts, TTS prompts are converted to text that appears in the body of the IVR window.



- **Count**: Minimum number of times that the user must speak for the prompt to be played. The default is 1.
- **Interruptible**: Not in use.

Events Tab

List of event handling options. You can add one or more prompts from a file, a variable, or from the TTS builder. You can arrange the prompts in a specific sequence. The list contains the default messages:

Event	Default Messages	Action
NoMatch	Your recording is too long. Please repeat.	Continue
NoInput	I cannot hear you.	Reprompt

- **Event**: List of possible events:
  - NoMatch: Generated if the recording stopped because it exceeded the maximum allowed recording duration and, in the General tab, **Generate Exception If Max Time Was Reached** is disabled.
  - NoInput: Generated if the recording time is zero.
  - Help: Generated if the caller presses the Help button on the keypad.
- **Count**: Number of events (1–11) for which the action should be taken.

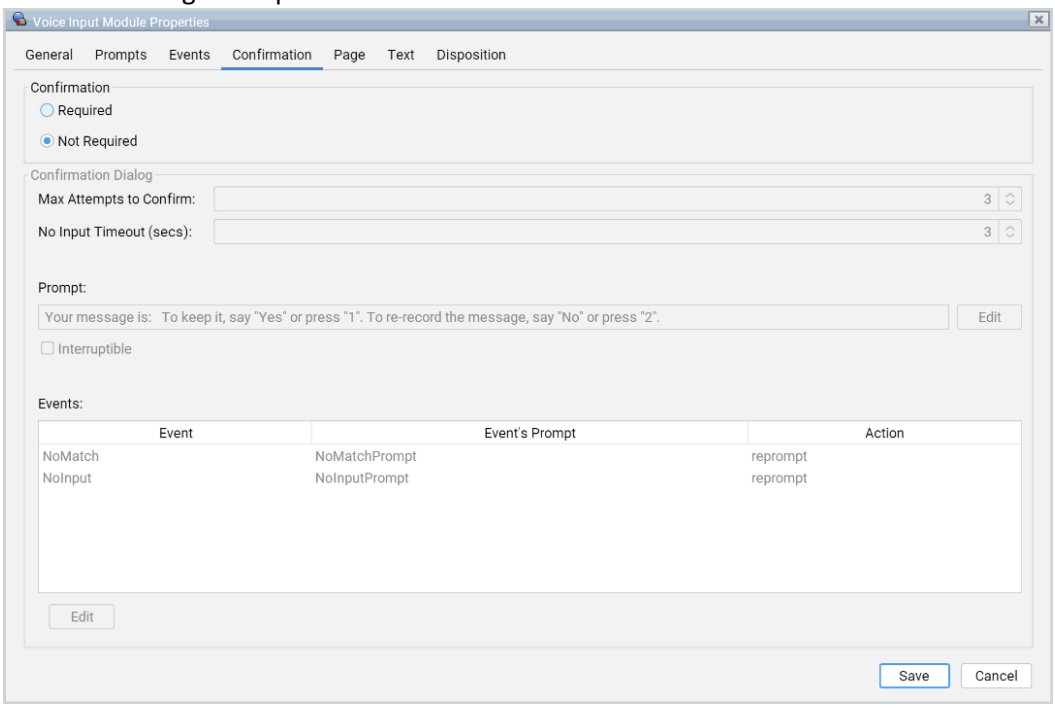
- **Action**: Action taken when the specified event occurs.
  - Reprompt: Repeat the prompt listed in the Prompts tab.
  - Continue: Proceed to next attempt without playing the prompt listed in Prompts tab.
  - Exit: Terminate the script.
- **Interruptible**: Not in use.

Confirmation Tab

This tab appears only if speech recognition is configured for your account. For confirmation with DTMF input, you must have selected **Variable to Access the Recording** in the General tab.

This tab, which accepts DTMF input, such as *Press 1*, or speech input, such as *Yes*, enables you to set how messages are recorded again if **Max Attempts** in the General tab is greater than 1. After a recording is played, the caller accepts or rejects the recording:

- Accepts: The IVR proceeds to the next module.
- Rejects: The caller is prompted to record the message again. The prompt to record again is specified as NoMatch events.



- **Confirmation**: Whether to use the options on this tab:
  - Required: Callers can listen to the message to confirm that it is correct or to record it again. Select this option to activate the confirmation options.
  - Not Required: By default, callers cannot listen to the recorded message.
- **Max Attempts to Confirm**: Number of attempts allowed to accept the recorded message. The default is 3.
- **No Input Timeout**: Number of seconds allowed before the NoInput event occurs. The default is 3.
- **Prompt**: Confirmation prompt played to callers. You can use the default prompt or create a prompt specific to your needs.
- **Events**: Actions that can occur during confirmation and re-recording, for example with no match, no input, or help request events. You can customize the event in this tab and add new events in the Events tab. The list contains these default messages.

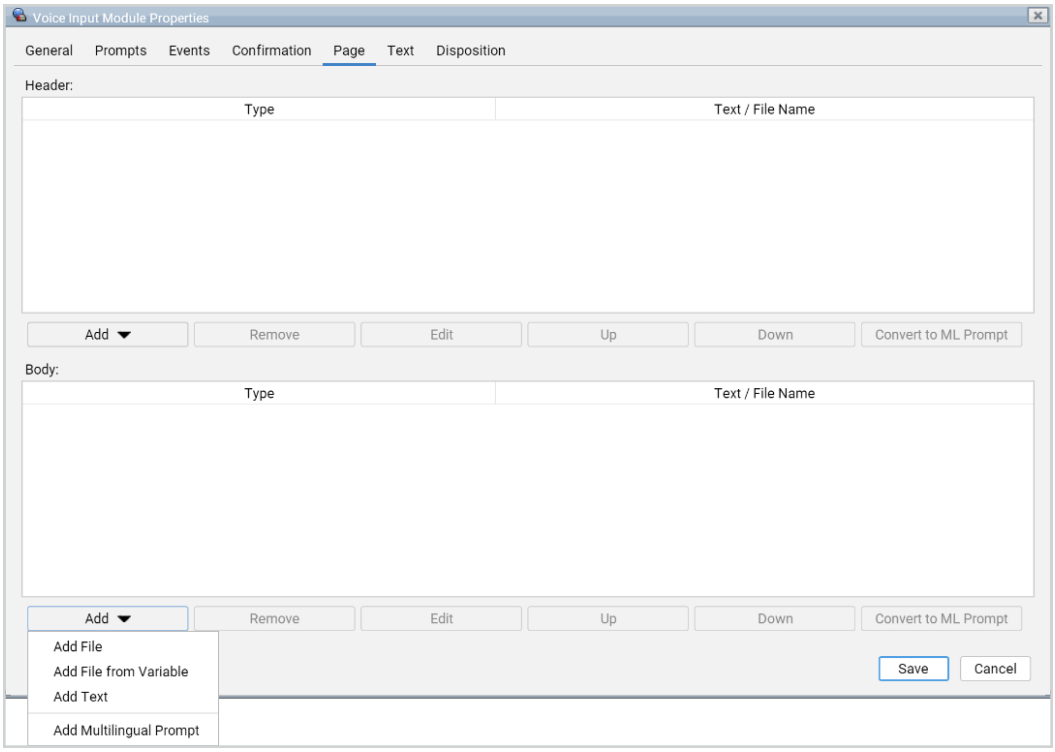
Event	Message	Action
NoMatch	Incorrect input.	Continue
NoInput	I cannot hear you.	Reprompt

Page Tab

This tab contains the list of Visual IVR prompts that are shown visually in the customer's Web browser when a IVR script is executed.

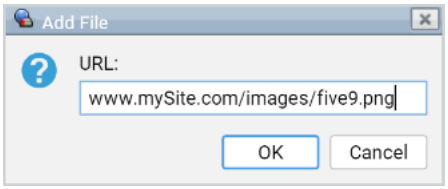
If this tab contains prompts, these are shown whereas prompts in the Prompts tab are not.

If this tab does not contain prompts, the prompts in the Prompts tab are shown.

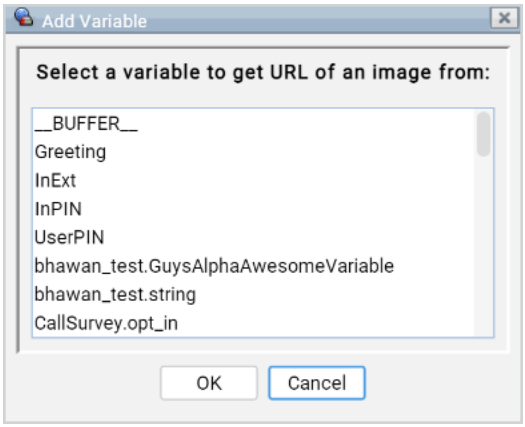


This tab enables you to add different types of prompts:

- **File**: URL of an image.

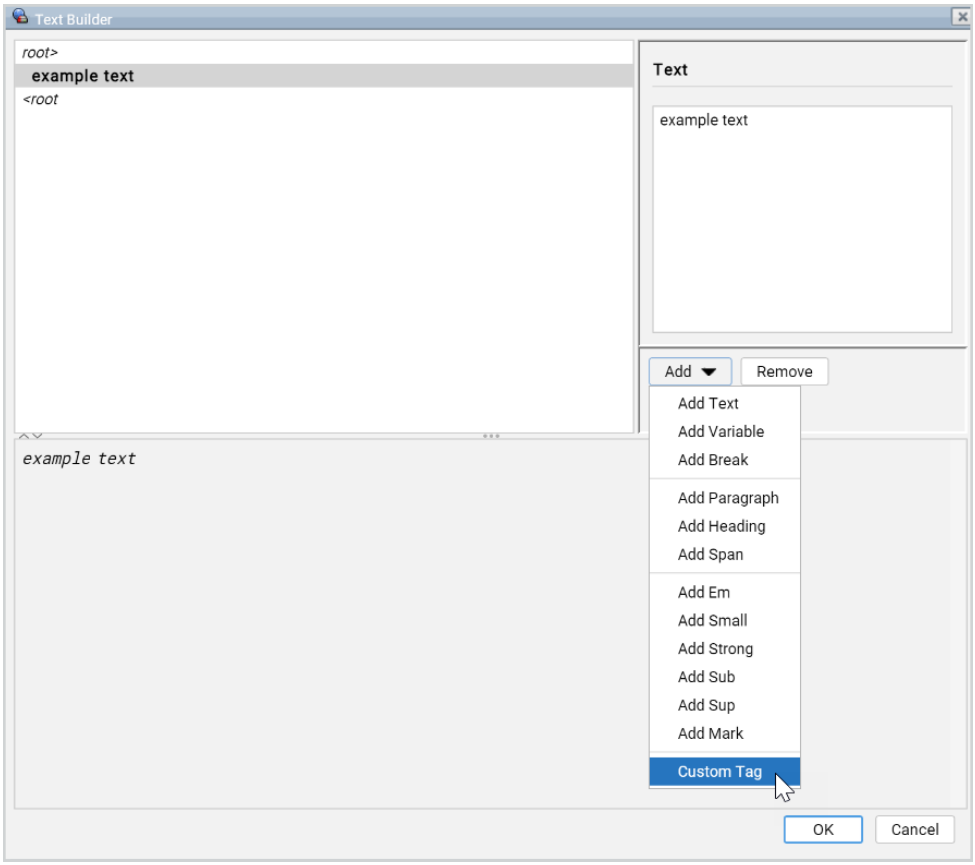


- **Variable**: Variable that contains the URL of an image.



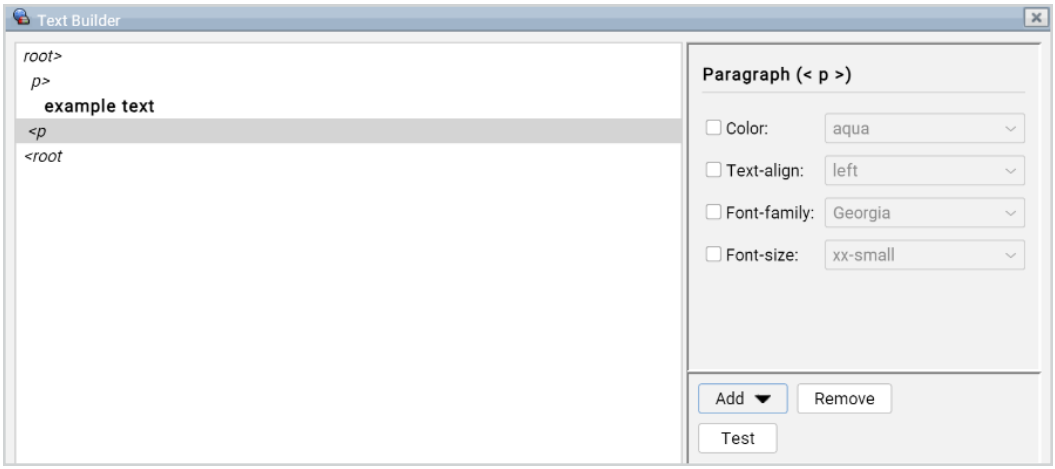
- **Text**: Formatted text that can contain variables. You cannot add images. If you select a variable that contains the URL of an image, the URL is displayed.

- **Custom** Tag: For detailed usage information, see [Using the Visual IVR URL](#).



The text editor enables you to create HTML text that contains formatted text and variables. You can customize the text with bold, color, and emphasis. Unlike breaks in the TTS builder, which are associated with speech, breaks in this text editor add a line or horizontal break.

The Test button enables you to preview the HTML text.



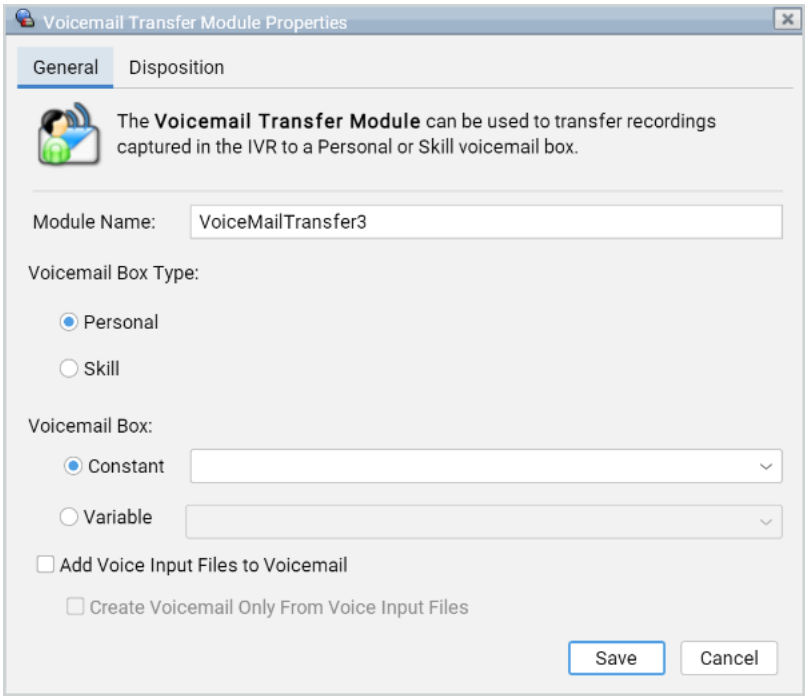
Dispositions Tab

The default disposition is Caller Disconnected. For more information, see Selecting Dispositions.

Voicemail Transfer Module

The VoiceMail Transfer module enables you to transfer recordings captured with an IVR to a personal or skill group voice mailbox. By default, a message remains in the module for 59 minutes and 59 seconds. Because transferring a call ends the IVR script, you need to specify dispositions.

If the caller does not leave a voice message, use another type of exit to route the call.



General Tab

- **Voicemail Box Type**: Select the type of voice mailbox for the message from the caller: Personal or Skill.

- **Voicemail Box**: Name or variable that specifies the name of the voice mailbox.
  - Constant: depending on the Voicemail Box Type that you selected, this menu contains the list of possible users or skills.

    Variable: list of contact, agent, call, IVR, and user (CAV) variable that you can use to find the voice mailbox. This menu contains string variables only.

    Because you may not use call variables that contain sensitive information in this field, these variables do not appear in the menu even if they exist in the Call Variables folder of the VCC.

- **Add Voice Input Files to Voicemail**: Whether to transfer the files of the recordings with the voicemail messages.
  - Enabled: transfer recordings. To transfer recordings to a personal or skill voice mailbox, include the Voice Input module in the script.

- Disabled: recorded files are not transferred to agents or skills; saved recordings can be accessed only from reports. See also **Using Recorded Files**.

- **Create Voicemail Only From Voice Input Files**: Whether to transfer only recorded files as voicemail to the specified voice mailbox.

  You can use the **Voice Input Module** to limit the length of voicemail messages received. Using the Voice Input module will also bypass an agent's personal greeting.

Dispositions Tab

The default disposition is Sent to Voicemail. For more information, see **Selecting Dispositions**.

IVR Examples

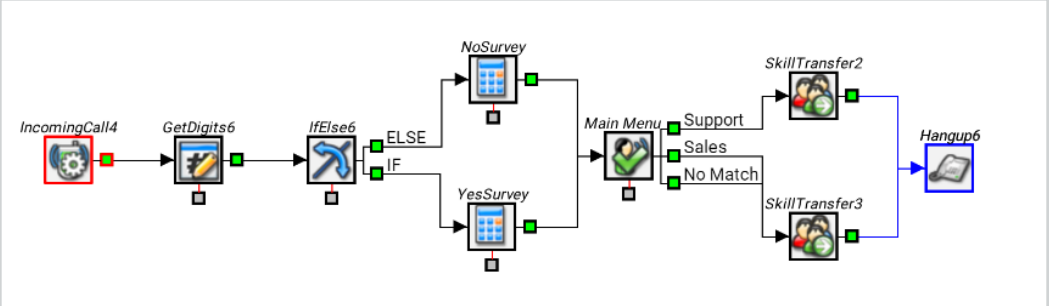
These topics present example scripts using several modules types.

Simple Campaign Script for Post-Call Surveys
Complex Campaign Script for Post-Call Surveys
Creating an IVR Script
Creating an IVR Loop
Configuring the Query Module
Creating an IVR Script with XML Web Service Query
Creating an IVR Script with Queue Callback
Creating an IVR Script for Tracking a Shipment
Using an Agent Extension in an IVR
Incoming Call Transfer to Studio IVA
Managing Voicemail
Creating an Opt-Out IVR Script
Flowcharts

Simple Campaign Script for Post-Call Surveys

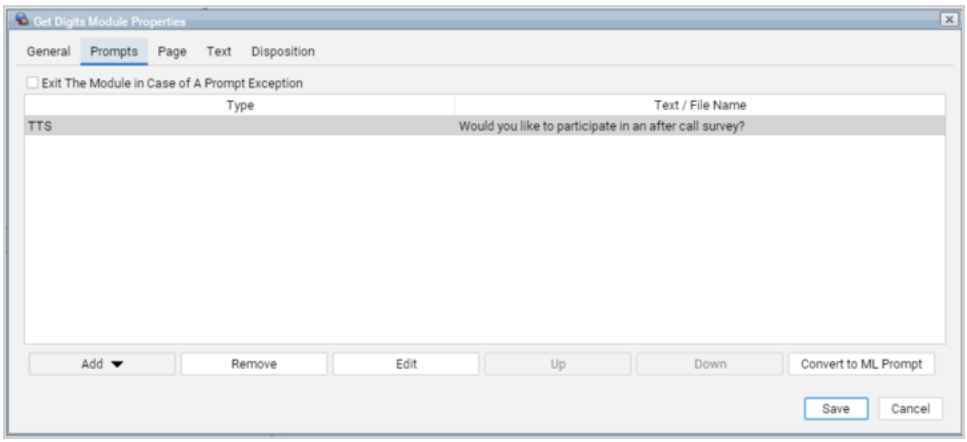
This example describes how to create a script to transfer calls to a survey campaign. See also **Complex Campaign Script for Post-Call Surveys**.

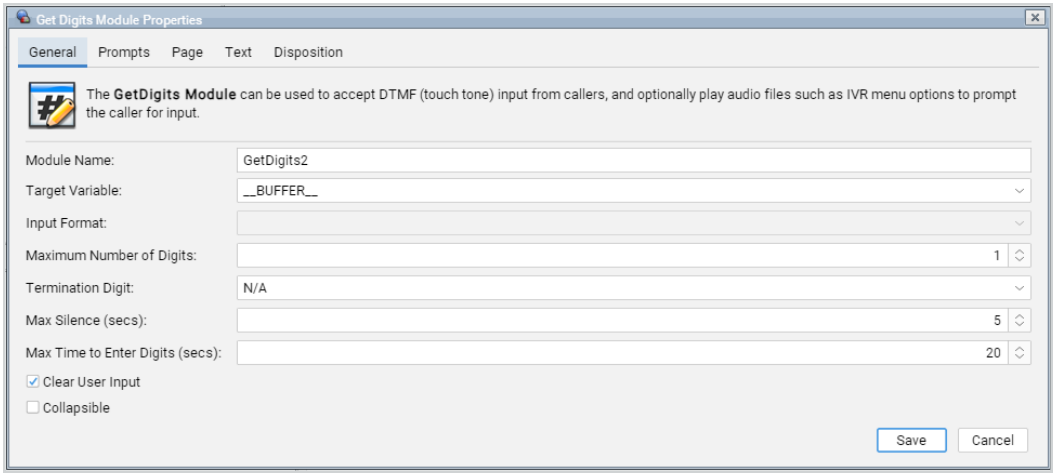
Get Digits Module
If/Else Module
Set Variable Module (IF Branch)
Set Variable Module (ELSE Branch)



Get Digits Module

This module asks the caller to participate in an after-call survey. The maximum number of digits in the BUFFER variable is 1. The caller is asked to enter 1 to start the survey or 2 to skip the survey.

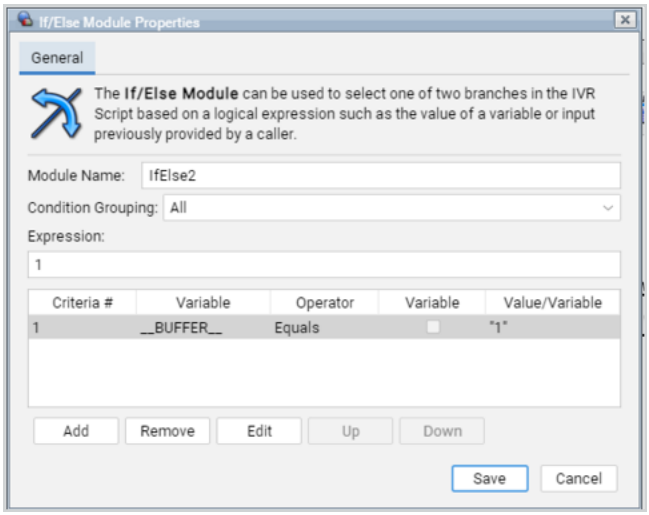




If/Else Module

Check the value of the BUFFER variable:

- BUFFER=1: (start the survey) proceed to **Set Variable Module (IF Branch)**.
- BUFFER=2: (skip the survey) proceed to **Set Variable Module (ELSE Branch)**.



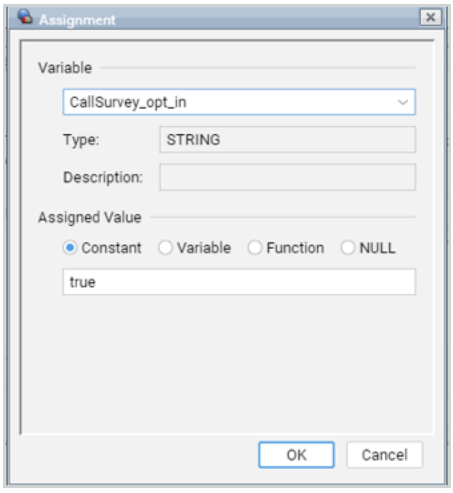
Set Variable Module (IF Branch)

Configure the module as follows:

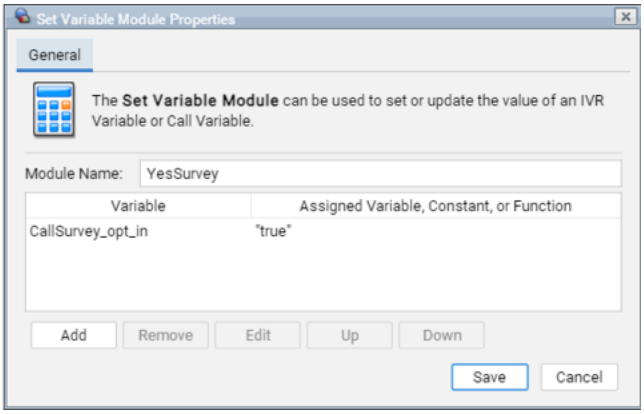
1. Assign a value to the `CallSurvey.opt_in` variable.

   Although it is a boolean variable, the data type that you see is `string`.

2. Select **Constant** and enter `true`.



3. Click **OK**.



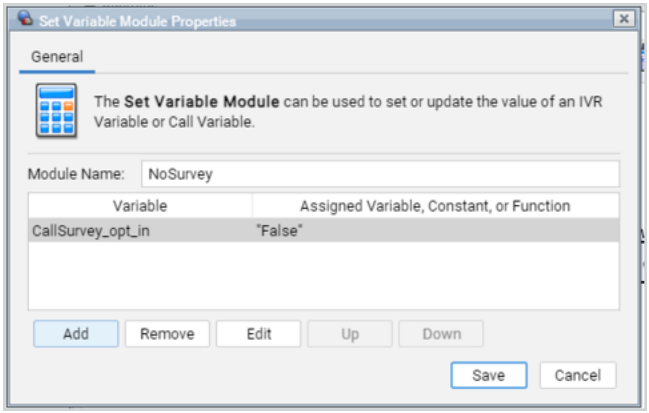
4 Proceed with the survey.

Set Variable Module (ELSE Branch)

Configure the module as follows:

1 Assign a value to the `CallSurvey.opt_in` variable.

2 Select **Constant** and enter `false`.



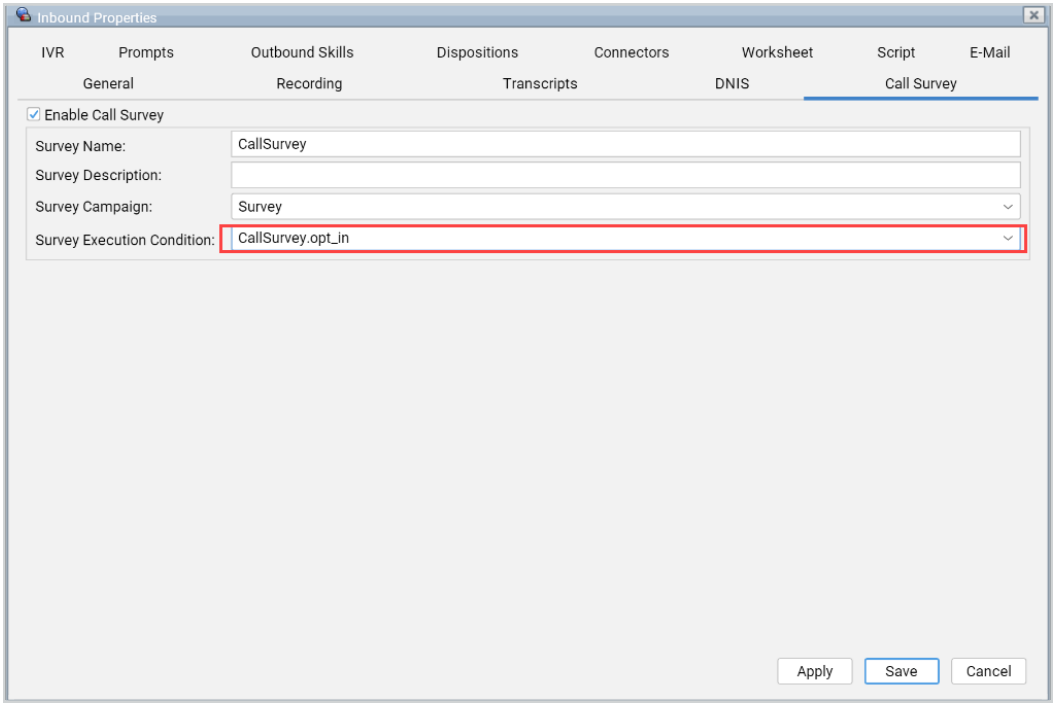
3 Click **Save**.

Complex Campaign Script for Post-Call Surveys

This section describes how to configure an IVR script for call surveys in which calls are transferred at the end of a campaign.

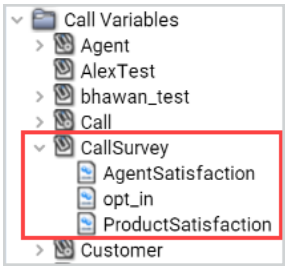
Call Variables
IVR Script

The `CallSurvey.opt_in` variable was added to an inbound campaign as call survey execution condition:



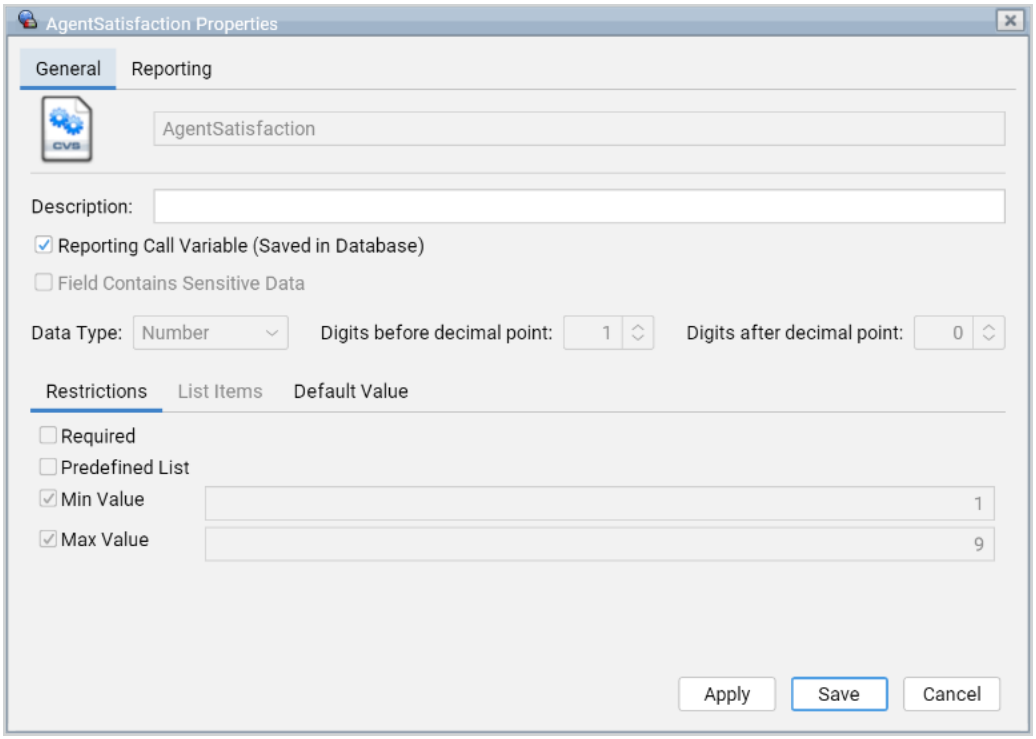
Call Variables

There is a Call Survey Variable group. It is not available by default. You have to create it by right-clicking **Call Variables** and selecting **Add Call Variable Group**. In this example it is called CallSurvey. The variables created here are used for questions in the following Call Survey script example.

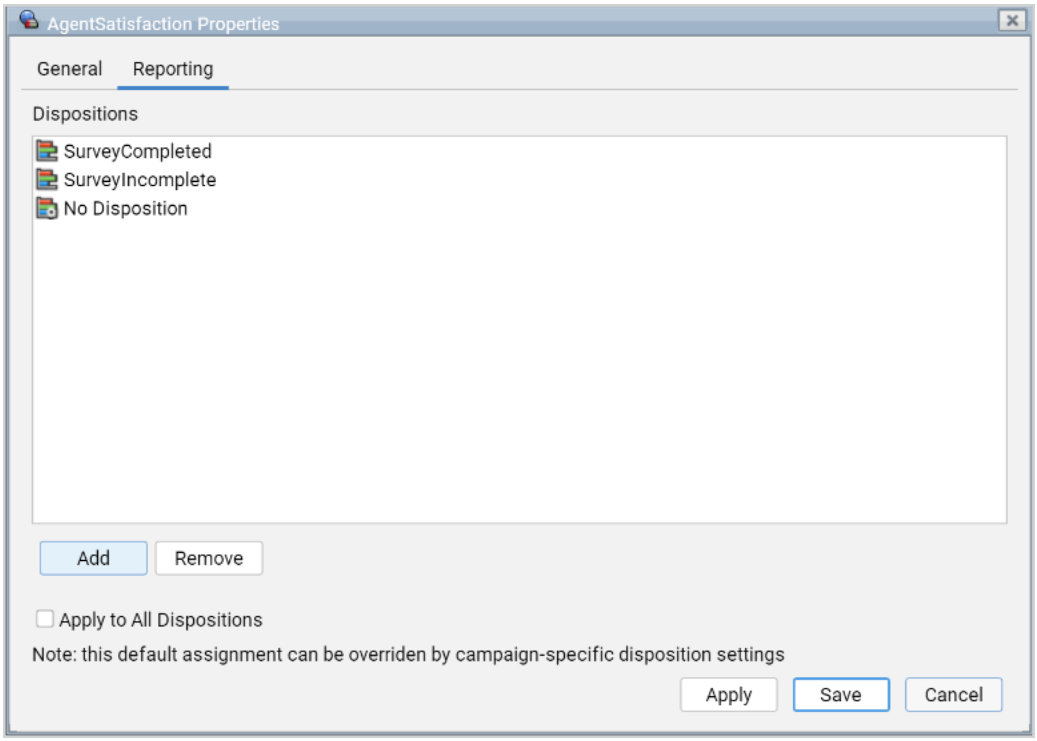


Read more in Creating Call Variable Groups, Creating Call Variables.

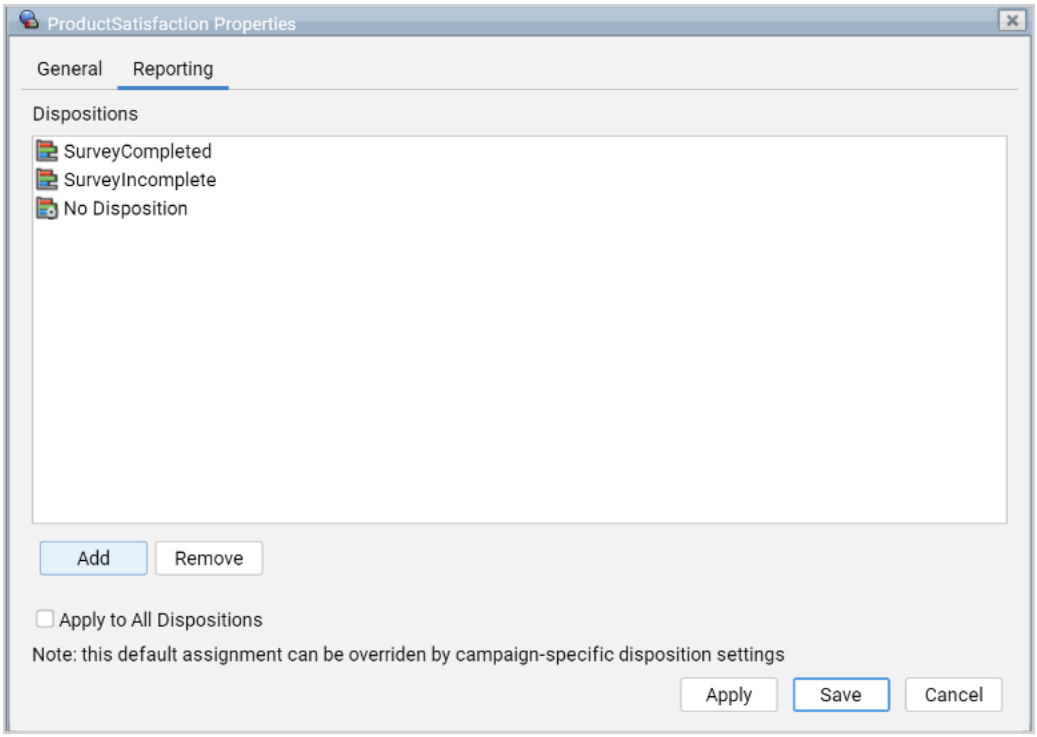
Agentsatisfaction Variable. You can enable **Reporting Call Variable** for your domain if you plan to use it. You can choose whether or not report on this variable (it is saved or removed).



You can choose only the applicable dispositions for you call survey script. In this example we use only SurveyCompleted and SurveyIncomplete dispositions, which were created earlier.

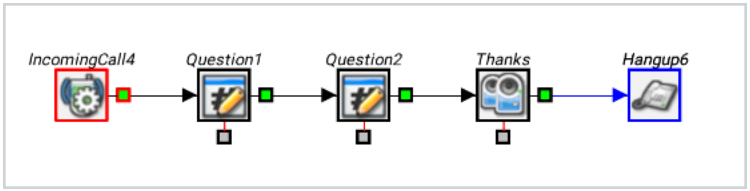


Productsatisfaction Variable. We have SurveyCompleted and SurveyIncomplete dispositions set in here.

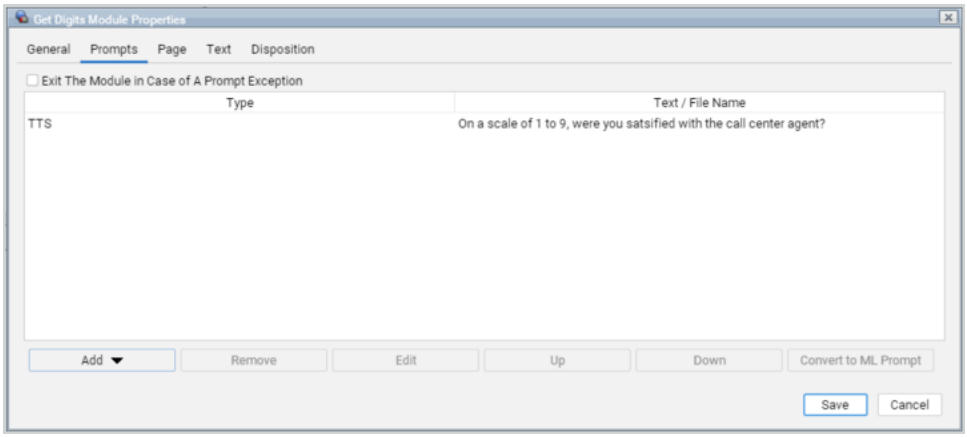


IVR Script

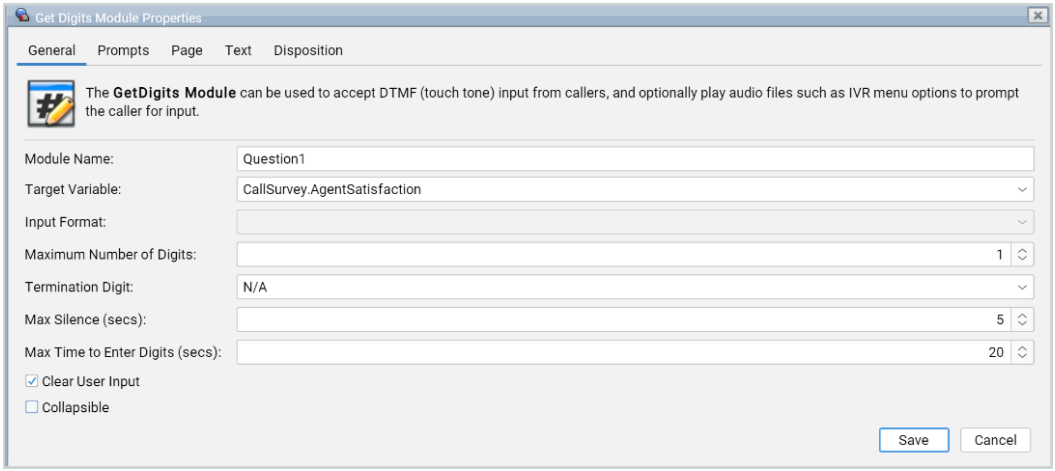
There is the Incoming Call Module and there may be a series of questions after it. There are 2 questions in this example.



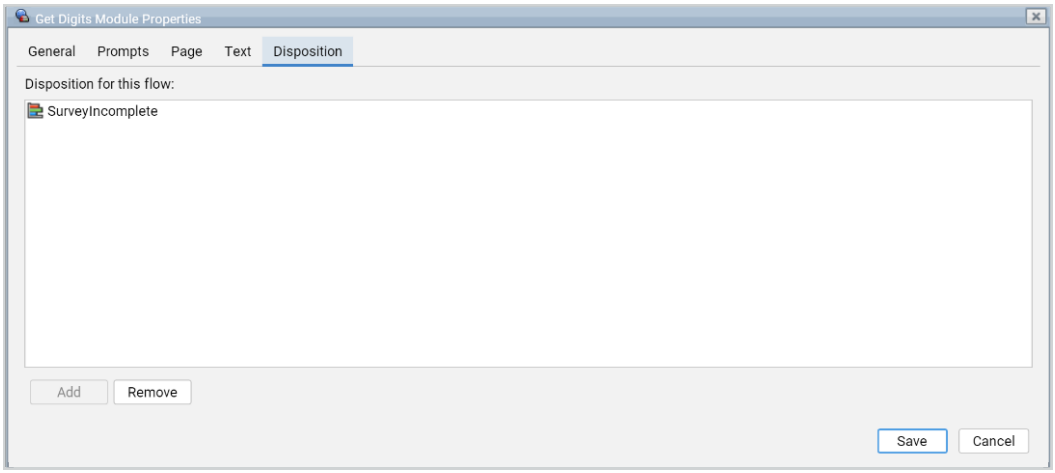
Get Digits Module 1. The first question asks the caller: *On a scale of 1 to 9, were you satisfied with the call center agent?*



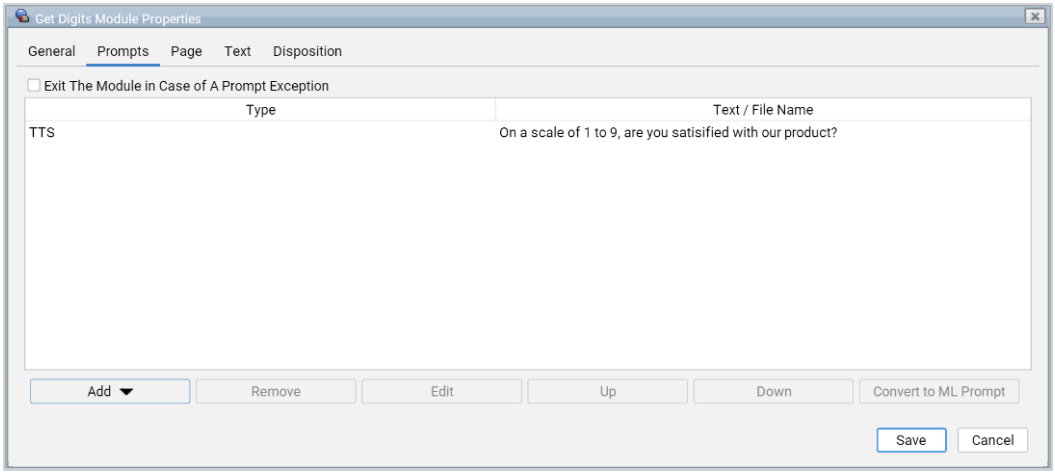
On the General tab, the target variable is a created variable AgentSatisfaction. The maximum number of digits is 1 because we have asked on the scale of 1 to 9. There is no termination digit unless you want the caller to confirm it.



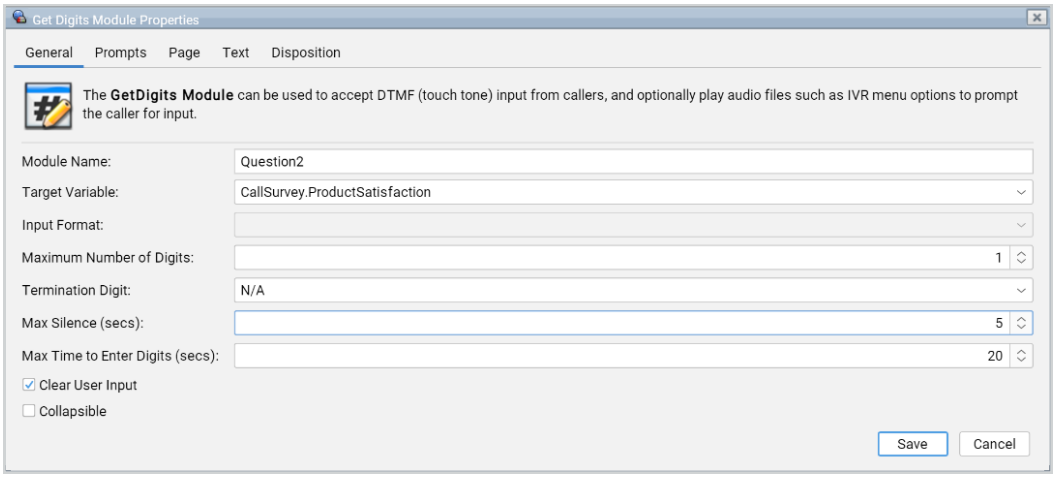
The disposition configured here is SurveyIncomplete. It tells us whether or not the caller actually went through the entire Call Survey script.



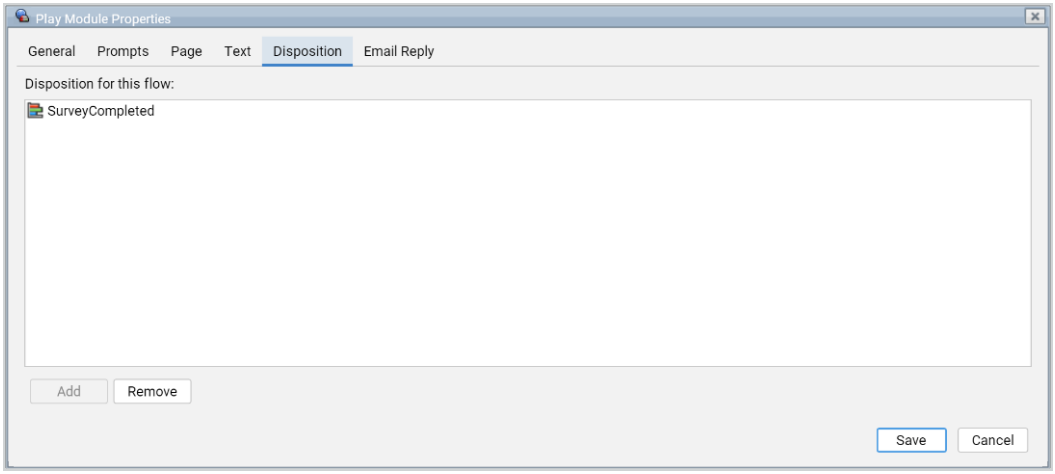
Get Digits Module 2. The next question asks: *On a scale of 1 to 9, are you satisfied with our product?*



The disposition is SurveyIncomplete, the target Variable is ProductSatisfaction, and the maximum number of digits is 1.



Play Module. We thank the caller for calling by using the Play module.



Hangup Module. The disposition is SurveyCompleted.

Creating an IVR Script

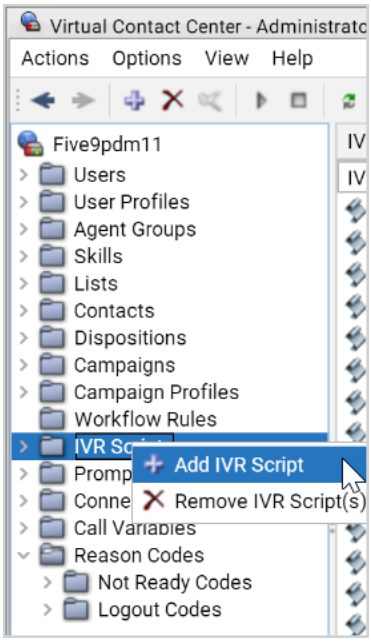
In this example, a dialer calls to the inbound number assigned to the campaign, is greeted with a message, and given the choice to transfer to Sales or Support by pressing 1 or 2. If the maximum hold time exceeds one minute, the caller is transferred to voicemail. If the caller makes an invalid entry (a number other than 1 or 2), the

choices are repeated. If the caller makes five consecutive invalid entries, the call is disconnected. This example uses two skill groups, Sales and Support, and a custom greeting, such as: *Thank you for calling <your company name>. Press 1 for Sales or 2 for Support.*

Adding and Configuring the Play Module
Adding and Configuring the Get Digits Module
Routing Users to Skill Groups
Adding the Hang Up Module
Adding and Configuring the If/Else Module
Adding and Configuring the Set Variable Module
Linking From the If/Else Set Variables Modules

To create an IVR script:

1 In the Navigation pane, right-click IVR Scripts, and select **Add IVR Script**.



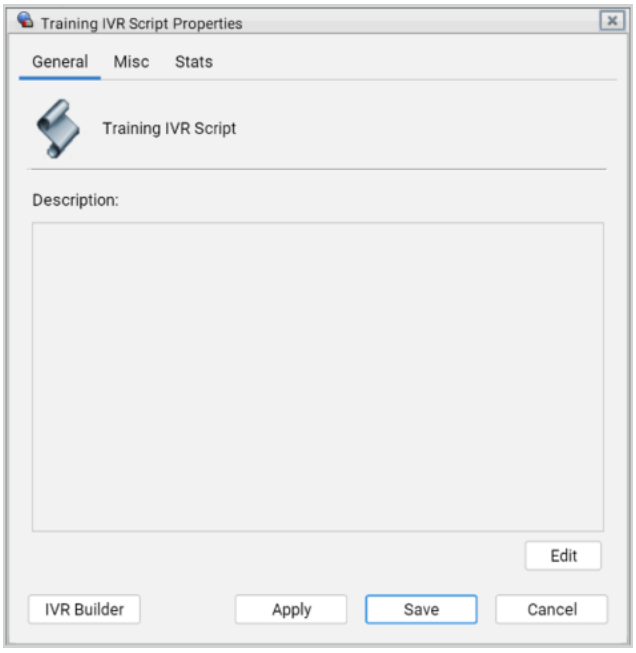
2 Enter the name of the IVR Script.

3 Select **OK**.

4 To start creating the script flow, open the **Script Properties**.

5 Double-click the script name or right-click and select **View Properties**.

6 Describe the script and its campaigns.



7 To open the Visual IVR Script designer, click **Edit**.

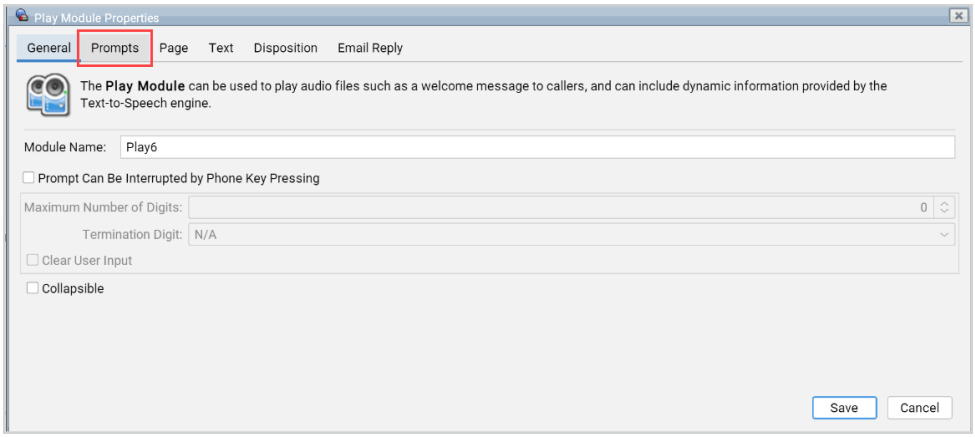
By default, the working area contains the Incoming Call module.

Adding and Configuring the Play Module

In the example, customers receive a welcome greeting and further instructions when they call the inbound campaign and next choose the skill group by entering 1 or 2.

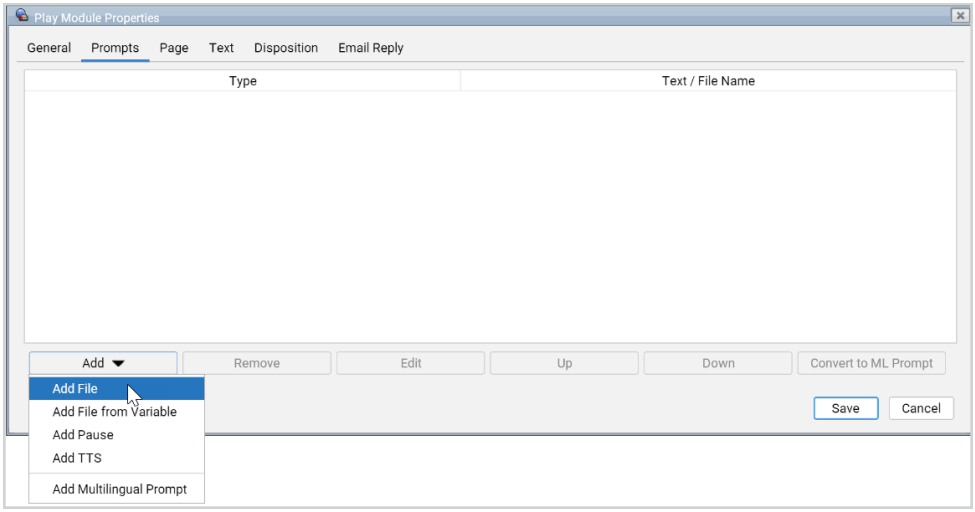
1 Double-click the Play module.

2 Select the **Prompts** tab.



You can create voice messages by using the preloaded prompts or the Text-to-Speech functionality. If you plan to use several prompts, add a pause between each.

3 To add the prompt, click **Add** > **Add file**.



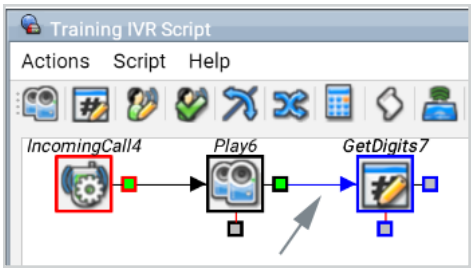
To create a voice message with TTS, select **Add**. > **Add TTS**.

4 Select a prompt from the list.

Adding and Configuring the Get Digits Module

1 Drag the Get Digits module icon from the toolbar to the working area.

2 Connect the Play and Get Digits module by using the right connector.

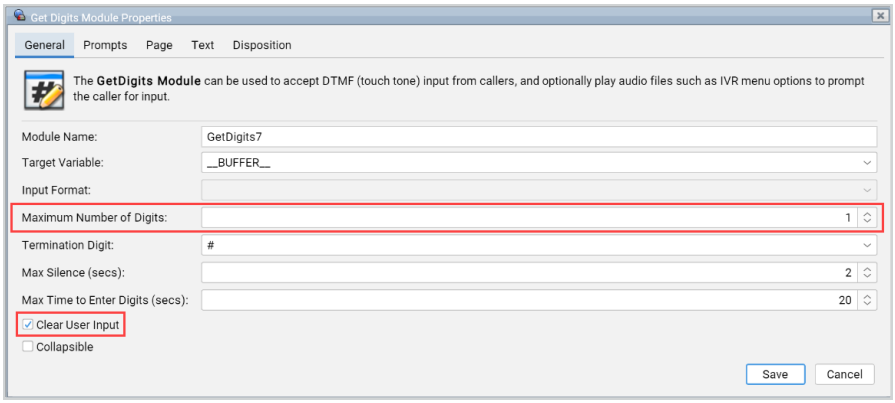


3 Double-click the Get Digits module.

4 In the **General** tab, set these options.

   a Set the **Maximum Number of Digits** to 1 to ensure that customers enter only one number.

   b Select **Clear User Input** so that all input from the customers clears when the call reaches this module.

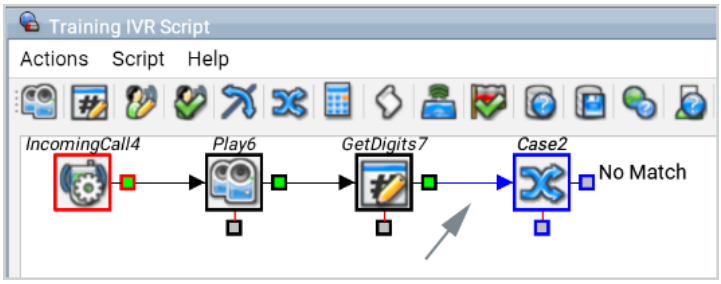


5 Select **Save**.

Routing Users to Skill Groups

You must route user input to the skill groups. Use the Case module to split the script flow based on user input to the appropriate branches. By default, this module has a No Match branch for when the user input does not match the criteria defined in the Case module (see Configuring the No Match Branch).

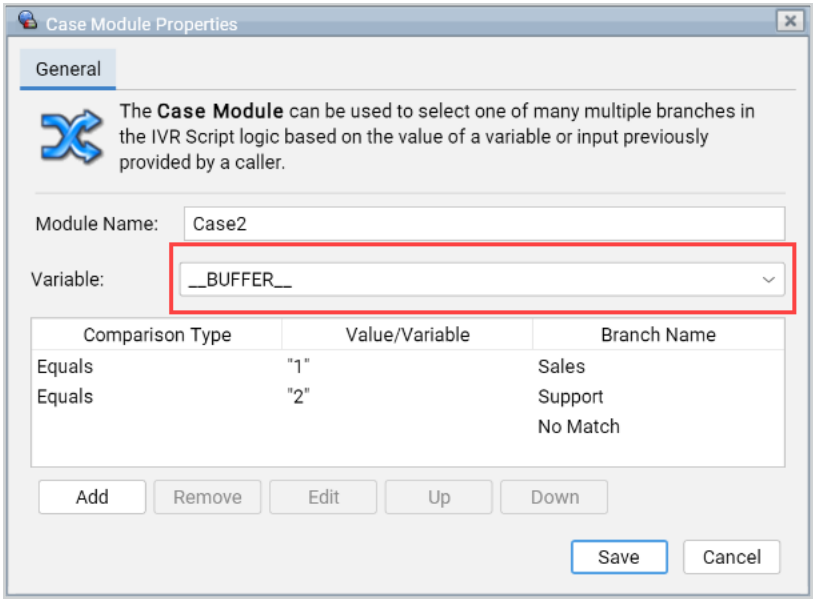
1 Add the Case module and connect it from the Get Digits module.



Route the user to skill groups by adding two branches, Sales and Support (see Configuring the Sales Branch and Configuring the Sales Branch), and define the criteria for the routing.

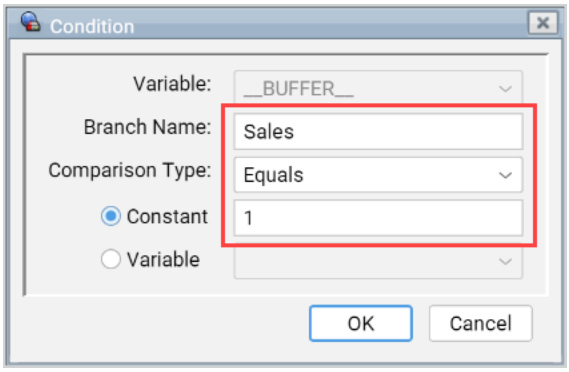
2 To configure the Case module, open its properties.

3 In the **Variable** field, select the **BUFFER** variable which contains the caller's input.



4 To add a new branch, select **Add**.

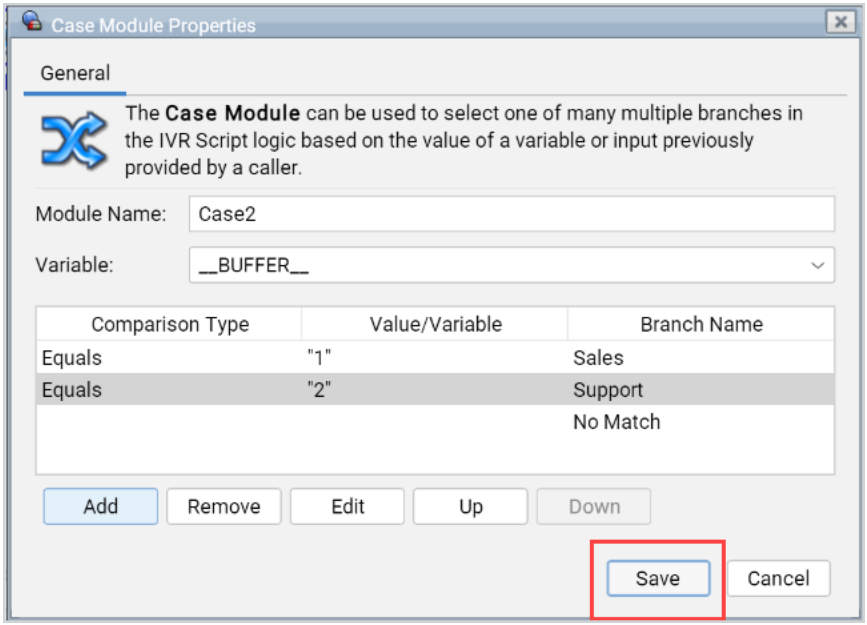
5 Enter **Sales** in the **Branch Name** field, select **Equals** from the **Comparison Type** drop-down list, and define the **Constant** as 1.



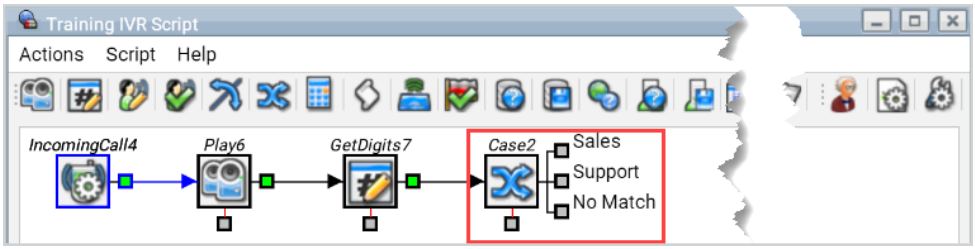
6 Select **OK**.

7 Repeat these steps to create a Support branch, but enter 2 in the **Constant** field.

8 Select **Save**.



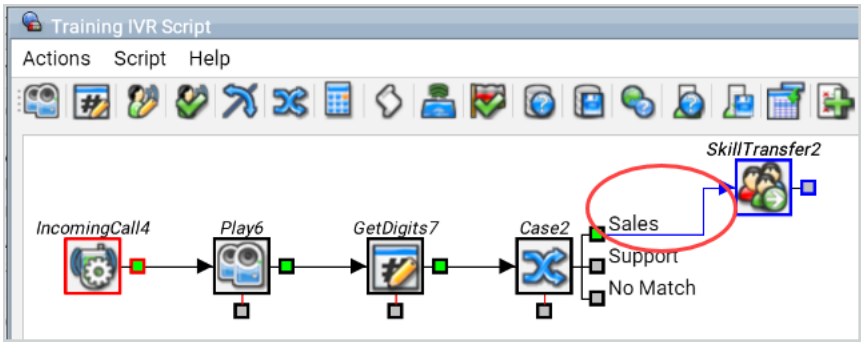
The script flow has three branches: Sales, Support, and No Match.



For our example, we now add the two branches, Sales and Support, and define the criteria for the routing.

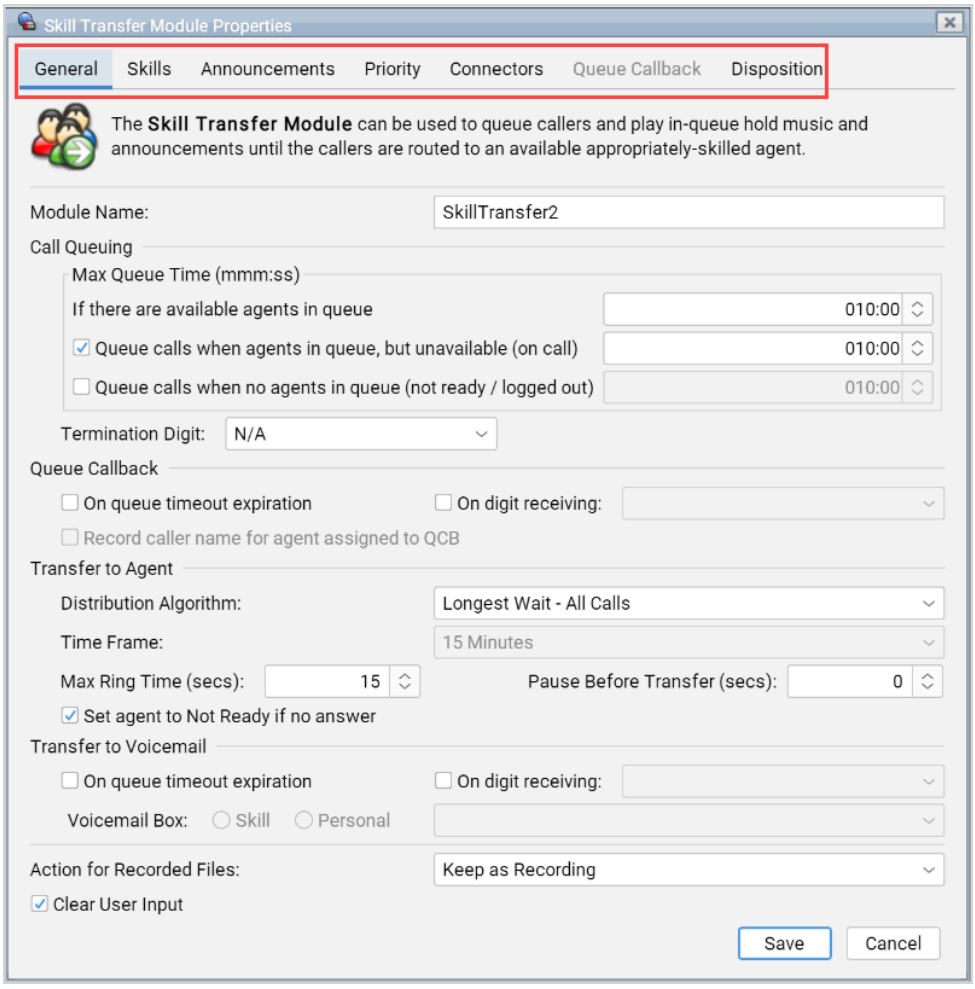
Configuring the Sales Branch

1 Add the Skill Transfer module, and add a connector to the Skill Transfer module from the Sales branch of the Case module.



Configure the Skill Transfer module to route the call to the appropriate skill group. In this example, the settings of the Skill Transfer module are the same for the Support and Sales branches.

2 To configure the Case module, open its properties.



3 In the **General** tab, set these options:

- **Call Queuing** defines the queue properties of the call:
  - **Max queue time if there are available agents in queue**: Sets the maximum time that should pass from the moment the call transfers to this module, to the moment the call transfers to the next IVR module in flow or to voicemail if agents do not answer during the defined time.
  - **Queue calls when agents in queue, but unavailable (on call)**: Select to set the time where the call is on hold waiting until agents can answer.

- **Queue call when no agents in queue (on break/logged out)**: Select to set the time where the call is on hold waiting until the agents can answer.
- **Termination Digit**: Choose the number the caller presses to pass the call to the next IVR module.
- **Queue Callback Digit**: Choose the number the caller presses to receive a callback when their position in the queue arrives.

◦ **Transfer to Agent** defines the call routing for the agent's transfer process:

- Distribution algorithm specifies the way the ACD selects an agent to receive a call. The configured distribution algorithms are available from the drop-down list. Select an algorithm that meets the requirements of your enterprise:
  - **Longest Wait - All Calls**: The ACD selects the agent with the longest wait (idle) time since their last call, of any call type.
  - **Longest Wait - Non-Manual**: The ACD selects the agent with the longest wait (idle) time excluding manual calls.
  - **Round Robin**: The ACD selects an agent from the list of logged-in agents who qualify for the queue. The list is initially sorted based on the longest wait (idle) time for all calls. When agents initially make themselves ready for the queue, they are added to the bottom of the list. The first queued call goes to the agent on top of the list. When an agent receives a call, the agent is removed from the list, until all agents are removed. For queued calls, when the only available agents are those already removed from the list, the calls are still routed to those agents.
  - **Min Calls Handled**: The ACD prioritizes agents who have handled fewer calls than the other agents working in the queue, based on statistics. The number of calls is calculated from the agent's last login (that is, the *current session*), and then assessed for the selected time range (see the Time Frame option below).

    Note: The time range counter for Min Calls Handled and Min Handle Time begins at agent login and resets to zero (0) at the interval set in the Time Frame option in the **Skill Transfer Module**.

- **Min Handle Time**: The ACD prioritizes agents with the lowest total handle time compared to the other agents working in the queue, based on statistics. The total handle time is calculated from the agent's last login (that is, the *current session*), and then assessed for the selected time range (see the Time Frame option below).
- **Time Frame**: Time range for the Min Calls Handled or Min Handle Time distribution algorithms.
- **Max Ring Time (secs)**: The maximum time for the agent to answer a call. The option allows you to set timeout in seconds.
- **Pause Before Transfer (secs)**: Creates a delay before sending the call to the agent. When the agent is selected for a new call, the system waits the set amount of time before sending the call to the agent. When there are queued calls, this option gives agents a short pause before receiving the next call.
- **Set Agent to Not Ready if No Answer**: Select to automatically change agent status to Not Ready if they don't answer the call within the Max Ring Time.

◦ **Transfer to voicemail** contains the options that define the call transfer to voicemail.

- **On queue timeout expiration**: Transfer calls to the skill group voicemail when the time defined in the queue area options expires.
- **On digit receiving**: Number caller presses to transfer the call to the skill group voicemail.
- **Voicemail Box** (skill or personal voicemail box): Selects the skill group or agent to receive the voice message from the caller.

◦ Action for recorded files allows you to define the action to take for recorded files gathered by the previous modules. See also **Using Recorded Files**.

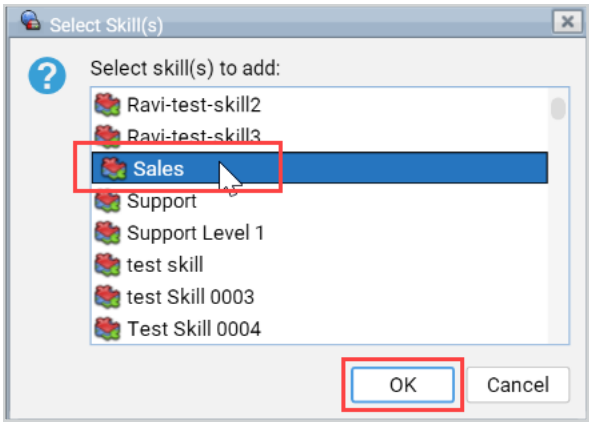
- **Clear User Input**: Clears the user input when the call enters this module.

4 Select the **Skills** tab.

In our example, configure one Skill Transfer module to use the Sales skill group and the second to use the Support skill group. In the Skills window, add the skill groups that receive the calls and define the sequence to use to choose the skill group for transferring the call. The upper group receives the call first if there are agents available. Otherwise, the call transfers to the next skill group in the list with available agents.

5 Select **Add**.

6 Select the Sales skill group, and click **OK**.



The skill group appears in the list. Use the + and - buttons to change the skill position in the list.

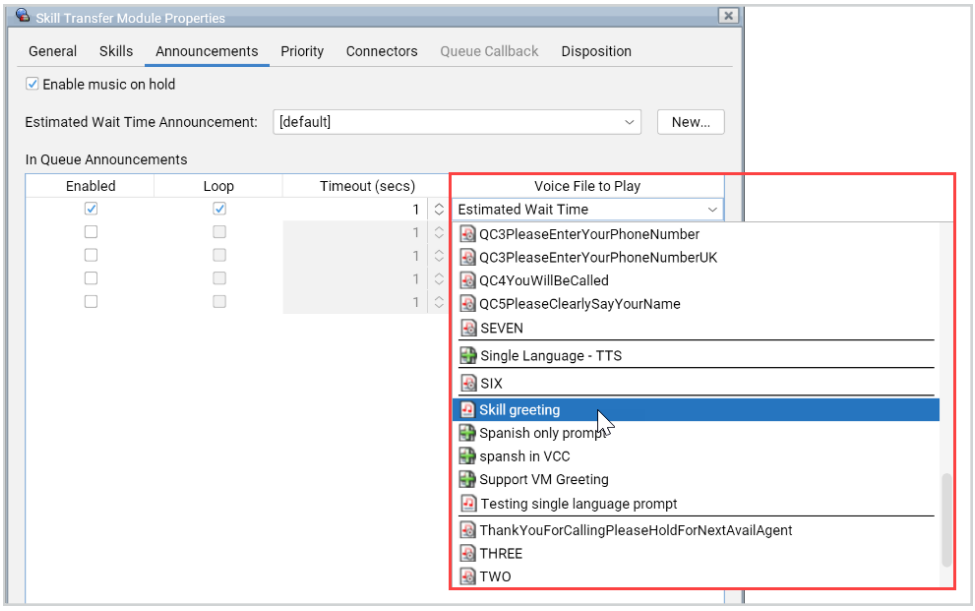
7 Select the **Announcements** tab.

Set the voice messages that play to the caller while the call is on hold in queue. The **Enable music on hold** option plays the default hold music to the caller while the call is in the queue. You can set up to five announcement messages to play to the caller at defined times during their wait time.

a To add an announcement, select the **Enabled** option and set a time in the **Timeout** column.

b To repeat the message through the period of time defined in the Timeout column, select the **Loop** option.

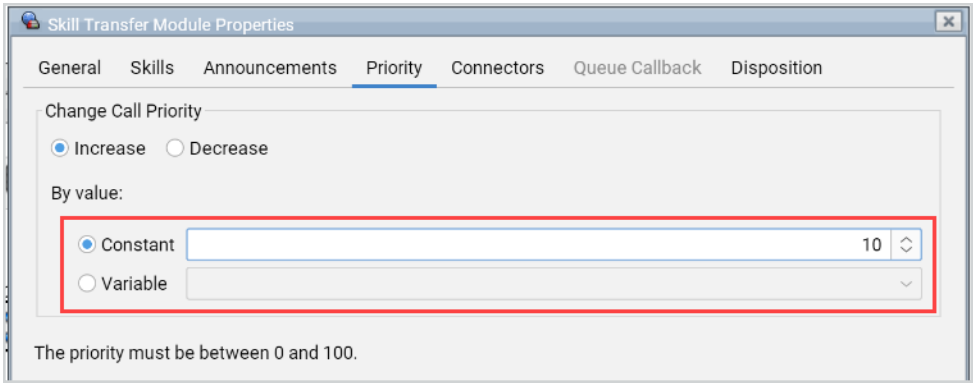
c To add the voice message to play to callers, select the message in the **Voice File to Play** column and select the message from the list. You can add voice messages using the **Add Prompt** command in the Prompts folder. See Adding Prompts.



8 Select the **Priority** tab.

Use priority management when you use one skill group in different script branches and the call from one branch to initially be accepted by available agents. You can modify the call priority. Priority means how fast the call transfers to agents from the queue. By default, Basic mode campaign calls begin with a call priority of 10 and Advanced mode calls have priority of 60. The priority range is from 0 to 100. You can increase priority to make the call transfer to the agent faster or decrease it to leave the call in queue for more time. For more information about campaign modes, see the Campaign Administrator's Guide.

9 Enter the value to change the priority in the **Constant** field or select a **Variable** integer value.



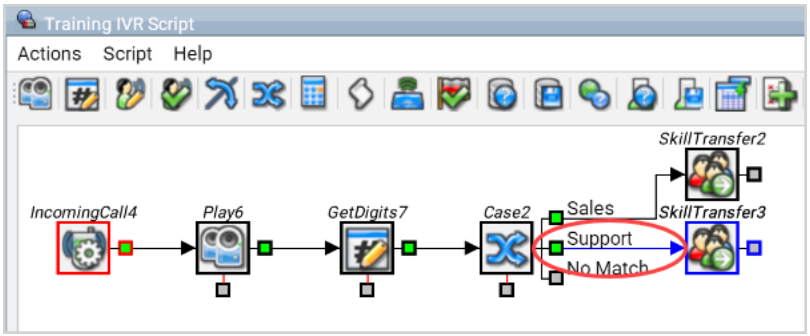
10 Select the **Dispositions** tab to define the disposition of the call if the caller hangs up.

The default disposition is **Abandon**.

11 Select **Save**.

Configuring the Support Branch

For the Support branch, add the Skill Transfer module and link it to the Support branch. Configure the Skill Transfer module of the Support branch to route the call to the appropriate skill group.

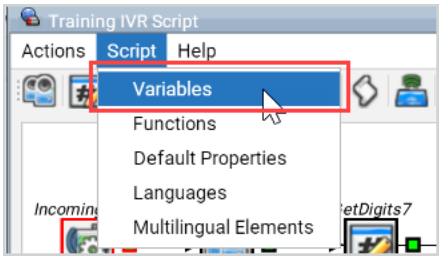


Configuring the No Match Branch

Now that we have the flow of the script, we need to configure the script to handle wrong input from the caller. For this we use the No Match branch of the Case module.

In our example, if caller makes an invalid entry (a number other than 1 or 2), they can repeat the input. After five consecutive invalid entries, the call is disconnected. If the caller's entry is invalid, we repeat the voice message instructions and have the caller try again. To trace the number of invalid entries, create the variable `loop_var` in the Variables tab to contain the number of allowed wrong entries (by default, Initial Value is 5).

1 In the Script menu of the IVR Script Properties window, select **Variables**.



2 To add a new variable, select **Add**.

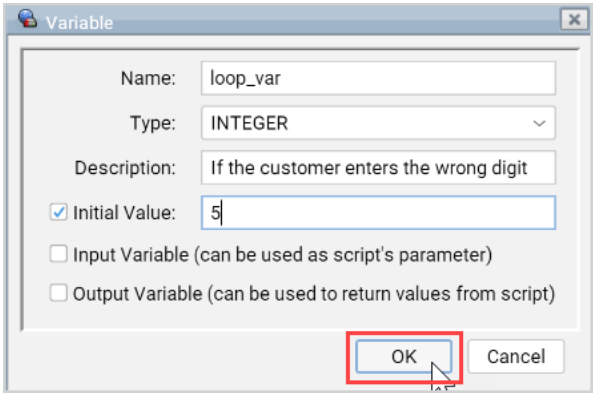
3 Enter the name `loop_var`.

4 Select the **Type** of variable: INTEGER.

5 Enter a description for the variable.

If the customer enters the wrong digit, in this example.

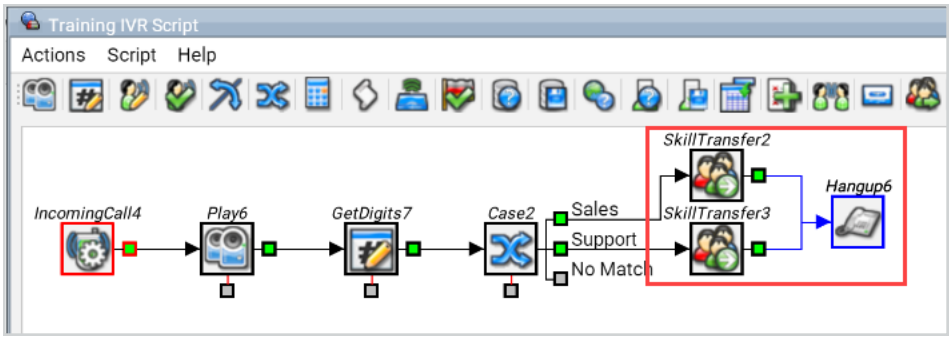
6 Select the **Initial Value** option and enter 5.



7 Select **OK**.

Adding the Hang Up Module

Now that both Skill Transfer modules are configured, we'll add a script termination module . Connect the Hang Up module to both Skill Transfer modules.



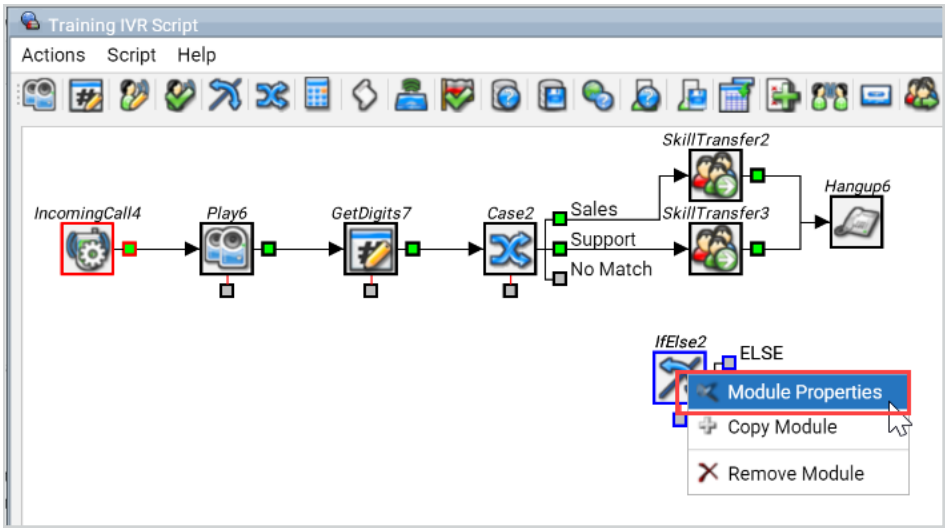
Adding and Configuring the If/Else Module

We configure this module to check the `loop_var` variable that was initialized at the beginning of the script with the 5 initial value. If the value of the variable is less than 1, the caller has entered incorrect digits five times. We should terminate the script.

1 Add the If /Else module to the script.

2 Right-click **If/Else**.

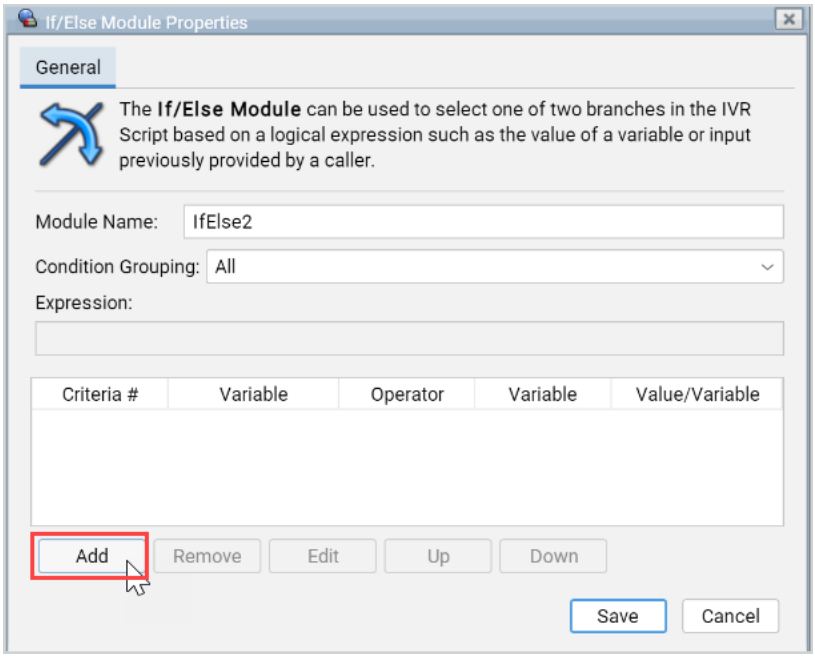
The Module Properties window displays.



Create the logical expression checked during the script.

If the result of expression is true, the script uses the If branch. If false, the script uses the Else branch.

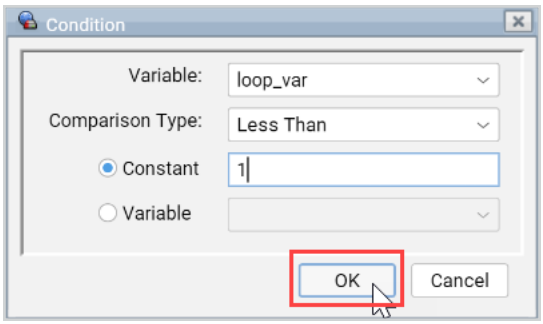
3 Click **Add** to add the condition to check.



4 From the **Variable** drop-down list, select the variable to check: `loop_var`.

5 Select the comparison type for the condition from the **Comparison Type** drop-down list: Less Than.

6 In the **Constant** field, enter the value to compare the variable with the comparison type: 1.



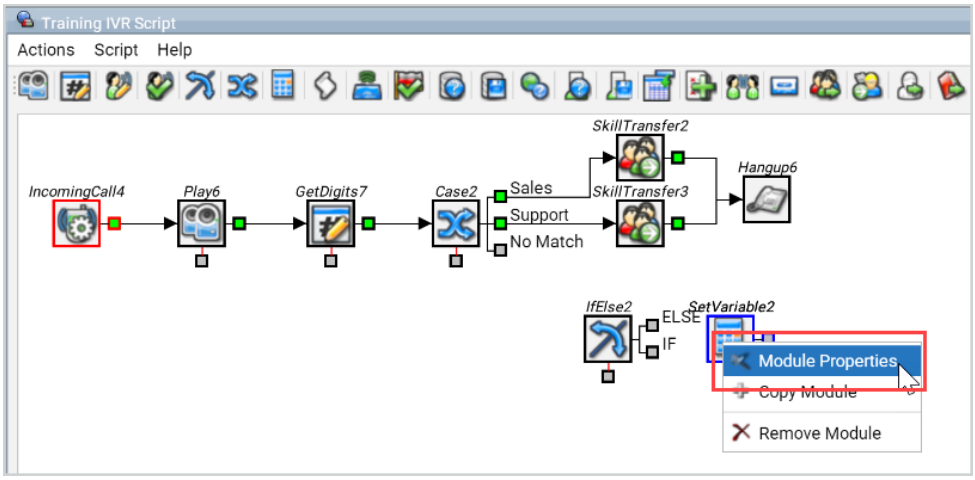
7 Click **OK**.

8 Click **Save**.

Adding and Configuring the Set Variable Module

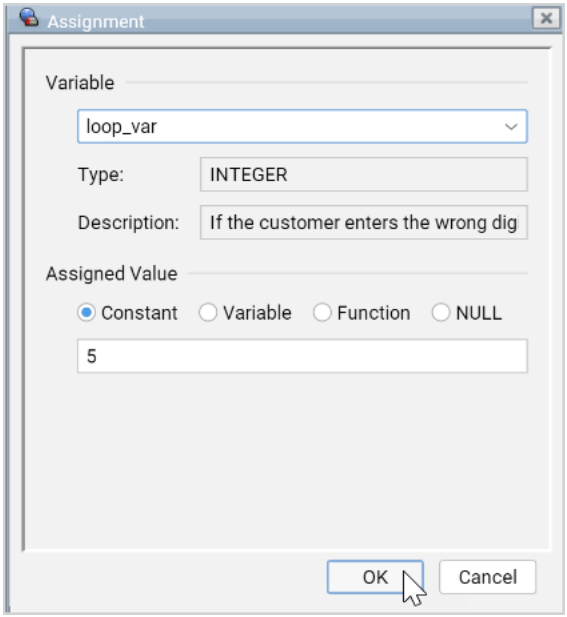
We configure this module to subtract 1 from `loop_var` each time the call enters this module. If the caller enters incorrect information five times, the `loop_var` variable contains 0 after the Set Variable module completes.

1 Add the Set Variable module to the script.



2 Open the Set Variable module properties window.

3 Click **Add** to add the variable to assign to this module.



4 From the **Variable** drop-down list, select the variable: `loop_var`.

5 Select the **Function** Assigned Value option.

6 Select the **DIFFERENCE(INTEGER,INTEGER)** function from the drop-down list.

7 Define the function arguments in the corresponding rows.

The first argument is the variable named `loop_var`.

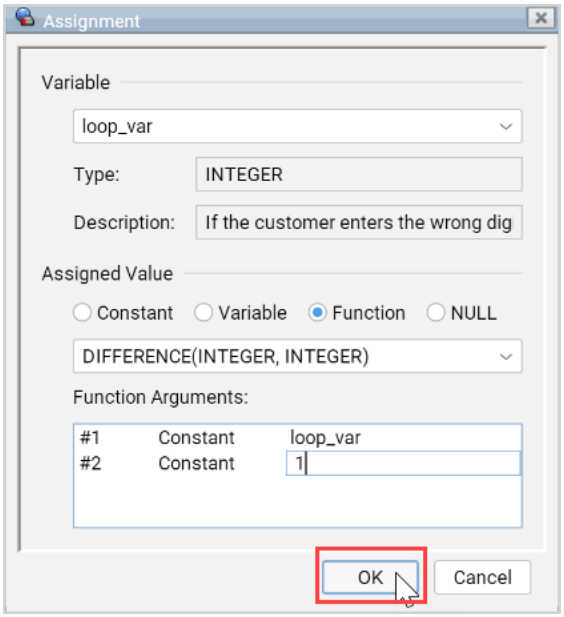
To define this:

a Click the first column in the #1 row and select **Variable**

b Click the second column and choose `loop_var`.

c Define the second argument.

In our example, this is the constant with the value equal to 1.



8 Select **OK**.

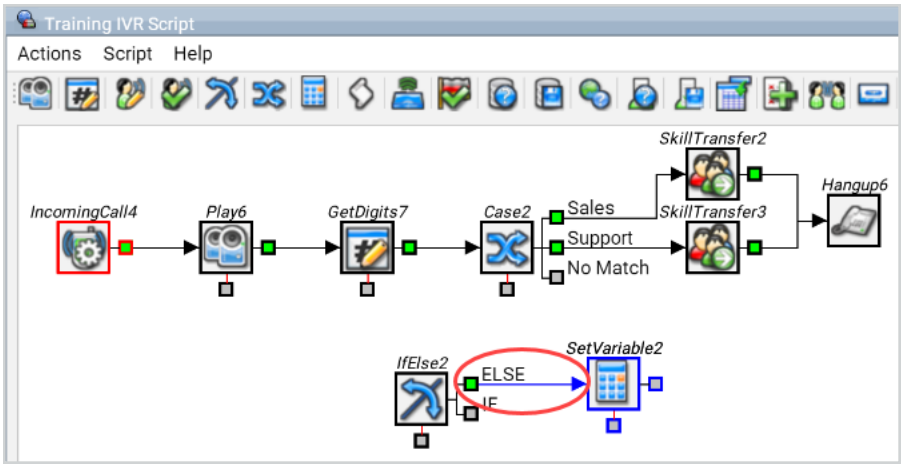
9 Select **Save**.

Linking From the If/Else Set Variables Modules

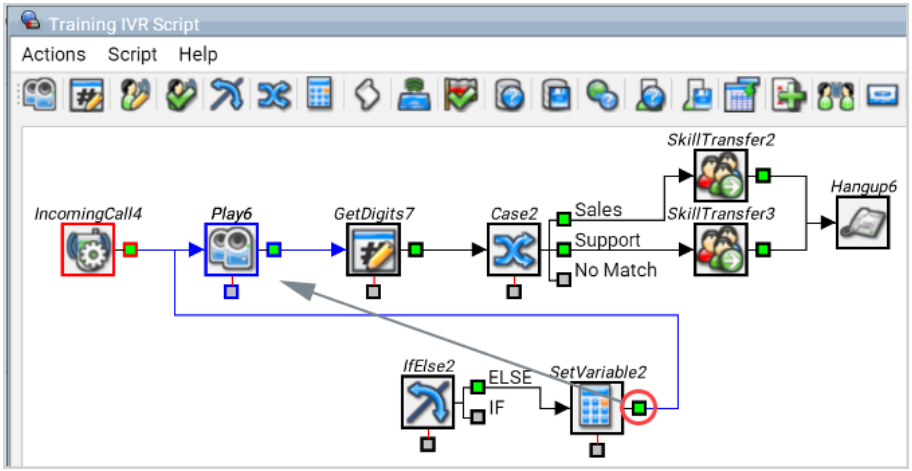
If the caller enters the wrong digit five times, the script follows the If branch of the If/Else module, which means that you should connect the If branch to the Hang Up module.

If the caller has entered the wrong digit fewer than five times, the call is returned to the Play module at the beginning of the script after reducing the number of available wrong entries in the Set Variables module.

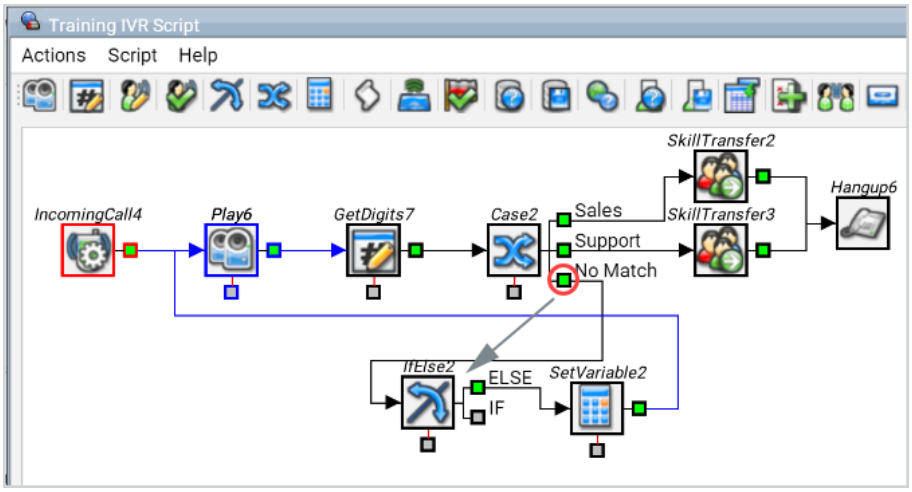
1 Link the Else branch of the If/Else module to the Set Variables module.



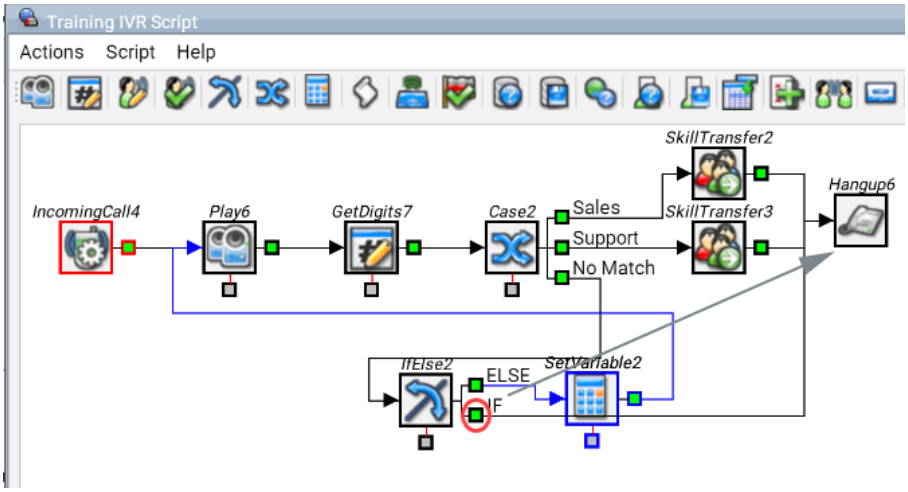
2 Link the Set Variables module to the Play module.



3 Connect the No Match branch with the If/Else module.



4 Connect the If branch with the Hang Up module.



5 To save the script, select **Actions > Save**.

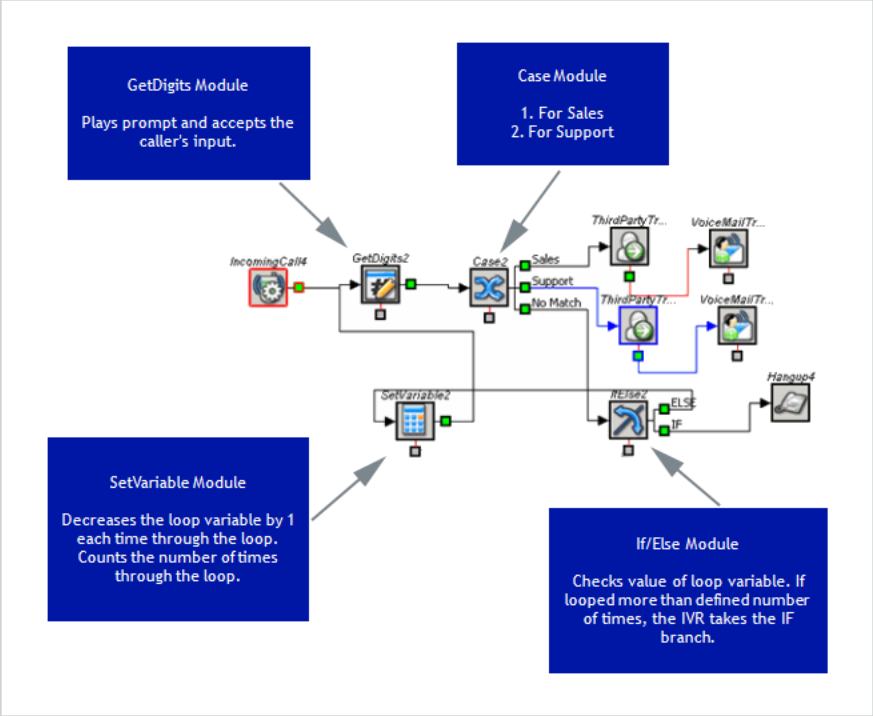
You can download this example to import it into your environment.

Creating an IVR Loop

This example shows how to create a loop, use variables, and use the Set Variable module. We loop from the No Match branch of the Case module when a caller makes an invalid entry.

There are other methods for creating loops. This is just one example. Another option is to set the loop variable to zero, then use If/Else to compare for the maximum number of loops and use SetVariable to add to, rather than subtract from, the loop variable. You can also insert a Play module inside the loop to inform the caller that they made an invalid entry.

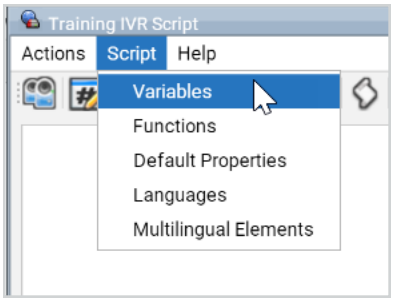
Defining a Variable
Adding and Configuring the Get Digits Module
Adding and Configuring the Case Module
Adding and Configuring the If/Else Module
Adding and Configuring the Set Variable Module
Linking the Modules



Defining a Variable

The first step in creating a loop is to define a variable. Set the initial value of the variable to the number of times you want to loop. For each loop we subtract one from this number. If the variable reaches zero, the loop will end.

1 In the Visual IVR Script designer, select Variables from the Script menu.

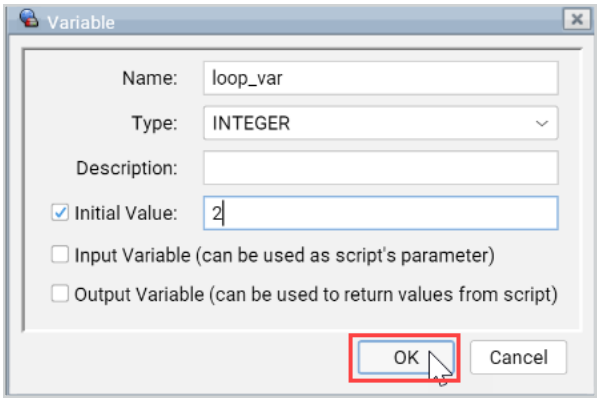


2 Click **Add**.

3 Enter a name for the variable - in our case the name is `loop_var`.

4 Select INTEGER as the Type (an integer is any whole number, positive or negative). Since we will be doing a calculation on this variable, subtracting 1 for each loop, it must be integer or numeric rather than a string.

5 In the Initial Value box, enter the maximum number of times you want to loop: 2.



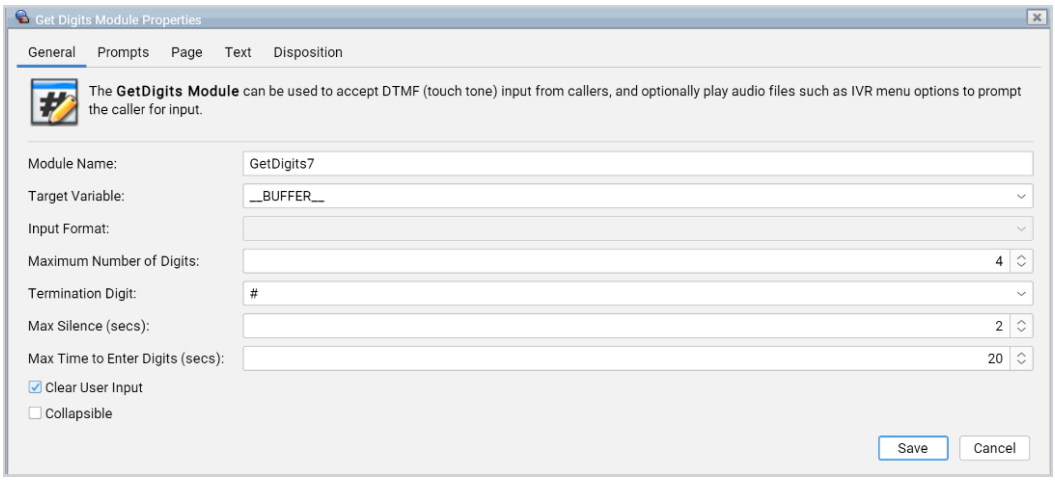
6 Click **OK** to save the variable.

7 Click **OK** in the Variables window.

Adding and Configuring the Get Digits Module

Configure the Get Digits module to accept an entry from the caller. In our example, we accept a single digit (either 1 or 2) so we set the Maximum Number of Digits to 1.

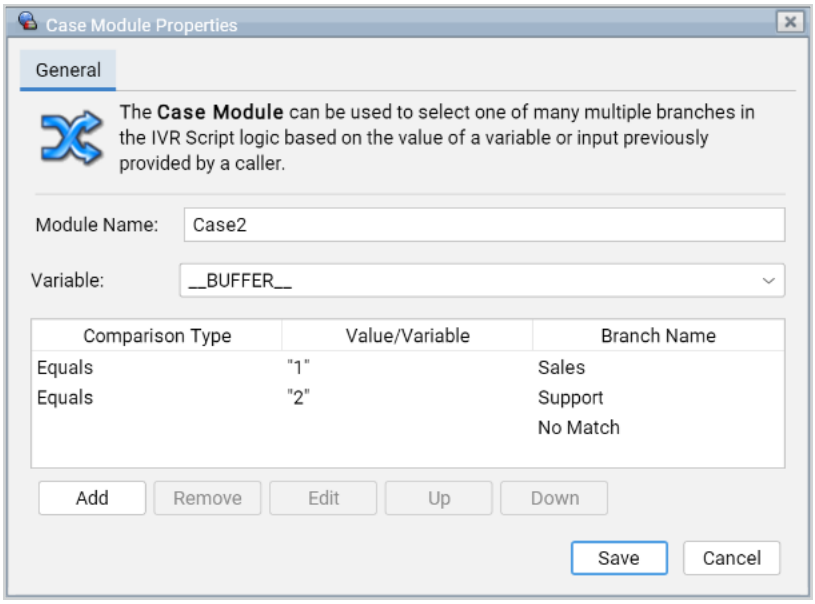
We are using the default BUFFER system variable. The caller's input is stored in this variable.



Adding and Configuring the Case Module

Configure the Case module with branches based on the caller's input. We are comparing the value stored in the BUFFER system variable which was set by the caller's input in the Get Digits module. Our loop will be used for the No Match branch.

For looping we use the combination of the If/Else module and the Set Variable module to determine how many times a caller has cycled through the loop. Set Variable decreases the loop variable by 1 each time through the loop. If/Else checks the value of the loop variable to determine if the caller has looped the maximum number of time.

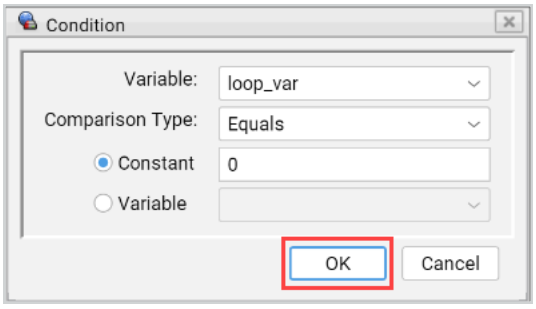


Adding and Configuring the If/Else Module

If a caller makes an invalid entry or no entry at all, the IVR use the No Match branch. The first module in the No Match branch is used to check the value of the loop variable. We use the If/Else module to do the comparison.

If the value is equal to zero, we use the If branch. If it is greater than zero we use the Else branch. The Else branch is the loop. Since the initial value of the loop variable is 2 the first time through, the If/Else module uses the Else branch.

1. In the If/Else module click **Add** to add a new comparison.
2. In the Variable list select the loop variable you created (`loop_var` in this case).
3. In the Comparison Type list, select Equals.
4. In the Constant box enter 0 (zero).



5 Click **OK**.

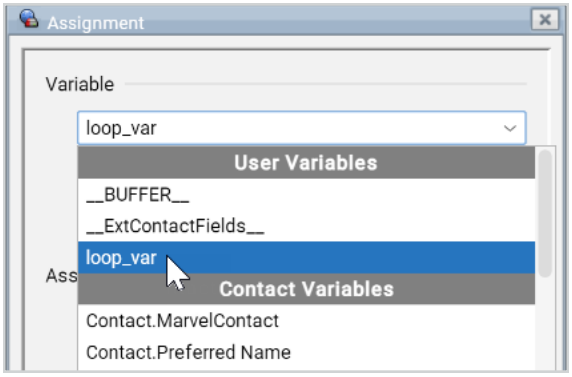
This module checks if the value of the loop variable is zero.

Adding and Configuring the Set Variable Module

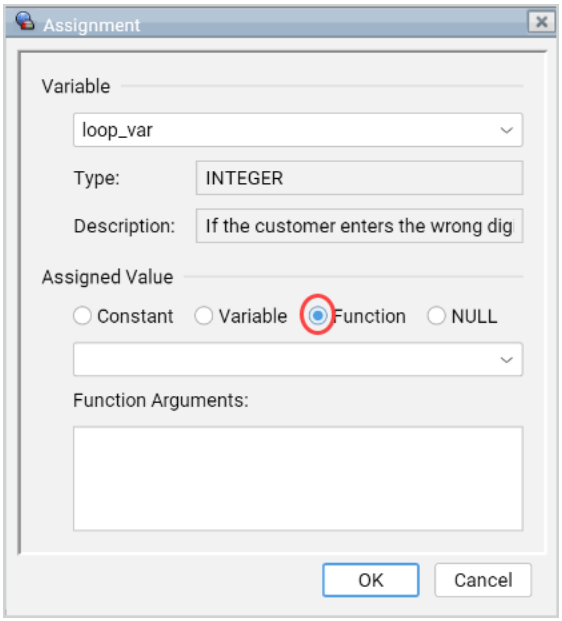
After the If/Else module, we use the Set Variable module to decrease the loop variable by 1. This module is basically counting the number of times the caller cycles through the loop. In our example we are counting down from the maximum number of loops set by the initial value of the loop variable (`loop_var` = 2).

1 In the Set Variable module, click **Add** to add a new entry.

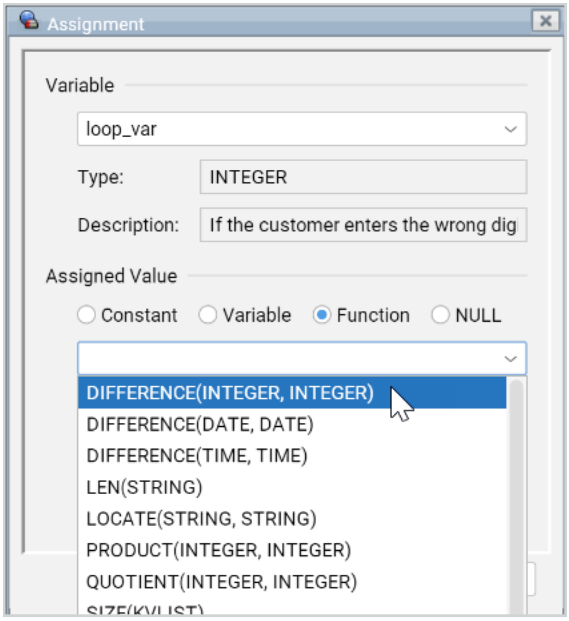
2 Select the loop variable from the Variable drop-down list.



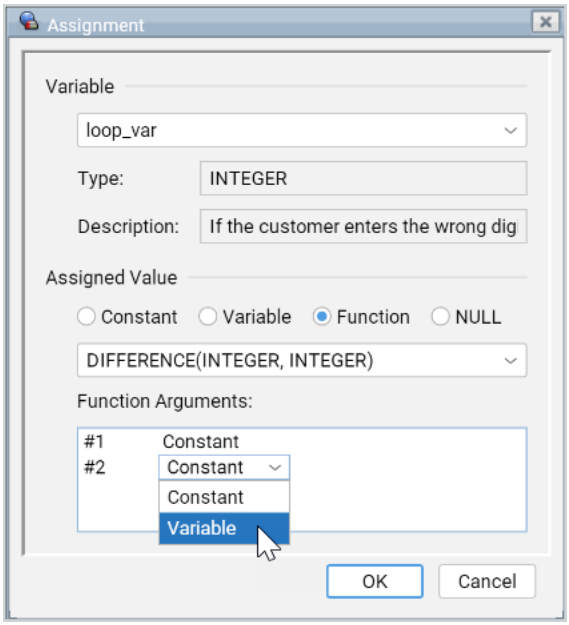
3 Select Function for the Assigned Value.



4 Select DIFFERENCE(INTEGER, INTEGER) in the drop-down list. We will use this function to subtract 1 from the loop variable.



5 In the #1 Function Argument, click the second column and select Variable.



6 In the third column for #1, select the loop variable (`loop_var` in our example).

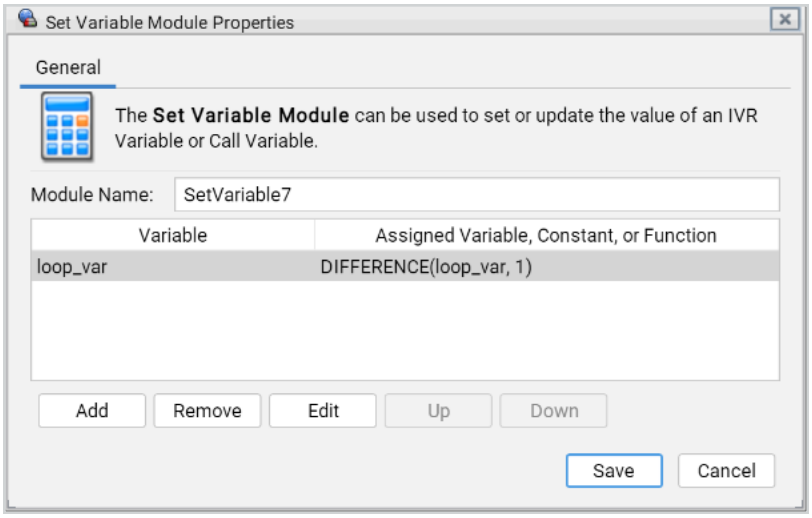
7 In the #2 Function Argument, select Constant in the second column.

8 In the third column for #2, enter 1.

We subtract this value from the loop variable.

9 Click **OK**.

The assignment is added to the Set Variable module.



Linking the Modules

1. Link the If/Else module from the No Match branch of the Case module.
2. Link the If branch of the If/Else module to the IVR branch used when the maximum number of loops is reached.
3. Link the Else branch of the If/Else module to the Set Variable module.
4. Link the Set Variable module to the Get Digits module.

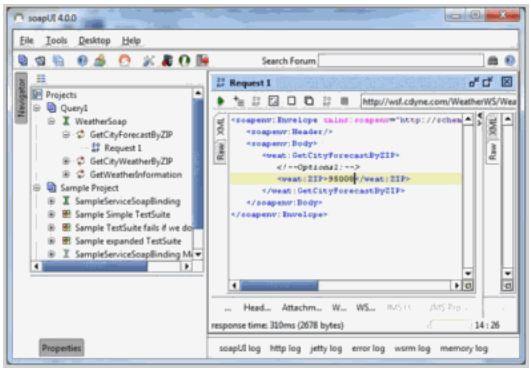
   This returns the caller back to the original prompt. See the first screen shot for an example.

Configuring the Query Module

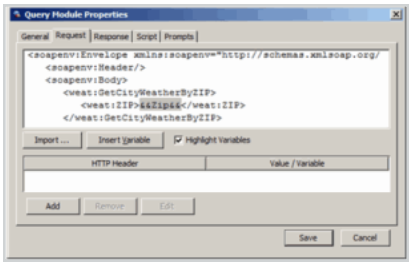
The Query module supports XML-encoded POST requests and replies. The module invokes complex Web Services, for example, Web Services based on SOAP such as Five9 Web services. You can use external tools to confirm and debug the Web Service before entering the request and response templates into the Query module. In our case an example of using SOAP UI is shown.

Use the Iterator Module to update variables in the Query Module with next matches result set.

1 With SOAP UI, form a proper request for the Web Service.

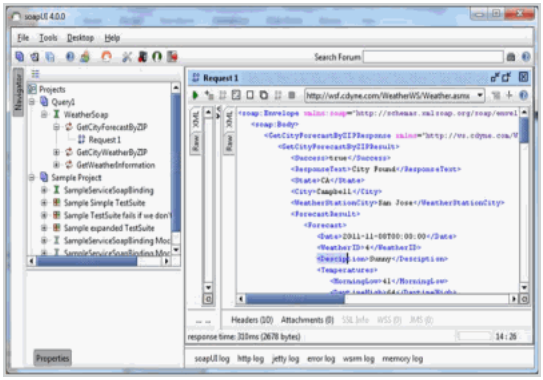


2 Paste the XML code into the Request tab of the Query Module and embed variables from IVR.

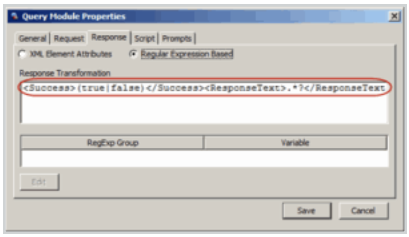


The Insert Variable button allows you to choose input variables and delimits them. In our example, it is &&Zip&&.

3 Call the Web Service from SOAP UI to get an example Response.



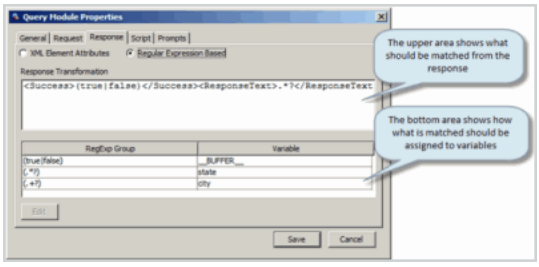
4 Copy the response and paste it into the Regular Expression tool.



5 Insert Regular Expressions where you want to match part of the Response.

To find the best regular expression, you can use a tool such as this: http://gskinner.com/RegExr/?31e98.

- Enter the Response from your Web Service.
- Enter your pattern to match.
- Use parenthesis around expressions which should be matched and assigned to variables.
- Test using evaluator.



6 Once the Regex tool is matching the data you want, assign the regular expressions to variables in the Response tab (bottom area).

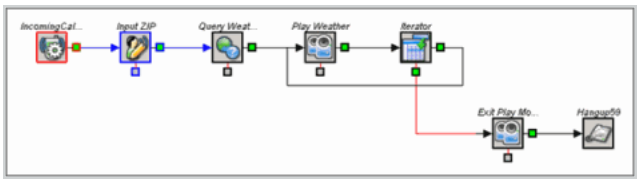
7 Run the IVR Script to test.

8 When testing is successful, enter the pattern into the Response tab and run the IVR script with the Query Module.

Creating an IVR Script with XML Web Service Query

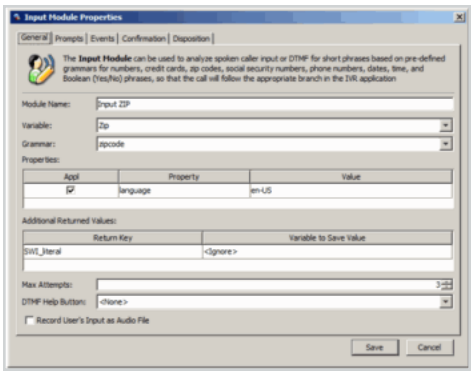
This topic provides information on how to configure original campaign's IVR script with XML Web Service Query. This example gets weather forecast by sending a query with a

ZIP code to a Web service. We use script variables but not call variables because the caller is not connected to an agent.



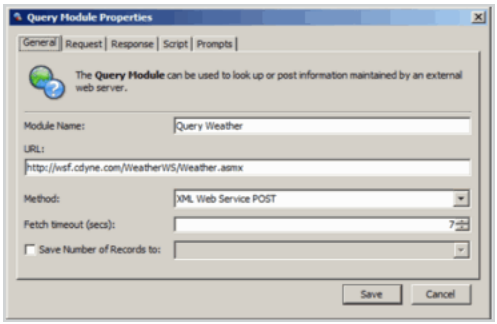
Input Module

Using the Input Module the caller enters a ZIP code. In the General tab of the Input Module Properties, choose ZIP as a variable.



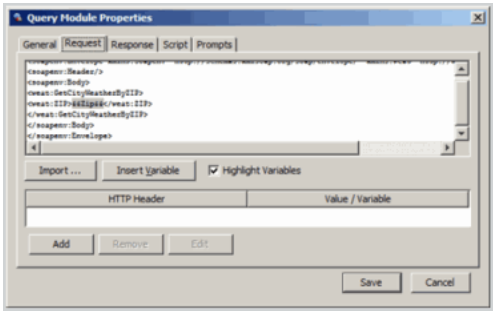
Query Module

1 In the General tab of the Query Module Properties window, enter the URL of the SOAP Web service into the URL field and choose XML Web Service POST.

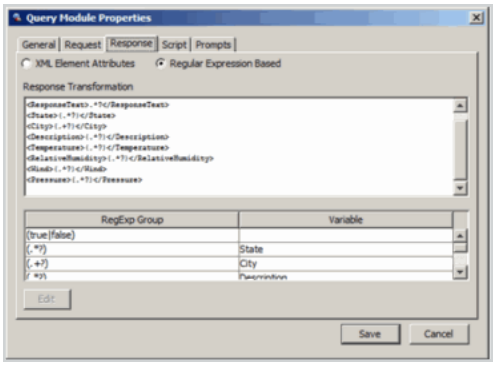


2 In the Request tab, enter the SOAP request.

It should contain the ZIP variable delimited by &&. This request will be sent to the weather service.

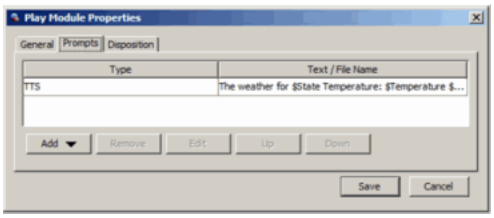


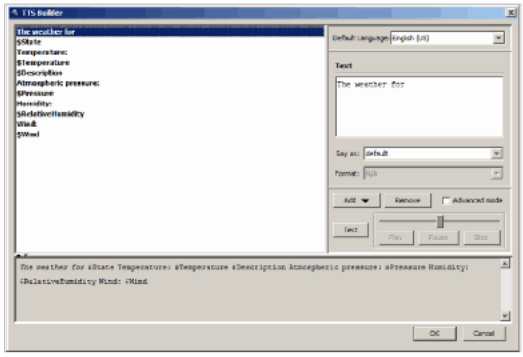
The Response Transformation area allows an input of Embedded Regular Expressions that can be mapped to IVR variables in the RegExp Group area. Any of regular expressions that are grouped (are enclosed within parenthesis), in the Response Transformation section, are automatically loaded in the table below as the RegExp Group. You should assign these regular expressions to variables.



Play Module

The Play Module plays the response of the web service to the caller. In the Prompts tab, add TTS prompt to be played to the user. The text of the prompt contains the information received from the Web service.

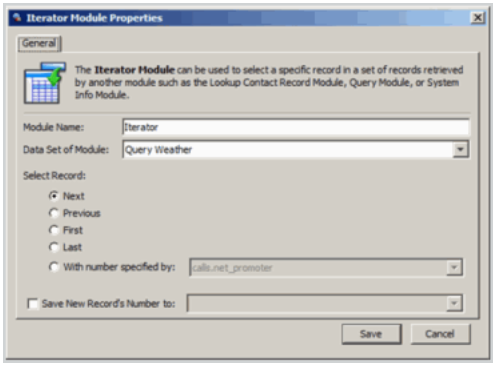




Iterator Module

The Iterator Module updates variables if you have multiple matches from the regular expressions. Select the Query Module that we configured earlier in the Data Set of Module list and chose **Next**.

Each time the Iterator Module is triggered, the Play Module moves to the next variable and the caller hears the further information.



Creating an IVR Script with Queue Callback

This section describes how to configure IVR script with queue callback for a campaign.

In the agent's desktop, the ACD Status tab shows the call when it is in queue. Once the agent becomes ready, the station automatically dials the phone number indicated by the caller. During/after-call - variables are displayed.

There a special disposition for Queue Callback calls. Based on this disposition, reports can be generated.

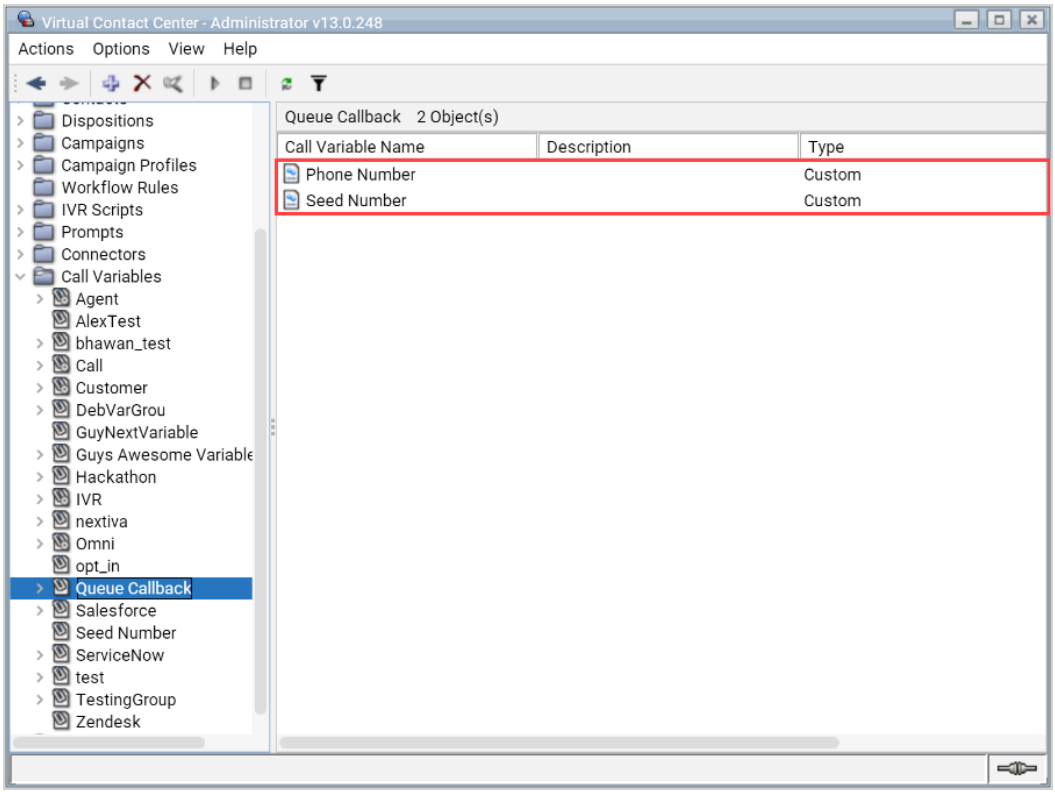
Call Variables Configuration

To create a Queue Callback Variable group, right-click the Call Variables folder and select **Add Call Variable Group**.

Create custom variables for questions in the script example:

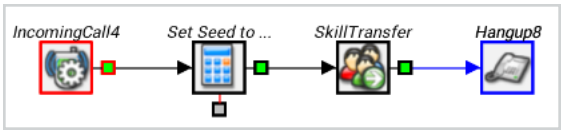
- Seed Number - variable (call type) used for the initial caller's number.
- Phone Number - variable (call type) used for phone number indicated by the user.

Read more in Creating Call Variable Groups, Creating Call Variables.



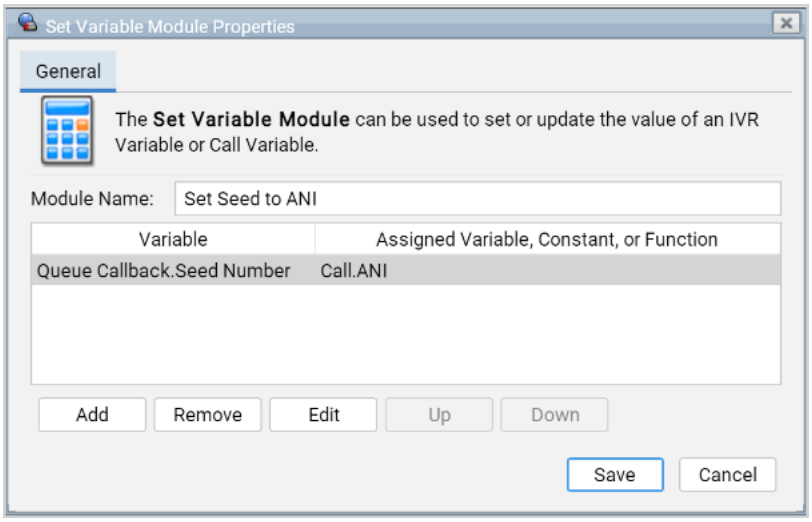
IVR Script Configuration

Let's see how the Queue Callback script is configured.



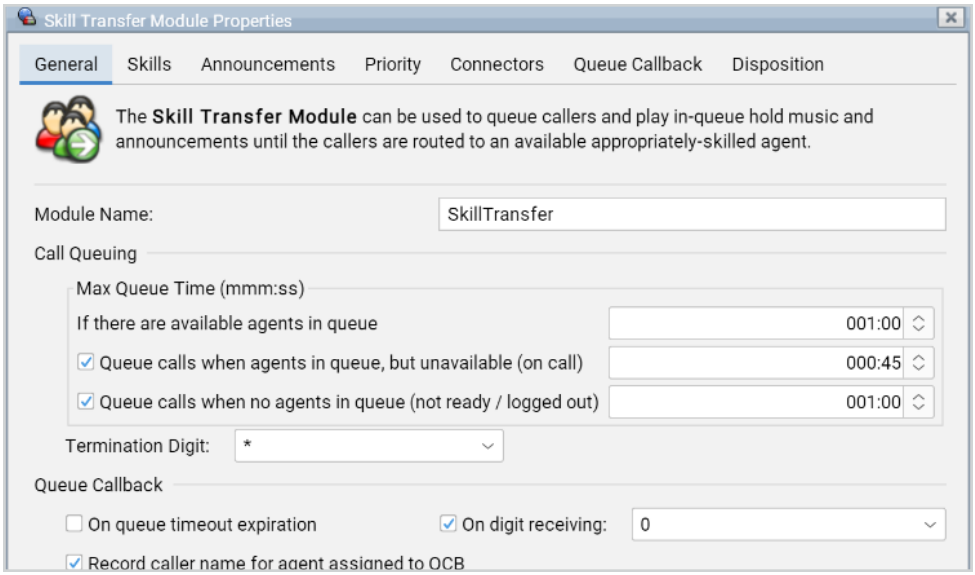
Set Variable Module

The Set Variable module is used to assign ANI to the Queue Callback Seed Number variable.



Skill Transfer Module

1 In the Queue Callback Digit list, select the Queue Callback Digit other than N/A. In our case, 0 was selected.



2 In the Queue Callback tab, from the Initial Callback Number from list, select the Queue Callback Seed Number variable.

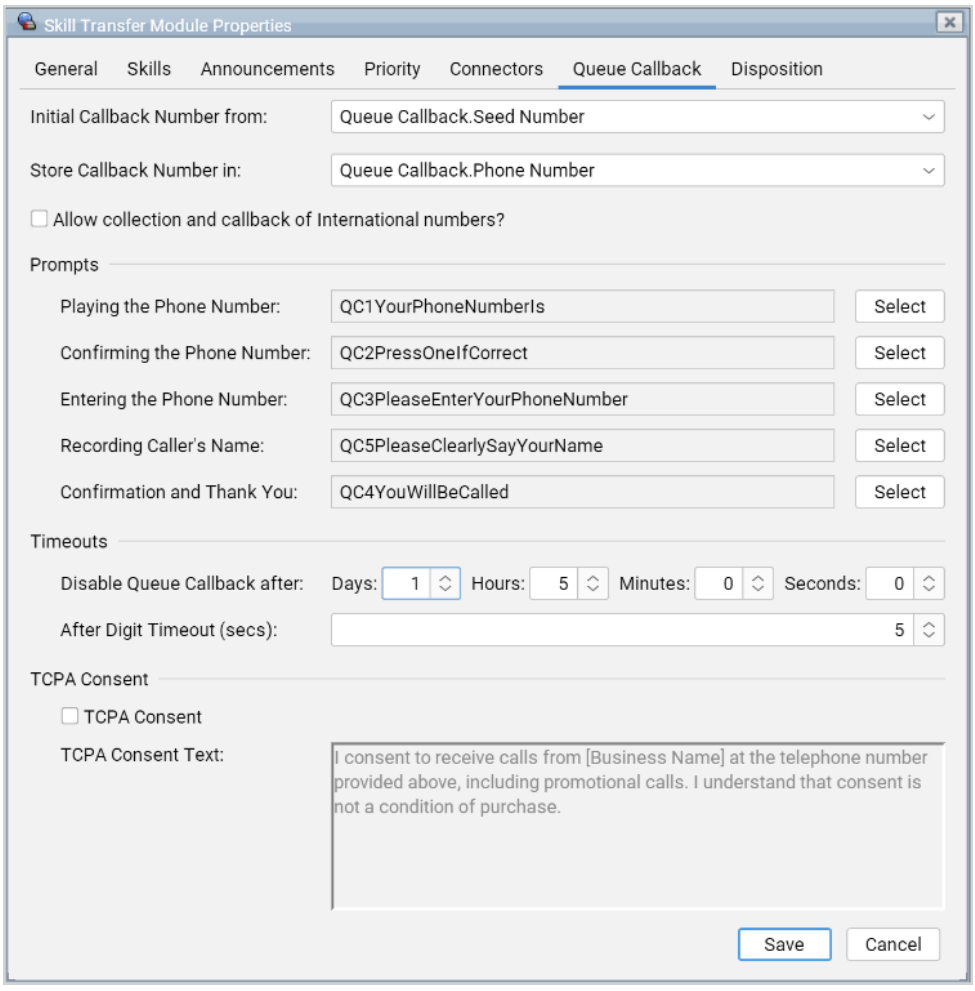
3 From the Store Callback Number in list, select the Queue Callback Phone Number variable.

4 In the Prompts section, choose the prompts.

Example prompt messages:

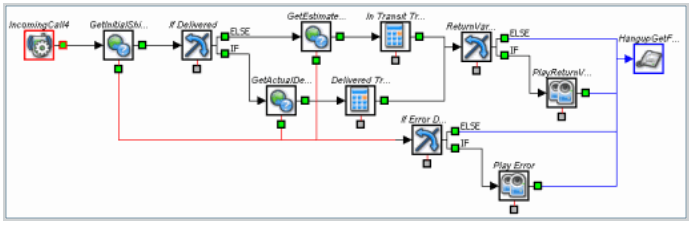
- Your phone number is ...
- Press one if correct.
- Please enter your phone number.
- You will be called.

5 Indicate the Disable Queue Callback after and After Digit Timeout options.



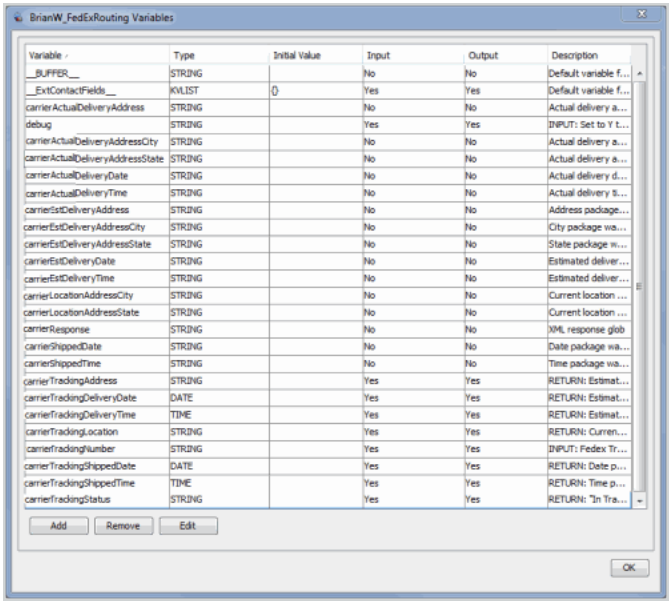
Creating an IVR Script for Tracking a Shipment

This topic provides information on how to configure a campaign's IVR script with multiple Web Service Query modules. This example gets tracking and delivery information by sending a query with tracking identifiers to a Web service.



Creating Variables to Support Query Responses

The first step in creating this IVR script is to set the variables that you will be using as the interaction is processed. These script variables are required for the query responses.

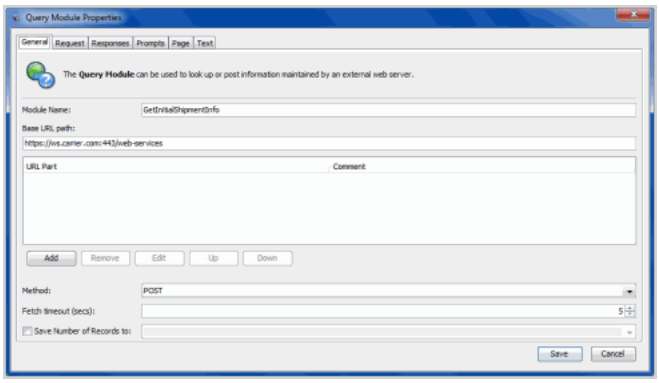


Adding and Configuring the Query Modules

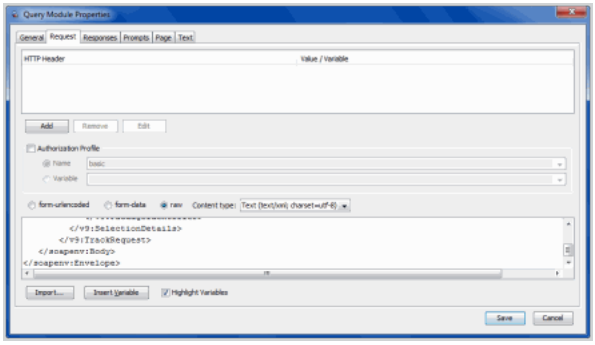
This IVR script uses three Query modules. Although each Query module uses the same SOAP query, each parses the response as needed for that stage of the IVR script.

Configuring the *GetInitialShipmentInfo* Query Module

The first Query module, named GetInitialShipmentInfo, gets the initial shipping information needed to proceed. This information includes the city and state from which the package was shipped and the actual date and time this shipment began.



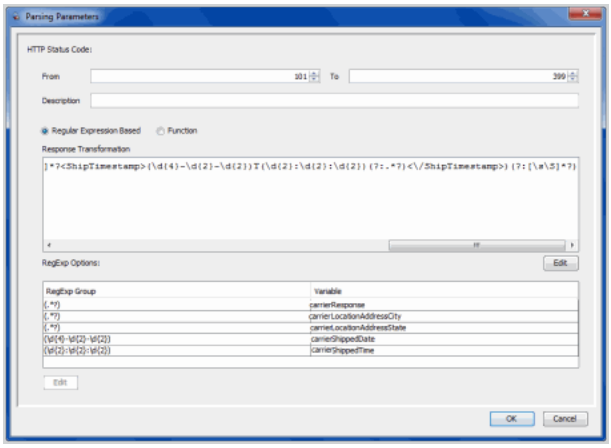
1. Provide an intuitive name for this module.
2. Add the base URL path.
3. Assigns the POST method for this query.



4. Configure the Request tab to gather the initial shipment information by using the following code:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v9="http://carrier.com/ws/track/v9">
   <soapenv:Header/>
   <soapenv:Body>
      <v9:TrackRequest>
         <v9:WebAuthenticationDetail>
            <v9:UserCredential>
               <v9:Key>Mh6hPS34N5fCn4lB</v9:Key>
               <v9:Password>bCp7cpvKpT7l9HuaVGi7f6jHn</v9:Pass
word>
            </v9:UserCredential>
         </v9:WebAuthenticationDetail>
         <v9:ClientDetail>
            <v9:AccountNumber>123456789</v9:AccountNumber>
            <v9:MeterNumber>987654321</v9:MeterNumber>
            <v9:Localization>
               <v9:LanguageCode>EN</v9:LanguageCode>
               <v9:LocaleCode>US</v9:LocaleCode>
            </v9:Localization>
         </v9:ClientDetail>
         <v9:TransactionDetail>
            <v9:CustomerTransactionId>Track By Number_v9
                     </v9:CustomerTransactionId>
            <v9:Localization>
               <v9:LanguageCode>EN</v9:LanguageCode>
               <v9:LocaleCode>US</v9:LocaleCode>
            </v9:Localization>
         </v9:TransactionDetail>
         <v9:Version>
            <v9:ServiceId>trck</v9:ServiceId>
            <v9:Major>9</v9:Major>
            <v9:Intermediate>1</v9:Intermediate>
            <v9:Minor>0</v9:Minor>
         </v9:Version>
         <v9:SelectionDetails>
            <v9:PackageIdentifier>
               <v9:Type>TRACKING_NUMBER_OR_DOORTAG</v9:Type>
               <v9:Value>&&CarrierTrackingNumber&&</v9:Value>
            </v9:PackageIdentifier>
         </v9:SelectionDetails>
       </v9:TrackRequest>
   </soapenv:Body>
</soapenv:Envelope>
```

The Responses tab parses the parameters into your predefined variables.



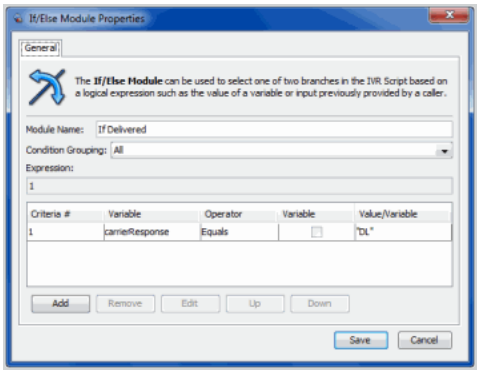
5 Parse the query response by using the following code:

```
(?:<StatusDetail>[\s\S]*?<Code>(.*?)
<\/Code>[\s\S]*?<Location>[\s\S]*?<City>(.*?)
<\/City>[\s\S]*?<StateOrProvinceCode>(.*?)
<\/StateOrProvinceCode>[\s\S]*?
<\/StatusDetail>[\s\S]*?<ShipTimestamp>(\d{4}-\d{2}-\d{2})T(\d
{2}:\d{2}:\d{2})(?:.*?)
<\/ShipTimestamp>)(?:[\s\S]*?)
```

The remaining tabs in this first query module may remain unused.

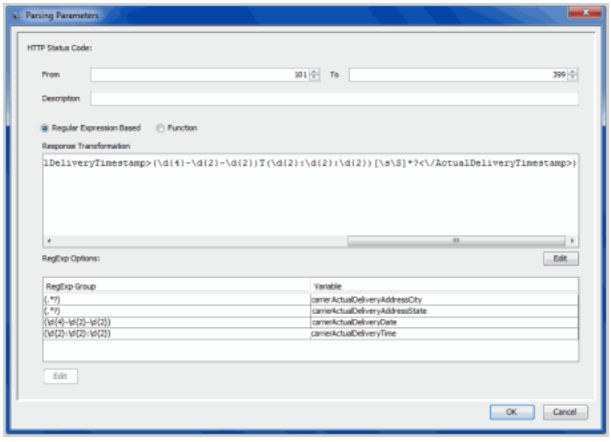
Adding and Configuring the *IfDelivered* If/Else Module

This second module in this IVR script uses the returned variables from the first **Query** module to determine if the package has been delivered. Using the **If/Else** module enables separate distribution branches that lead to specific **Query** modules. If the item has been delivered, the If branch is taken and the call is delivered to the follow-on **Query** module and subsequent **Set Variable** module to retrieve and assign the delivery information. If the item is still in transit, the Else branch delivers this call to an alternate follow-on **Query** module and subsequent **Set Variable** module to retrieve and assign the estimated delivery information.



Adding and Configuring the *ActualDeliveryInfo* Branch

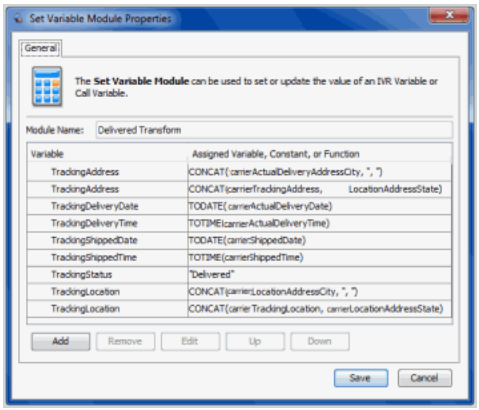
When the item has been delivered, the actual delivery branch retrieves and assigns the delivery information.



1 Configure this module similarly to the first Query module with this code:

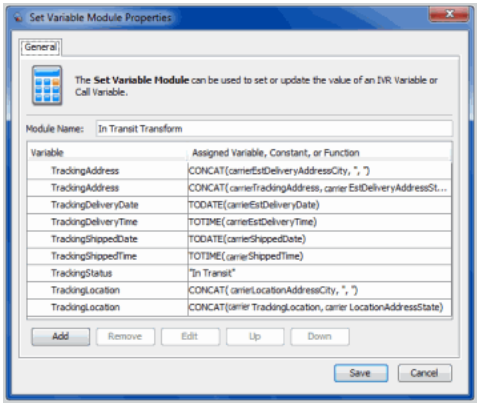
```
(?:<ActualDeliveryAddress>[\s\S]*?<City>(.*?)<\/City>
[\s\S]*?<StateOrProvinceCode>(.*?)<\/StateOrProvinceCode>
[\s\S]*?<ActualDeliveryTimestamp>(\d{4}-\d{2}-\d{2})T(\d{2}:\d
{2}:\d{2})[\s\S]*?<\/ActualDeliveryTimestamp>)
```

2 Configure the **SetVariable** module, ***DeliveredTransform,*** to assign the variables retrieved in the previous **Query** Module.



Adding and Configuring the *GetEstimatedDeliveryInfo* Branch

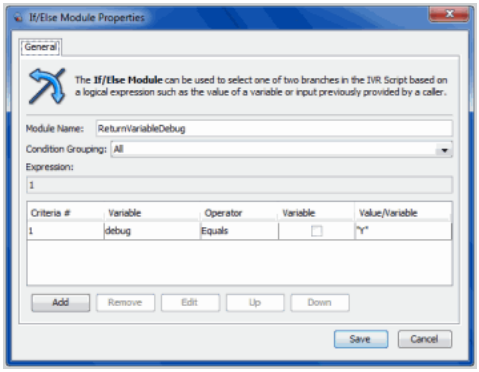
This branch uses a **Query** module and **Set Variable** module to retrieve the estimated delivery information. The setup is similar to the ***IfDelivered*** branch above, with the except that the TrackingStatus is set to InTransit, not Delivered.



Adding and Configuring the *ReturnVariableDebug* Module

You configure this branch using an **If/Else** module to check for the presence of a return variable and a **Play** module to play any error message to the caller.

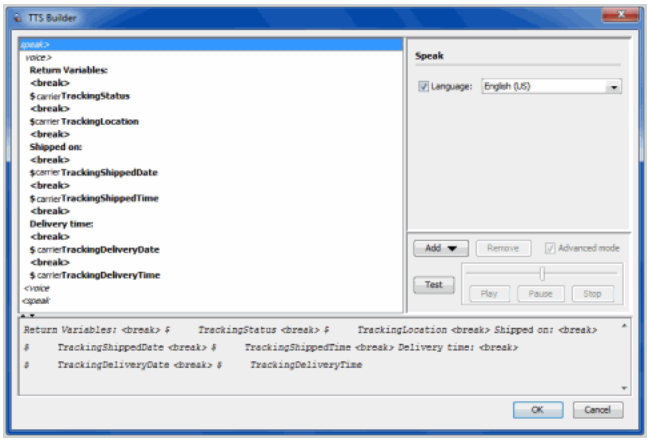
1 Add an If/Else module, you check the value of your debug variable.



2 Add criteria to check for the Debug variable is set to "Y".

3 Configure the IF branch to play that variable recording to the caller.

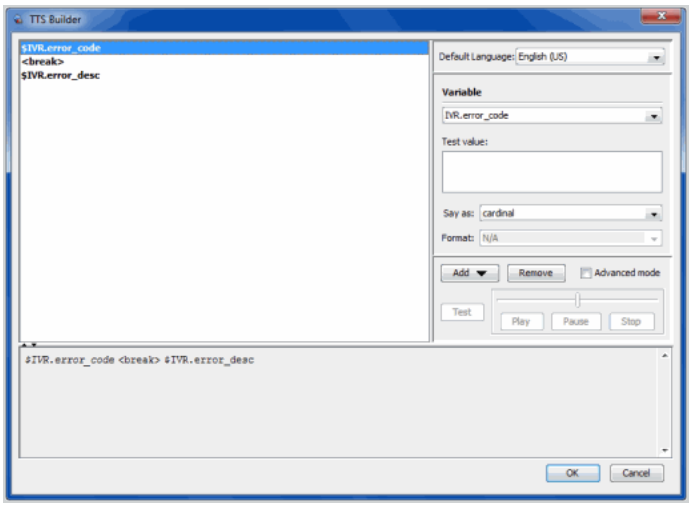
4 Add a Play module to play TTS as described below.



5 Configure the Else branch to proceed to disconnect if there are no error messages to play.

Adding and Configuring the *IfErrorDebug* Module

You configure the final **If/Else** module to capture any IVR errors from any of the prior **Query** modules. The entry into this module is the error branch from any of the three **Query** modules that you have configured. You configure this branch similarly to the error branch above, except the TTS configuration for the final **Play** module, shown below.



This completes your configuration for this IVR script.

Using an Agent Extension in an IVR

This section shows how to create a script that allows callers to make a menu selection or enter an extension without going to a second prompt with the Get Digits and the Play module. The caller can press 1 for Sales, 2 for Support, or enter an extension. All extensions start with the number 9.

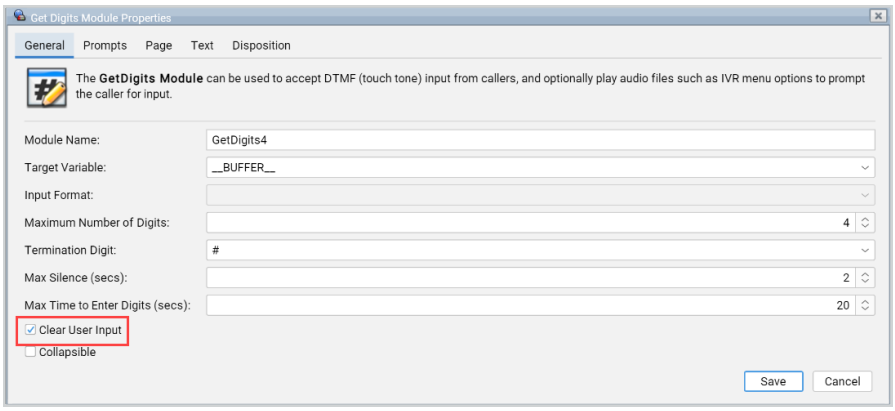
Your IVR script should be created and the IVR Flow Editor window be open.

Configuring the Get Digits Module

We use the Get Digits module to accept the values entered by the caller. You can also add the Extension Transfer Module instead of the Get Digits. The Extension Transfer

Module will accept the digits entered by the caller, and transfer the call. The Extension Transfer Module can play the default prompts. Read more in Extension Transfer Module.

1. Add a Get Digits module to the workspace.
2. Open the **Module Properties**.
3. Set these properties.
   a. Select the default BUFFER variable.
   b. Check **Clear User Input**.



4. Click **Save**.

Configuring the Case Module

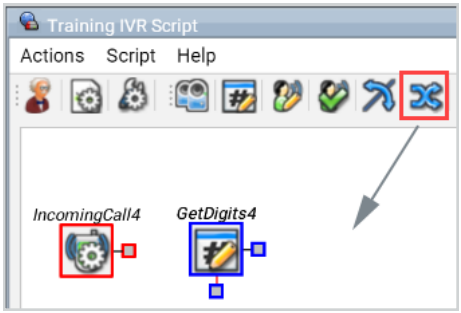
The Case module is used to split the script flow based on the user input to the branches. This module has a No Match branch which is used when the user input does not match any criteria defined in the Case module.

This script has four branches: Sales, Support, Extension, and No Match:

- The caller can press 1 for sales.
- The caller can press 2 for support or enter an extension.
- The caller can enter an extension. All extensions start with 9. You need to enter a wild card % to substitute for any other character or characters in a string.

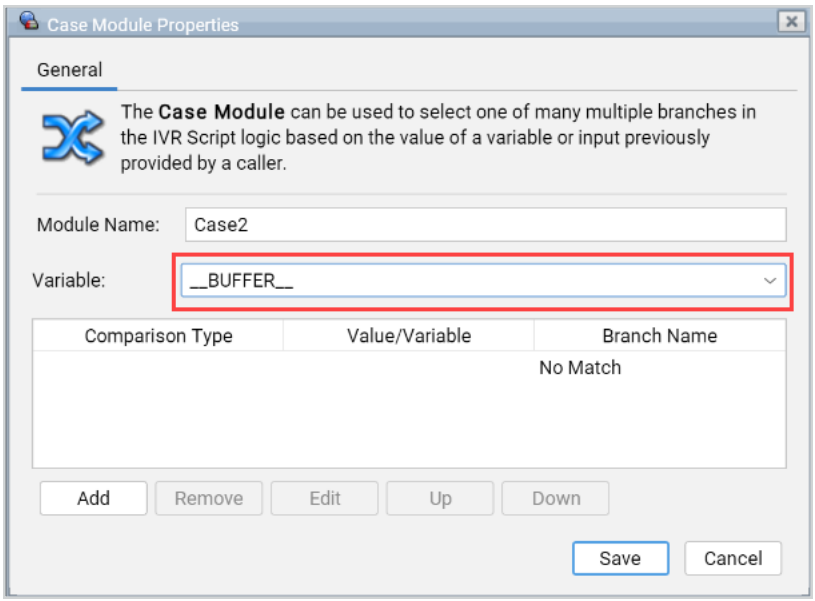
- If the caller does not enter a number that matches Sales, Support, or Extension, the module selects No Match. Link the No Match according to your needs.

1 Add a Case module to the workspace.



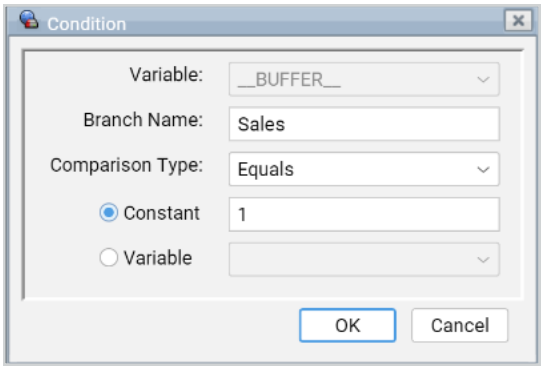
2 Open the **Module Properties**.

3 In the Variable field, select the variable that contains the caller's input, in this case: BUFFER.



4 To add the first branch, Sales, click **Add**.

a Enter Sales into the Branch Name text field, select Equals in the Comparison Type, and enter 1 as the constant.



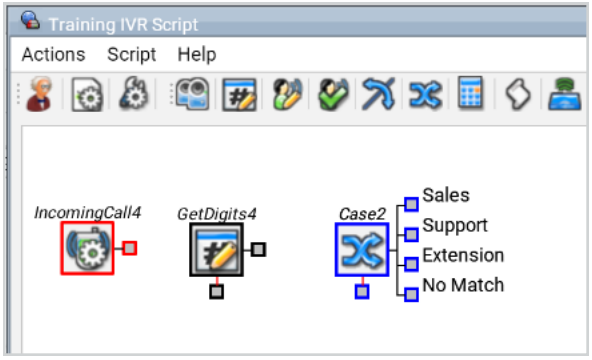
b Click **OK**.

5 Repeat step 4 to create a branch named Support, with 2 as the constant.

6 Repeat step 4 to create a branch named Extension, with the Like operator.

You need to enter a wild card “%” used to substitute for any other character or characters in a string.

7 Click **Save**.

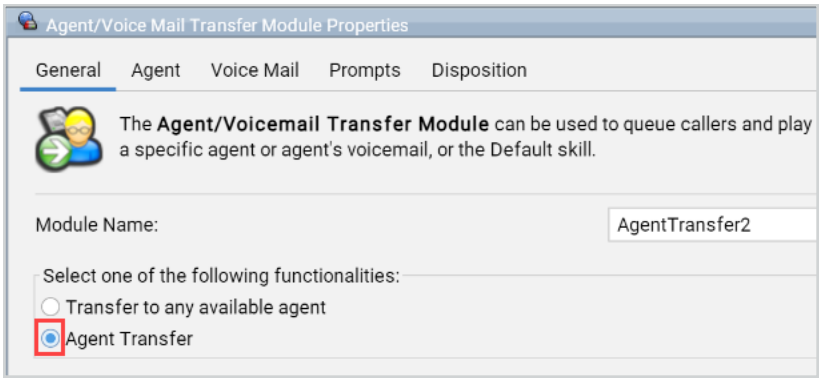


Configuring the Agent/Voice Mail Transfer Module

1 Add a Agent/Voice Mail Transfer module to the workspace.

2 Open the **Module Properties**.

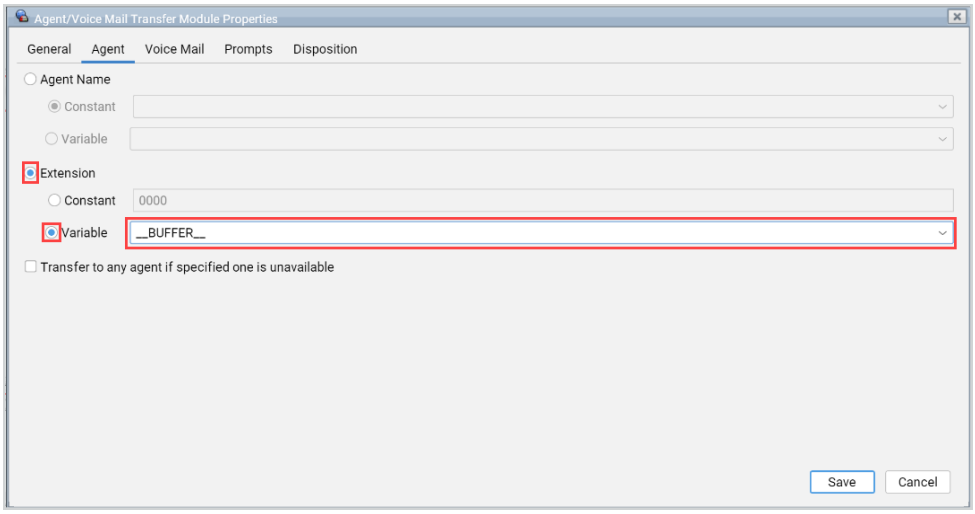
3 In the General tab, select **Agent Transfer**.



4 Select the Agent tab.

5 Select the default BUFFER option.

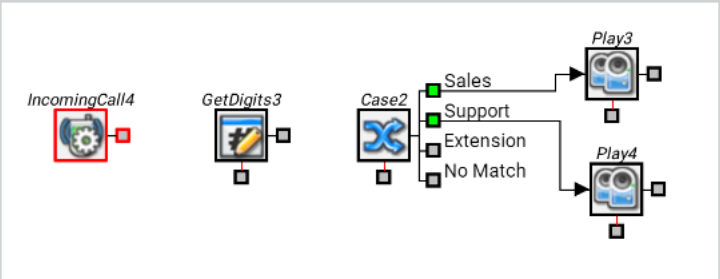
The Agent/Voicemail Transfer Module uses the BUFFER variable to find the Agent's extension.



6 Click **Save**.

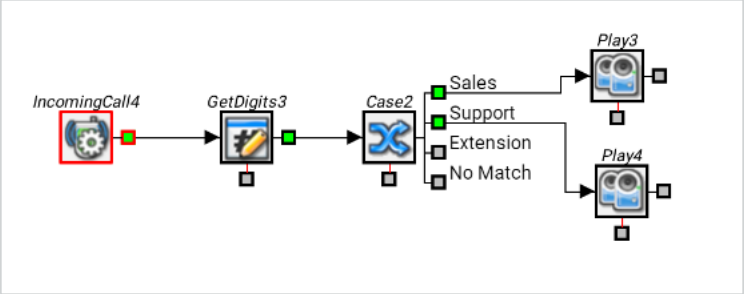
Adding Modules for Each Case

Depending on your campaign requirements, add the modules for each Case Module branch. In our example, we added the Play modules for the Sales and Support branches. For the Extension branch, we added the Agent Transfer module, and the Play module.

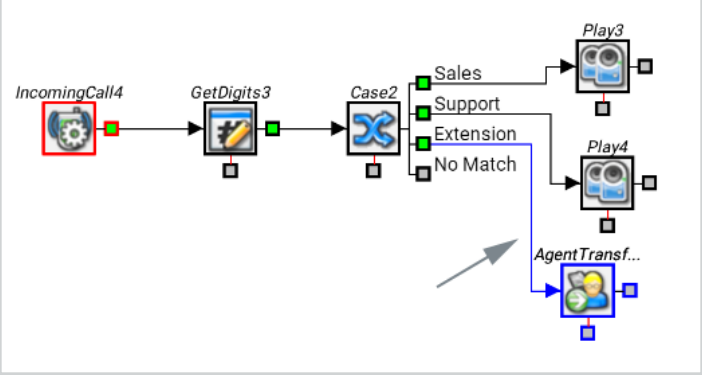


Connecting the Modules

1 Connect the modules in this sequence: **Incoming > Get Digits > Case**.

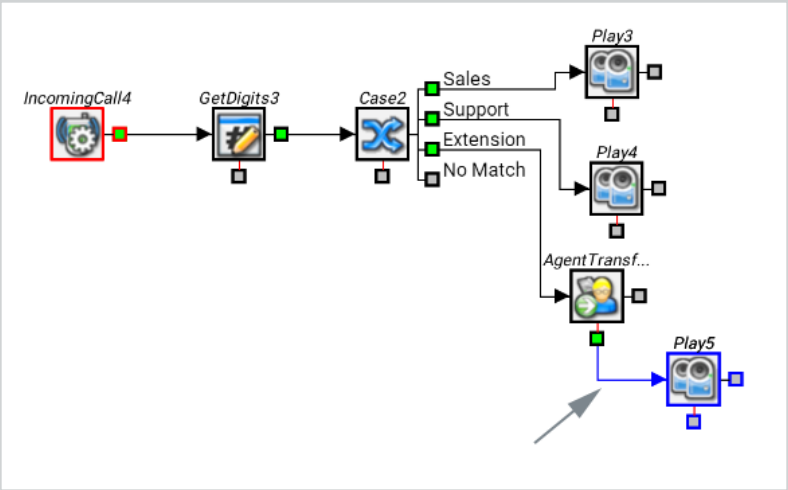


2 Connect the Extension branch to the Agent/Voice Mail Transfer module.

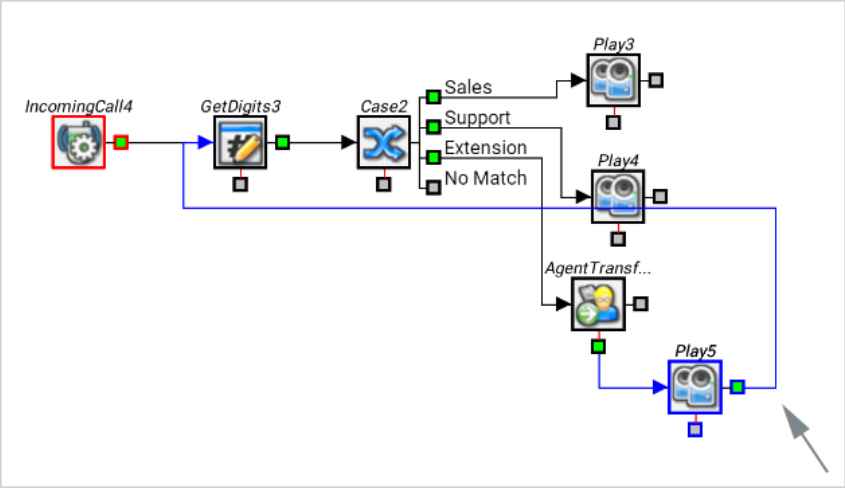


3 Add a new Play module and connect it to the extension port of Agent/Voice Mail Transfer module.

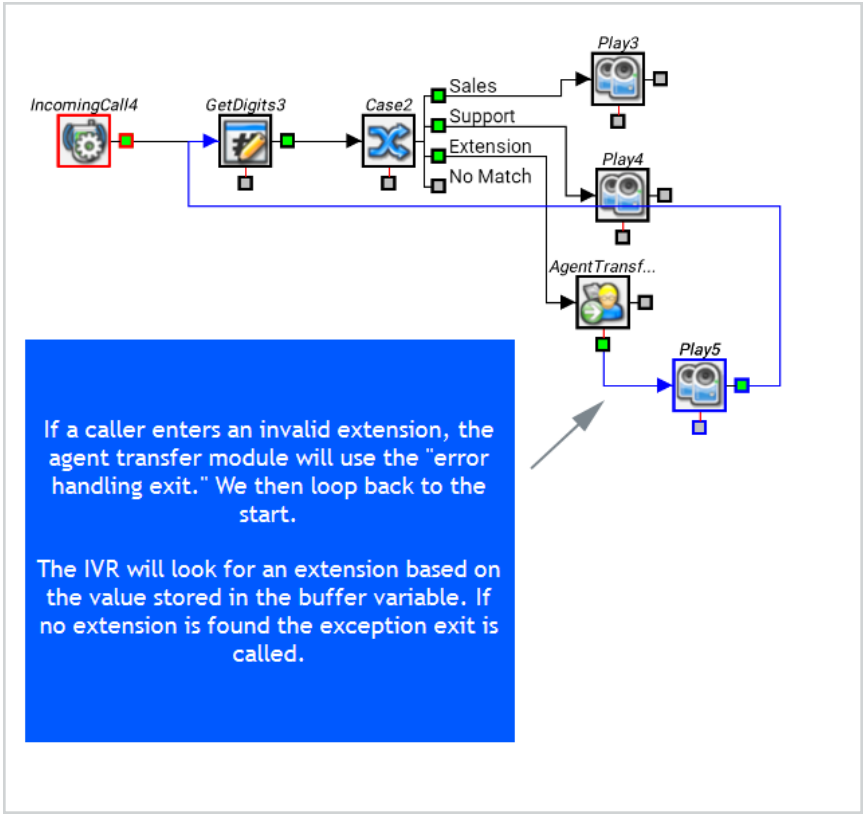
If a caller enters an invalid extension, the Agent/Voice Mail Transfer module uses the Error handling exit.



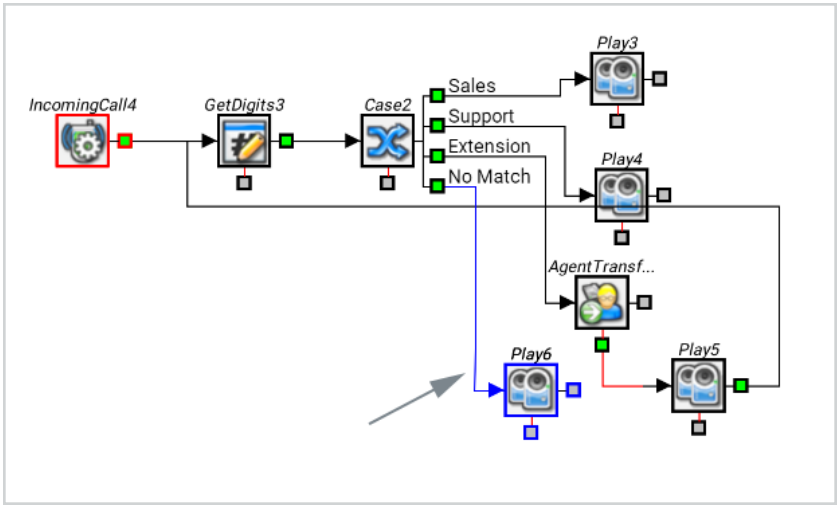
4 Loop back the third Play module to the start (the Get Digits module).



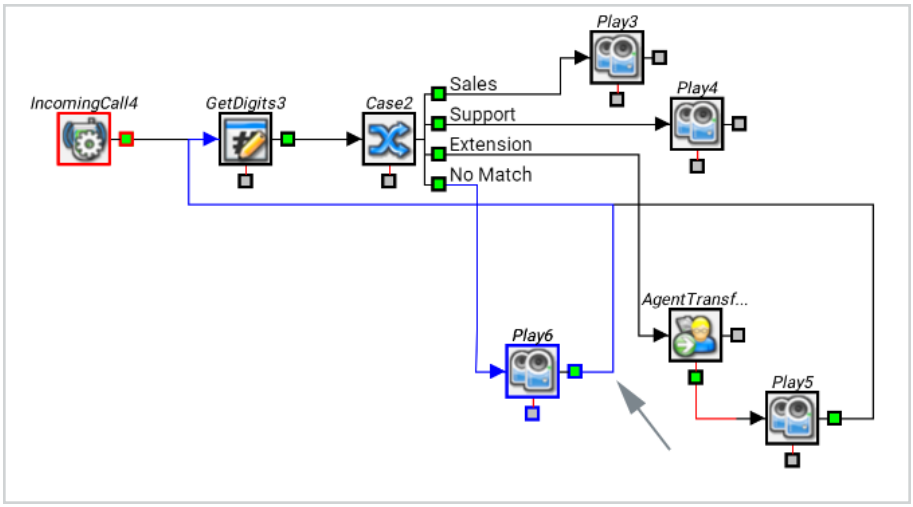
The following image shows what happens when a caller enters an invalid extension.



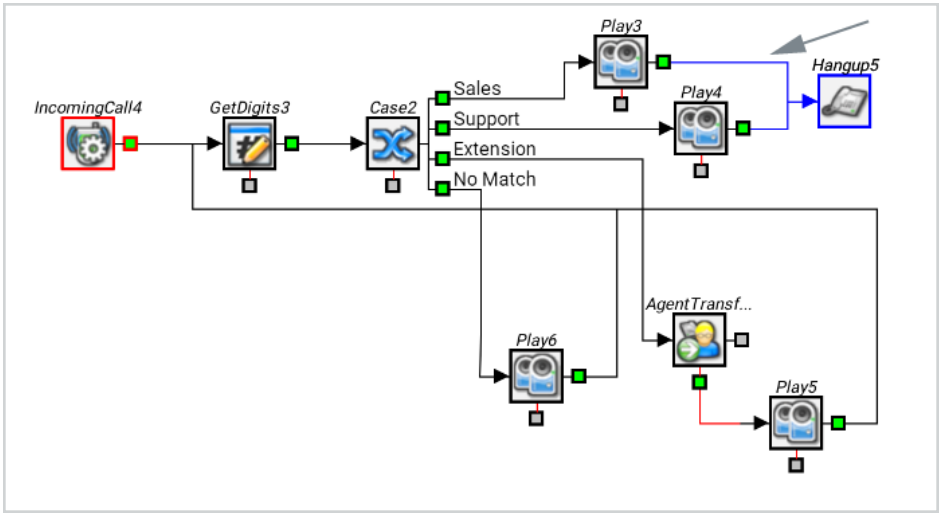
5 Add one more Play module, and connect the No Match branch of the Case module to the new Play module.



6 Loop back the fourth Play module to the beginning (the Get Digits module).



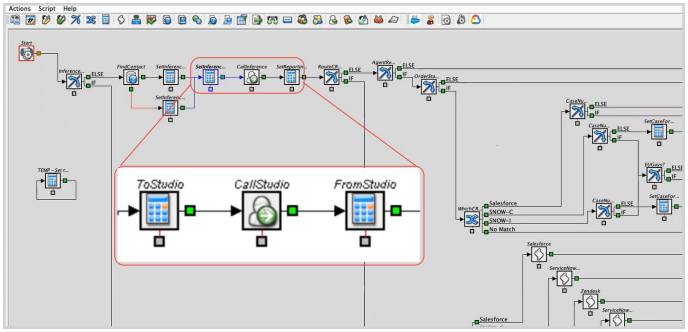
7 Connect the first and the second Play modules to the Hang Up module.



Incoming Call Transfer to Studio IVA

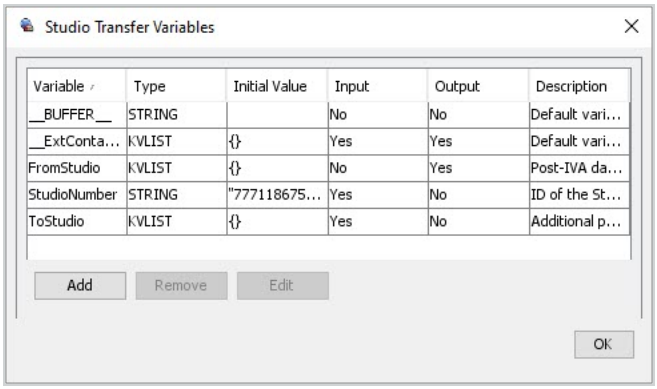
This example identifies some basic interaction and data transfer using the Five9 Studio IVA solution. Your particular IVR script will involve more modules than discussed here. The focus of this example is three specific modules:

- **Set Variable** module to collect data to pass to Studio.
- **Third-party Transfer** module to transfer the interaction and collected data to Studio.
- **Set Variable** module to pass return data to VCC, such as customer journey details and interaction information.



Preparing Your Script Variables

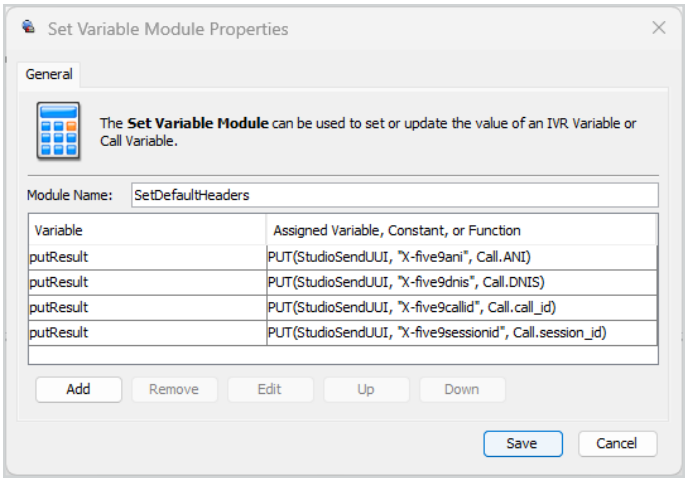
You define and modify custom variables using **Script Variables**. The following variables support the modules identified in this example.



1. **FromStudio**: This variable stores the return data following the IVA interaction. This data is defined in the Return From IVA, or second Set Variable module used in this example.
2. **StudioNumber**: This variable translates the 12-digit Studio number for use in Studio agent contact.
3. **ToStudio**: Data gathered in your IVR script to send to the IVA with the interaction.

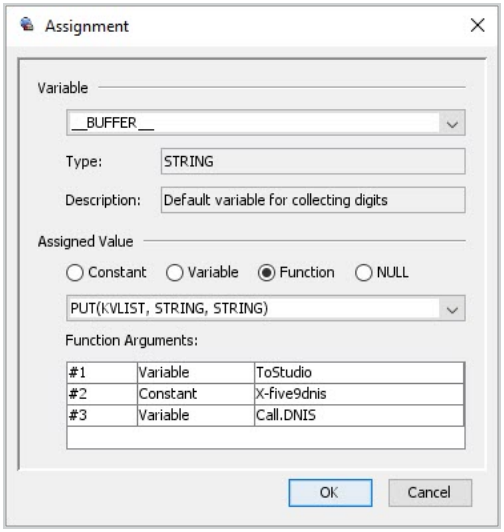
Collecting Data for IVA (to Studio)

The interaction heading toward Five9 IVA comes from the **Five9 Engagement Workflow** embedded in your campaign IVR script. Once the interaction is introduced to this campaign, the first **Set Variable Module** captures and stores information from Five9 to send with the interaction, such as DNIS. This module example explains capturing that DNIS information and lists additional, commonly used variables.



1 Drag a Set Variable module into your IVR script canvas and double-click the module to edit the properties.

2 The Assignment window opens. Click **Add** to create a new variable.



3 In the Variable dropdown menu, select **_BUFFER_**. You can select from the script variables created in Preparing Your Script Variables.

4 Select the Function radio button for Assigned Value and select **PUT(KVLIST, STRING, STRING)** from the Function dropdown. Function arguments are as follows:

a Argument **#1**: Variable - ToStudio

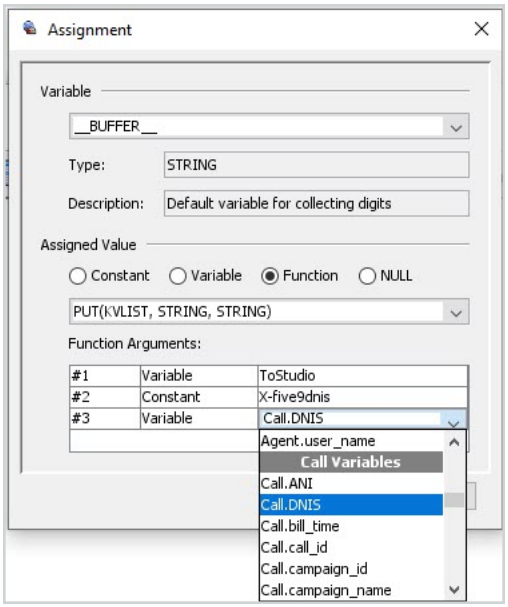
This calls the ToStudio script variable to store the Five9 DNIS and send it to Studio.

b Argument **#2**: Constant - X-*five9dnis* <insert your variable name here>

> **Important:** Variable names exactly match those in Studio. This example is not using a required variable name.
> Use all lowercase characters for variable names because the data that returns in the IVA interaction is always lowercase and the names must match

c Argument **#3**: Variable - Call.DNIS

This value is the Five9 call DNIS and is selectable in the **Call Variables** section of the variable dropdown.

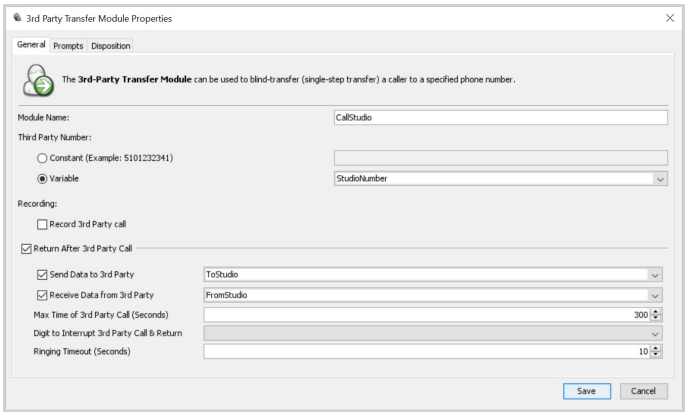


5 Click **OK** to save the variable definition.

Use this process to create other commonly used variables shown in this script, such as `Call.session_id` and `Call.call_id`.

Sending the Interaction to Studio IVA

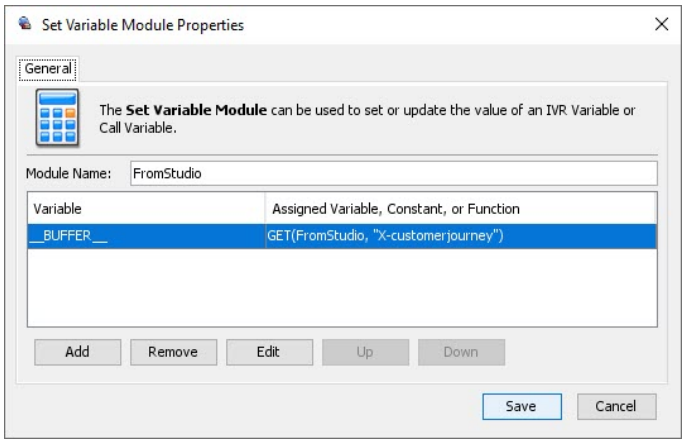
The second module in this sequence, a **Third Party Transfer Module**, sends this interaction to the Studio IVA. This module uses the **StudioNumber**, **FromStudio**, and **ToStudio** variables.



Important: You must select **Return After 3rd Party** to retrieve the interaction and select **Send Data to 3rd Party** and **Return Data From 3rd Party** to exchange variable information.

Data Return (From Studio)

The interaction remains in Studio until it is resolved or passed to a live agent. You can define interaction data to return in your Studio Header Node. Interaction information is captured from SIP headers as XSIP variables. The second Set Variable module identifies the return information from Studio. This example shows retrieving the customer journey information.



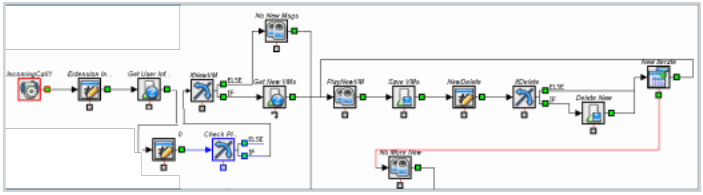
Managing Voicemail

This example is divided into specific functional branches for construction. Each branch loops back to a main menu module to enable multiple options in a single IVR script. This script includes the following branches.

Retrieving Voicemail Messages
Configuring Voicemail Account for New Users
Playing the Current Voicemail Greeting
Recording a Voicemail Greeting
Changing an Existing Voicemail PIN

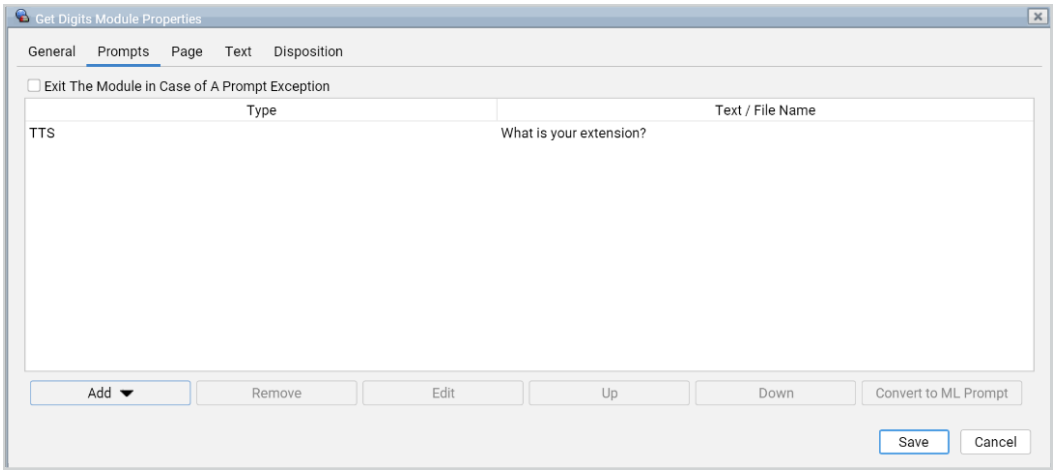
Retrieving Voicemail Messages

Configure this branch to enable voicemail account access. Use the following modules to identify the caller's extension and credentials. The modules are connected in series, in the order listed.

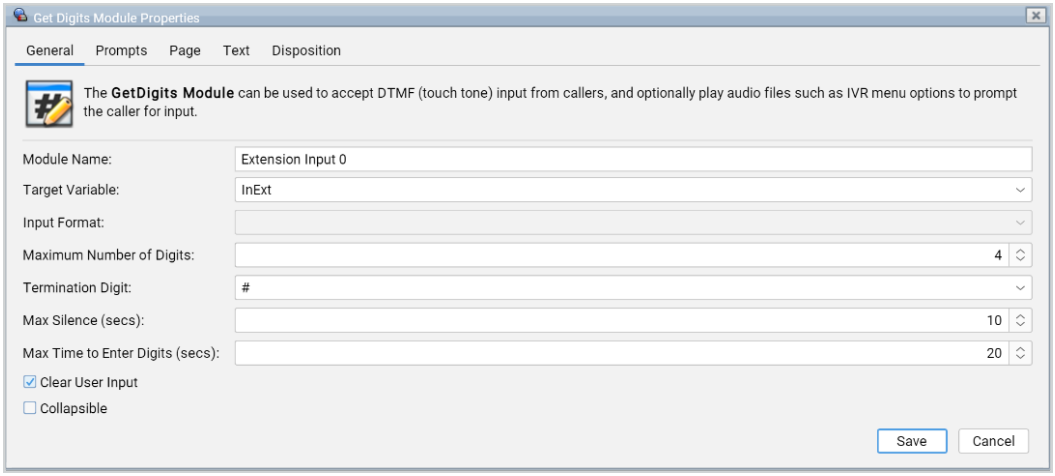


Get Digits Module

Use this module to collect caller input. This input identifies the user using their 4-digit Five9 extension.

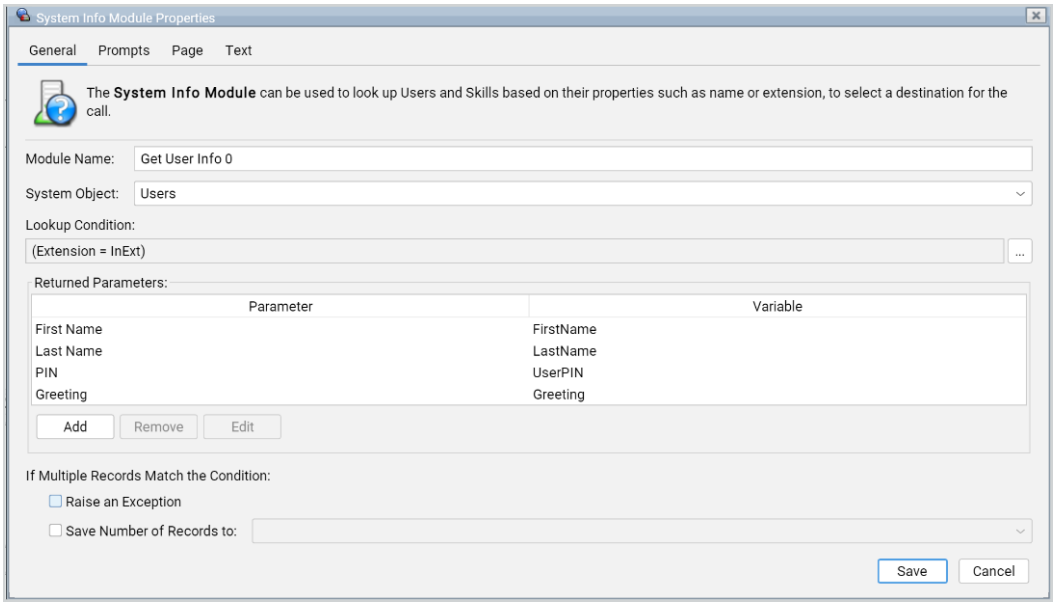


Set the maximum number of digits in the BUFFER variable to 4.



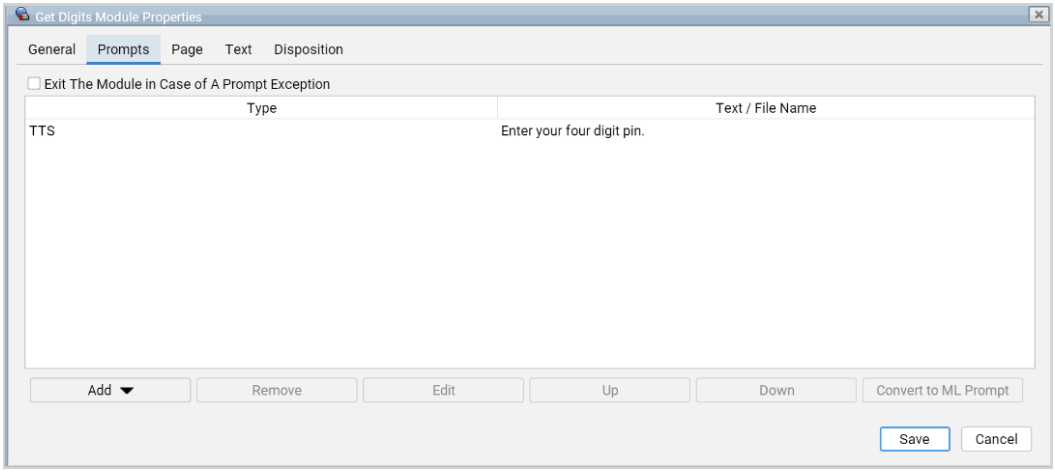
System Info Module

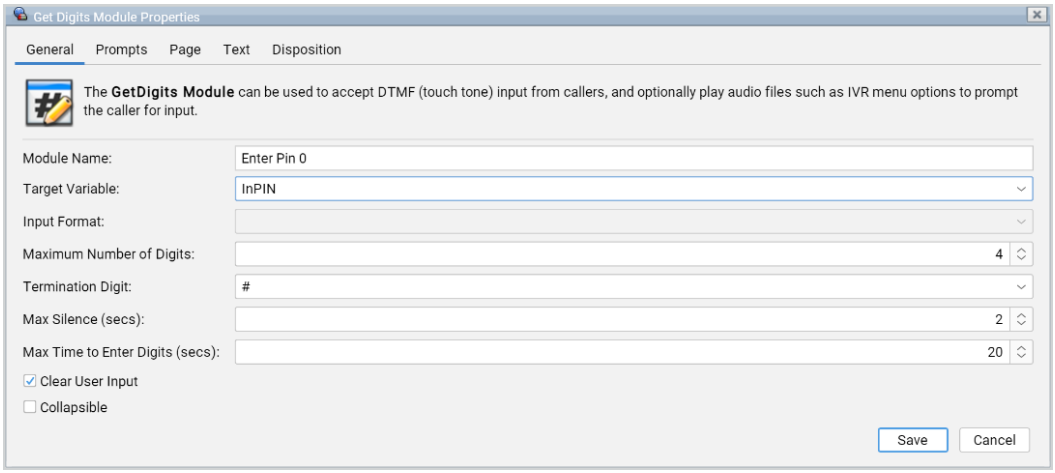
This module retrieves the parameters associated with the extension identified in the previous step. Configure this module to populate the script variables and establish the specific user information associated with the extension entered in the previous module.



Get Digits Module

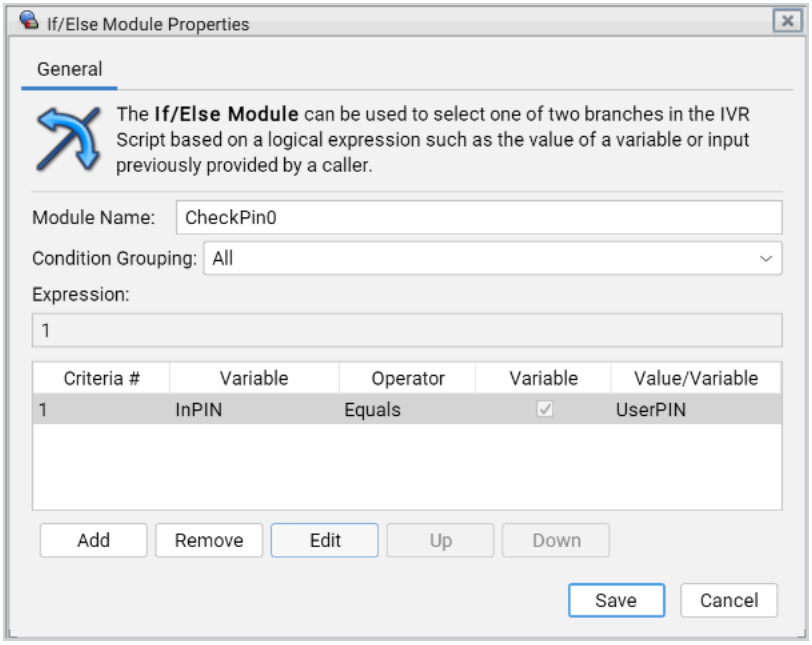
Use this module to collect the user input and authenticate the PIN associated with the user and extension. The maximum number of digits in the BUFFER variable is 4.





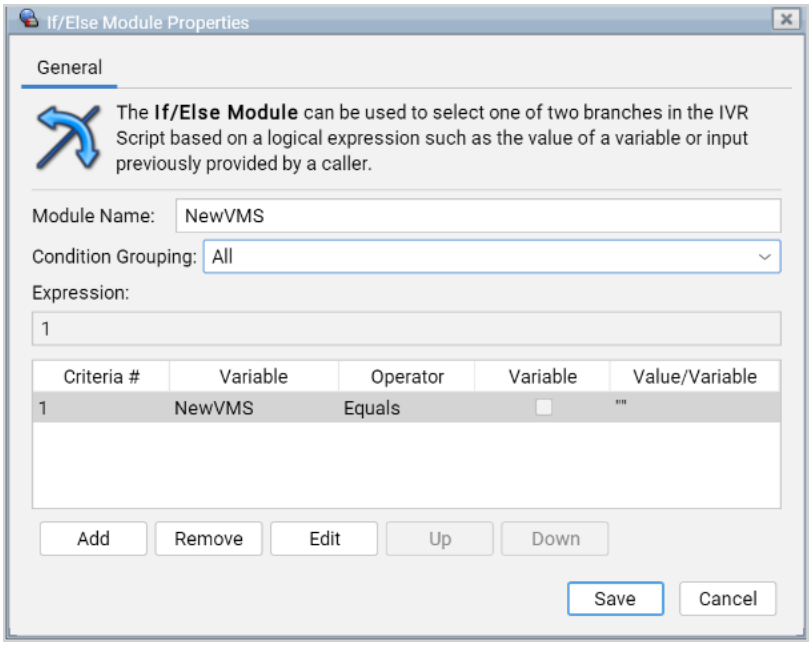
If/Else Module

Use this module to verify the PIN entered against the PIN retrieved from system information. If the entered PIN matches the `InPIN` variable, the call proceeds to voicemail retrieval. If the PIN entered does not match the call returns to the enter PIN step. If the InPIN variable is null, indicating that a PIN has not yet been created for this extension, the caller should be directed to the Configuring Voicemail Account for New Users branch of this script. For more information, see Configuring Voicemail Account for New Users.



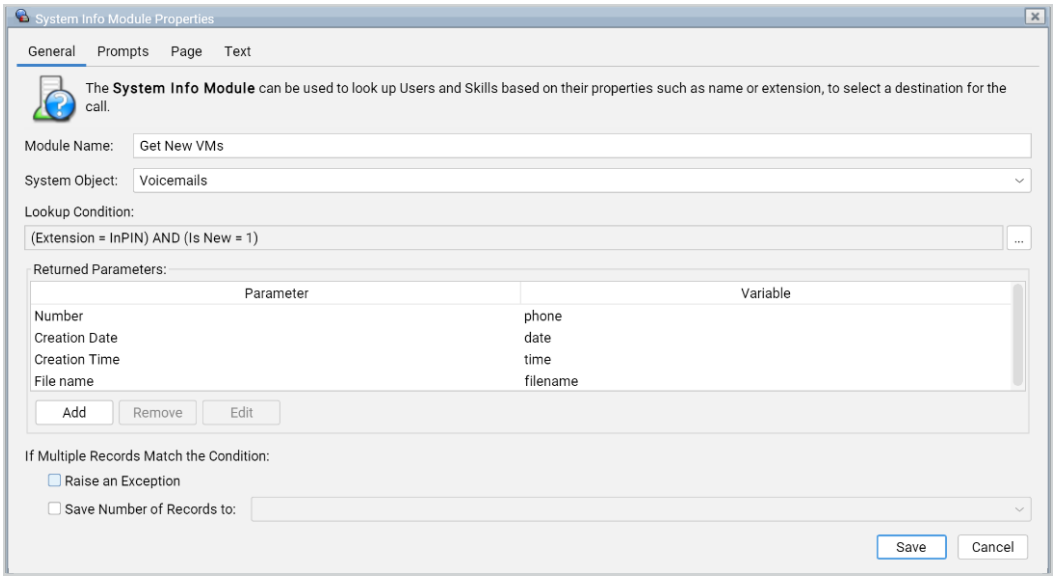
If/Else Module

Use this module to check the `NewVMS` variable to check for new voicemail messages. This variable has an initial value of 0 and any value greater than zero indicates new voicemail messages. If new messages exist the call proceeds to retrieve these new messages.



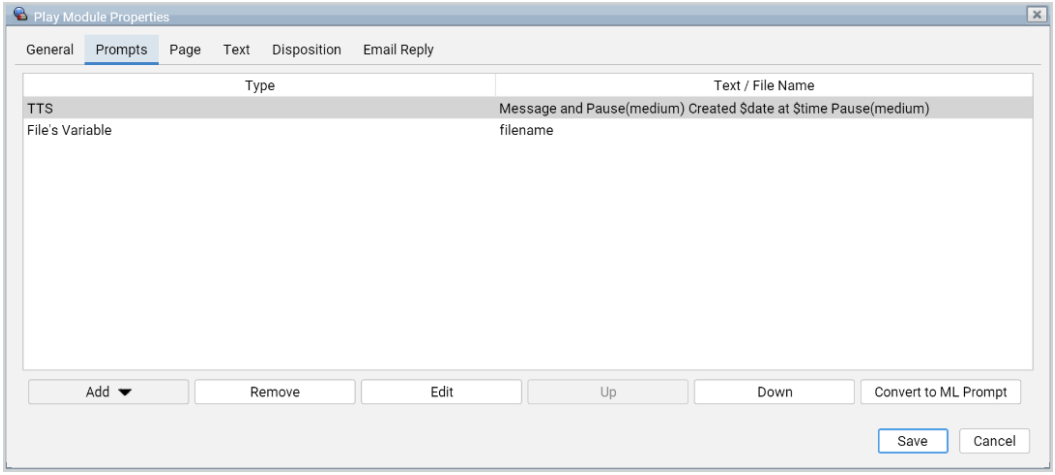
System Info Module

Use this module to retrieve new voicemail messages to play in the next step.



Play Module

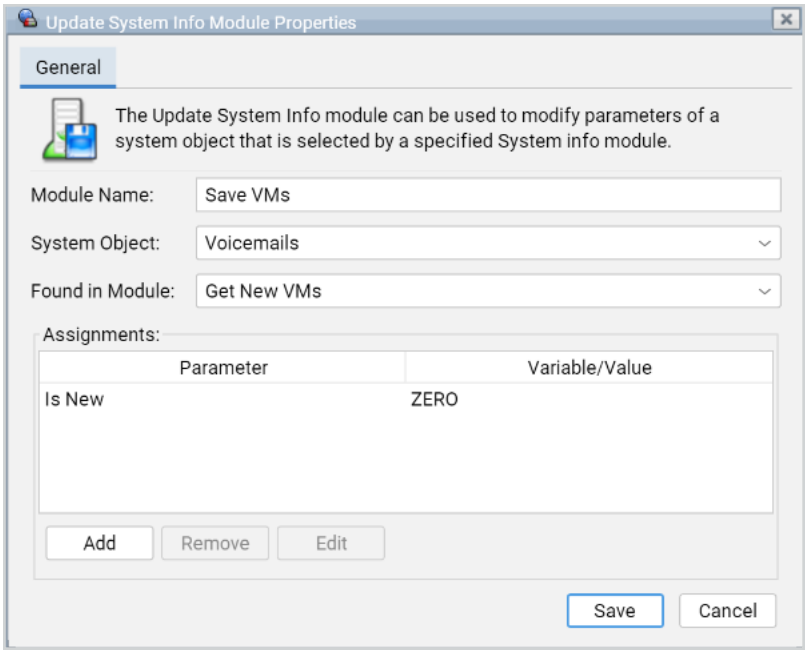
Use this module to play the date and time of each voicemail message, and the associated voicemail message file, identified in the previous step. Additional messages are played in the order they were received.



Update System Info Module

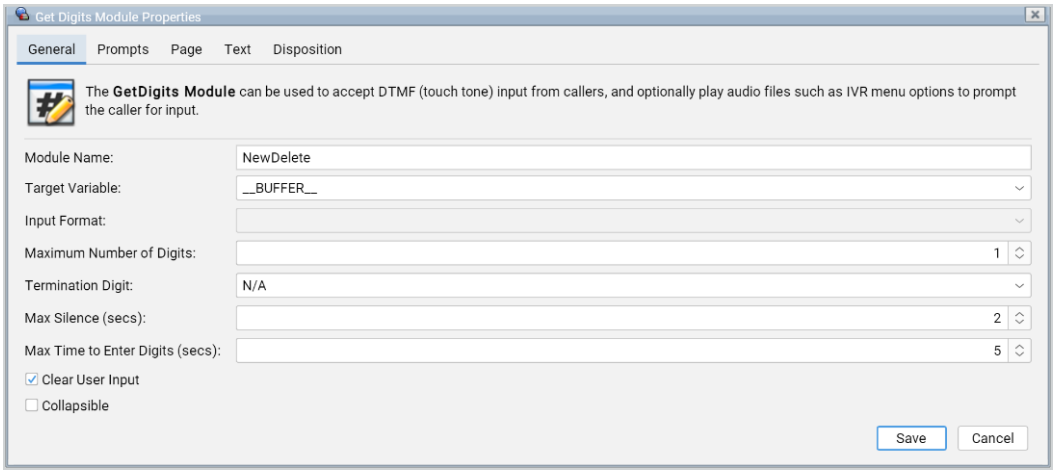
Use this module to reset the `IsNew` variable to 0 for the voicemail, marking that message as played and removing that message from the list of messages flagged as

new voicemail messages.

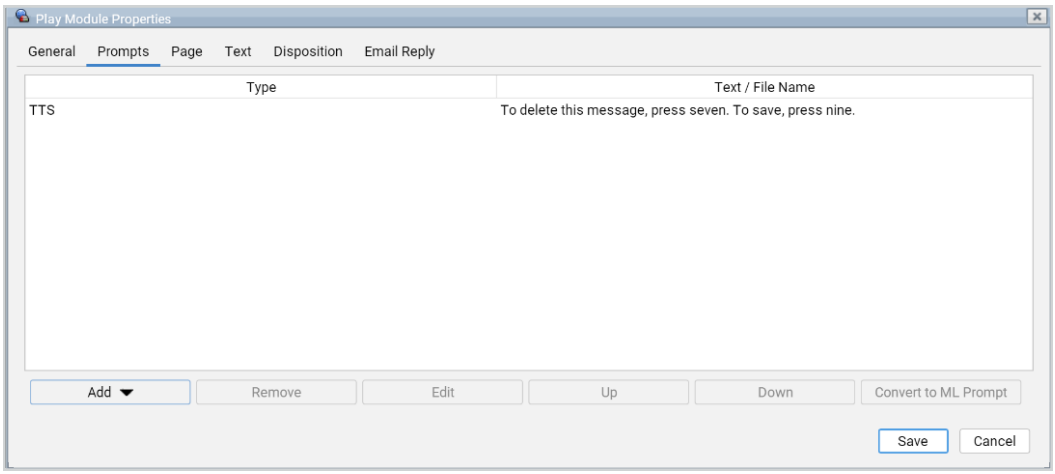


Get Digits Module

Use this module to present delete or save options to the caller for the message that was just played. Configure this module to accept a maximum of one digit.

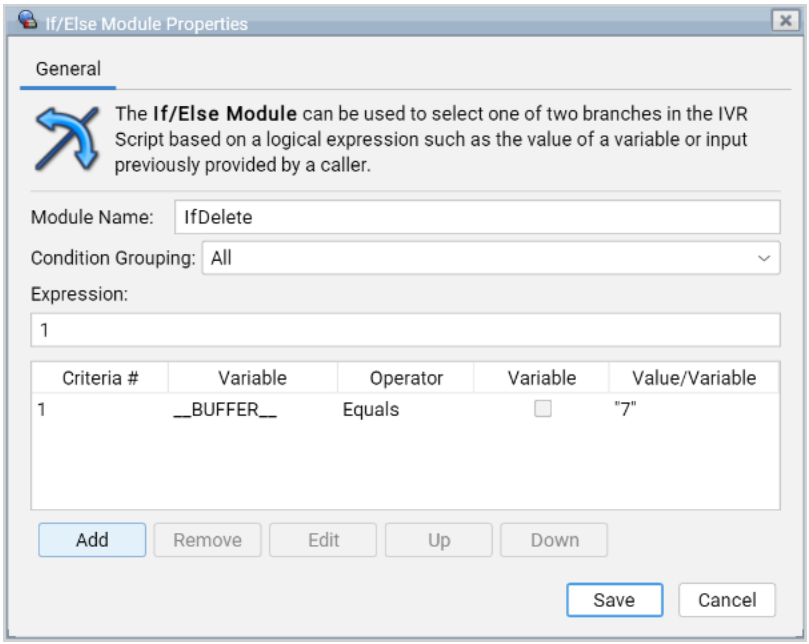


Configure TTS to prompt the caller to press seven to delete the message or nine to save the message.



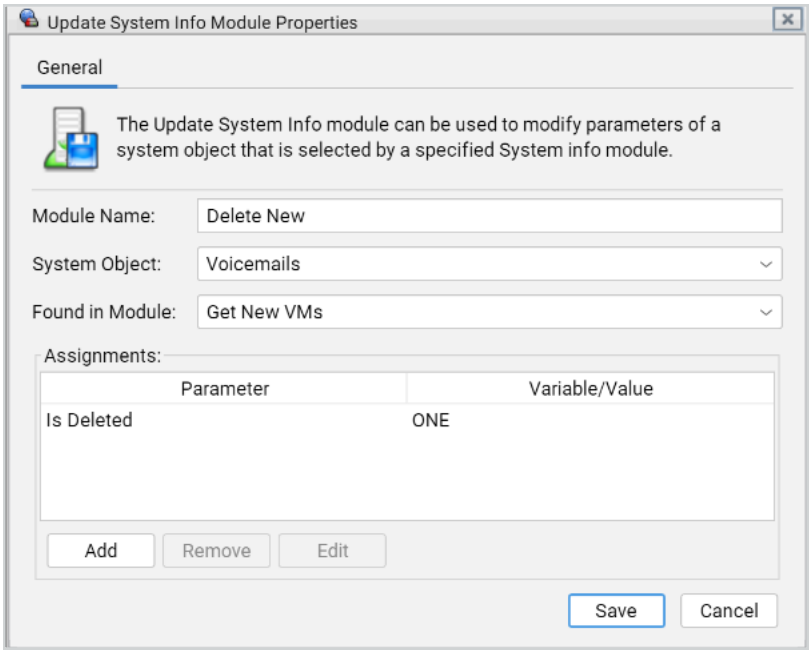
If/Else Module

Use this module to take action on the caller's save or delete choice. Configure the **If** branch to flow into the next **Update System Info** module when the caller chooses seven to delete the voicemail message. Configure the **Else** branch to go directly into the Iterator module to retrieve the next voicemail message.



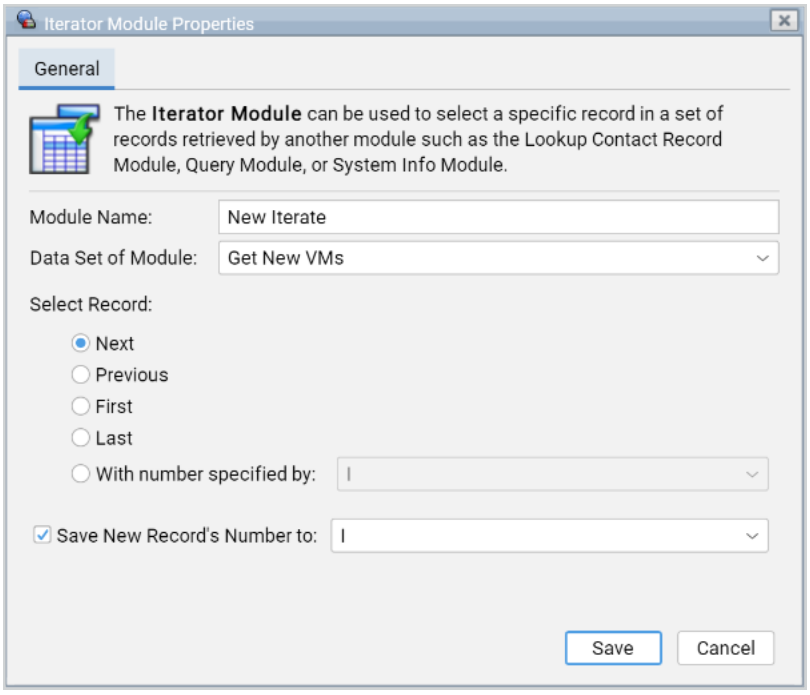
Update System Info Module

Use this module to delete a voicemail message when the caller selects that option. Configure this module to feed into the **New Iterator** module to retrieve the next message. When the caller selects nine, to save the voicemail message, this module is bypassed and the previous **Get Digits** module flows directly into the next **New Iterator** module.



New Iterator Module

Use this module to advance to the next voicemail message. The output of this module loops back to the input side of the **Play** module configured to play new voicemail messages. Configure the exception branch of this module to a play module that informs the caller there are no more new voicemail messages.



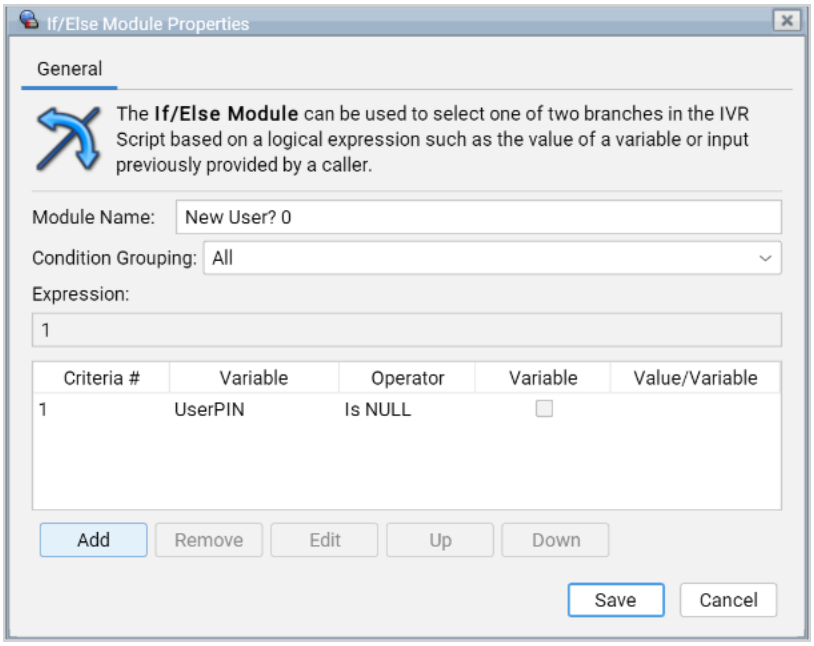
This is the end of this branch. Connect the output of this branch to the input of the You can choose to incorporate this branch into a more comprehensive IVR script and return the caller to the options menu, or send the output of your final play module to a hangup module to complete this script.

Configuring Voicemail Account for New Users

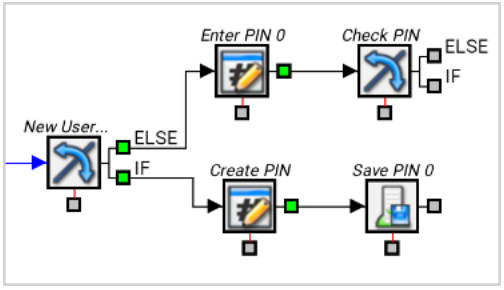
Configure this branch for new user setup. The input to this branch is the output of the first **System Info** module (see System Info module), which establishes the specific user information. The If/Else module that begins this branch evaluates the `UserPIN` parameter to identify new users. A null value for this parameter indicates an extension for which setup has not yet been completed.

If/Else Module

Use this module to determine whether the caller is a new user that needs to set up their voicemail PIN and greeting. This is accomplished by evaluating the **`InPIN`** variable. A null value indicates that the mailbox has not yet been configured.

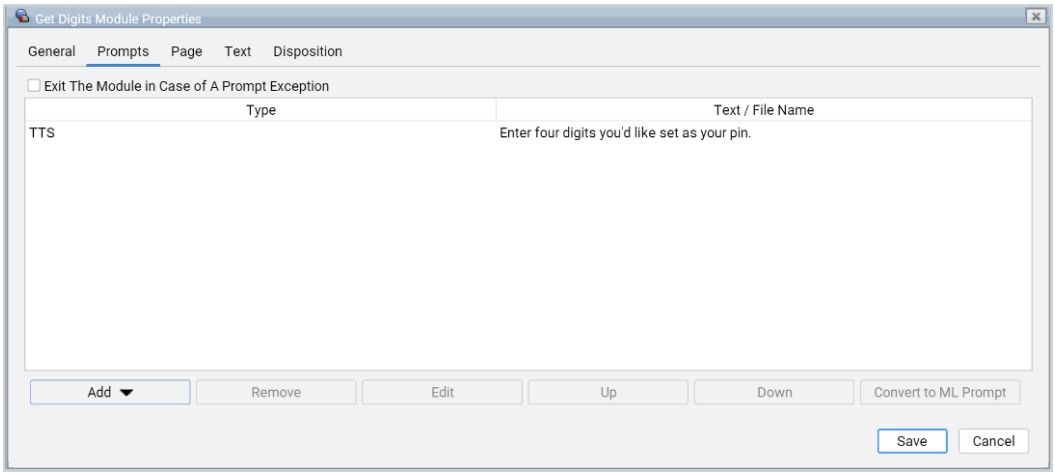


The **If** branch flows into the next Get Digits module to enable the caller to set their PIN. The **Else** branch goes to an alternate Get Digits module to gather the user PIN for verification into their voicemail account.

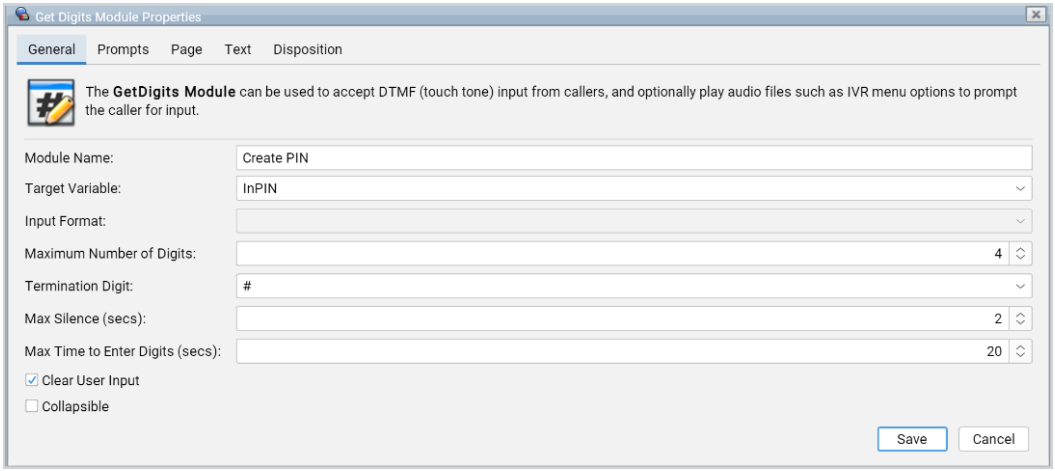


Get Digits Module

Use this module to prompt the caller to enter a 4-digit PIN.

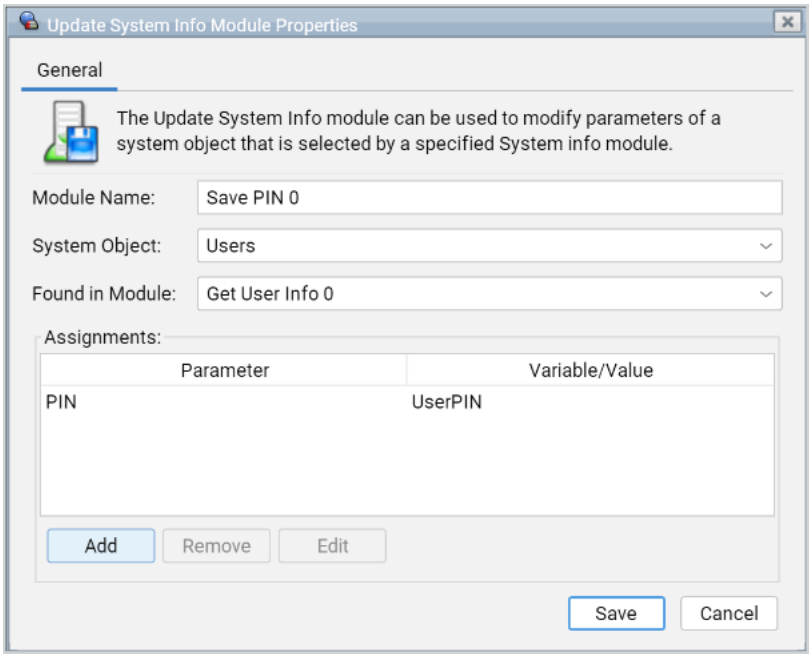


Store this new PIN in the `InPIN` variable.



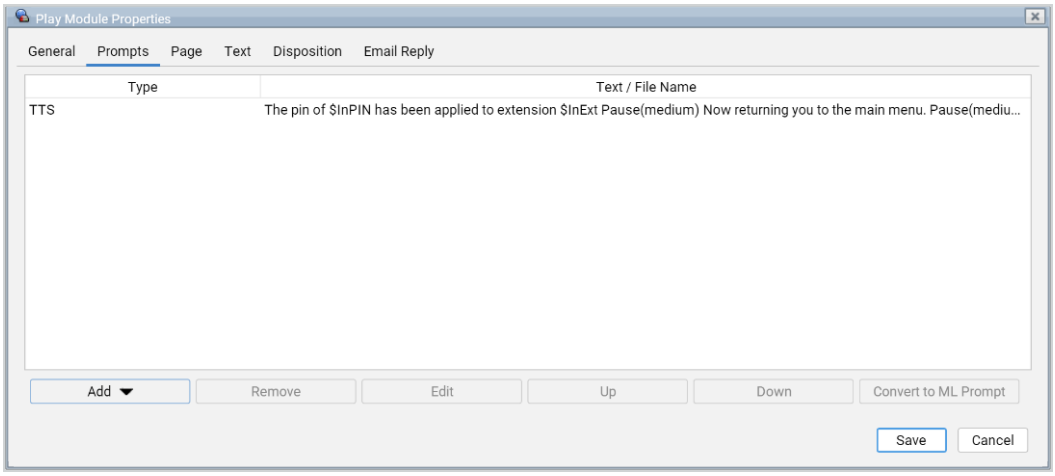
Update System Info Module

Use this module to save the PIN configured in the previous step to the user account associated with the user's extension.



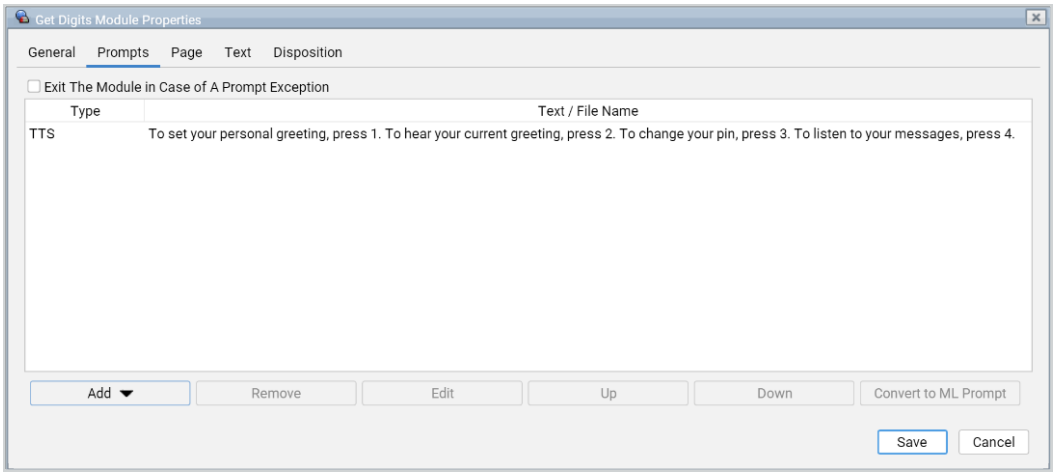
Play Module

Use this Play module to provide confirmation for the new PIN. In this module, the `InPIN` and `InExt` variables are used to provide accurate details.

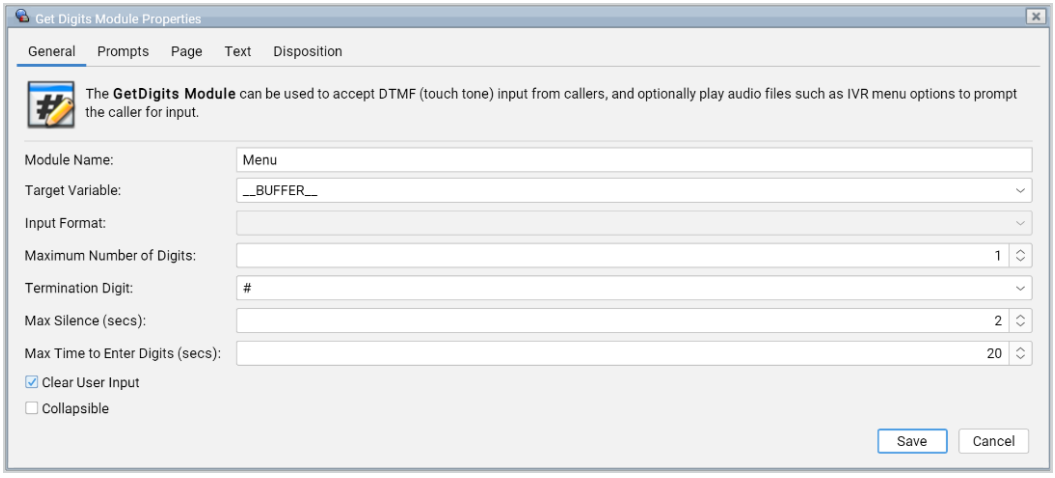


Get Digits Module

Use another Get Digits Module to present menu options to your caller. One option offered is to create a new voicemail greeting. This option is an obvious next step for new user configuration, but may also be used by existing users that want to change their current voicemail greeting.

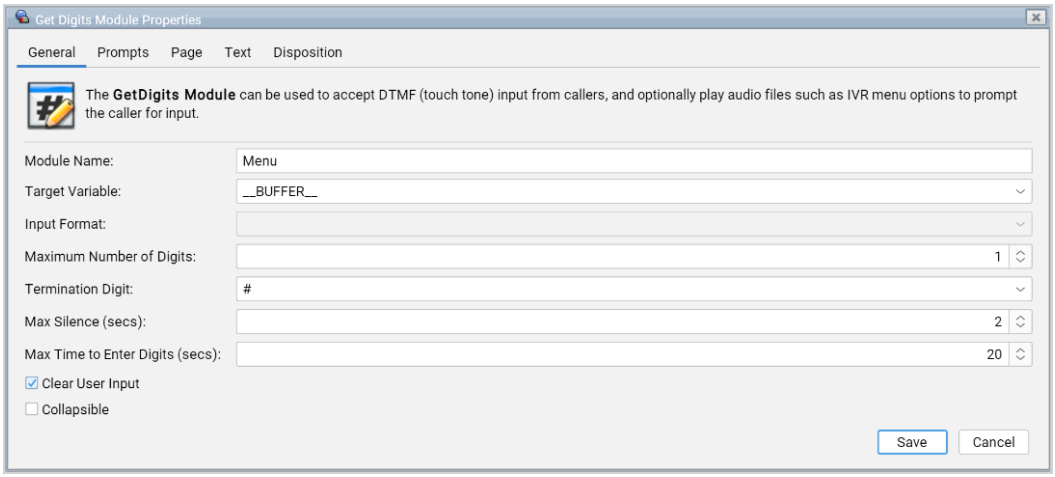


This module allows a maximum number of one digit to be used input and is configured to allow the caller up to 20 seconds to provide that menu selection choice.



Play Module

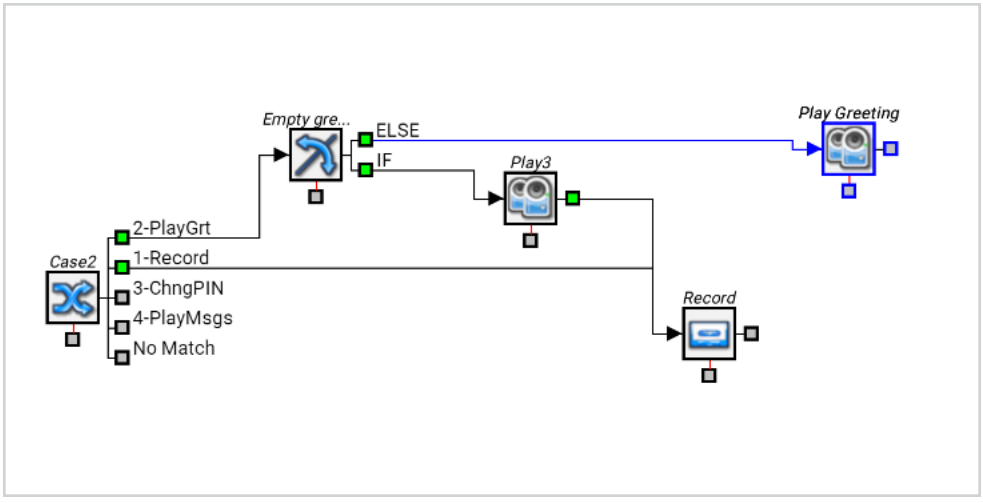
Use this module to confirm the recorded greeting to the caller.



Connect the output of this module to the input of the main menu options Case module (see **Case Module**).

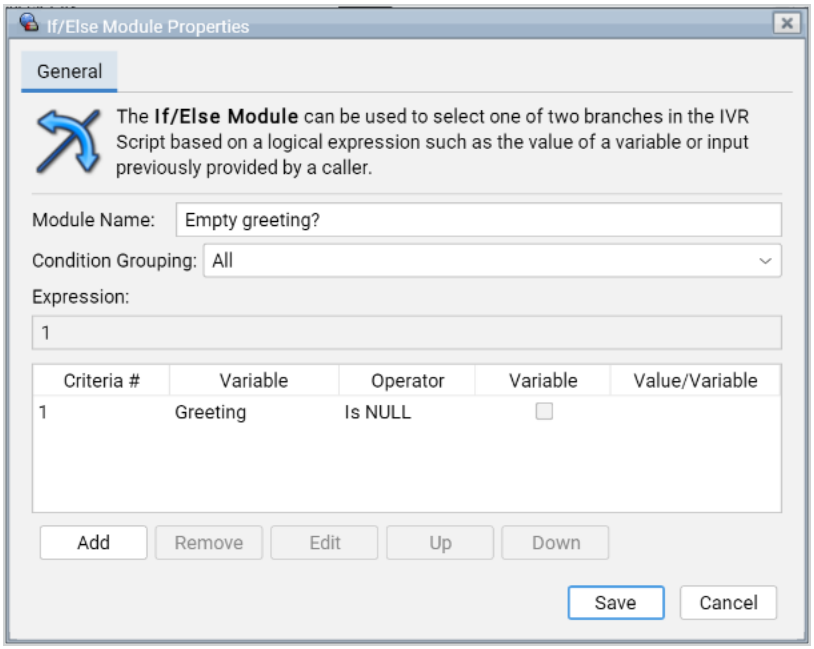
Playing the Current Voicemail Greeting

Another option from the main menu options case module enables the caller to listen to their voicemail greeting. In this branch, an If/Else module first checks the greeting variable for a value.



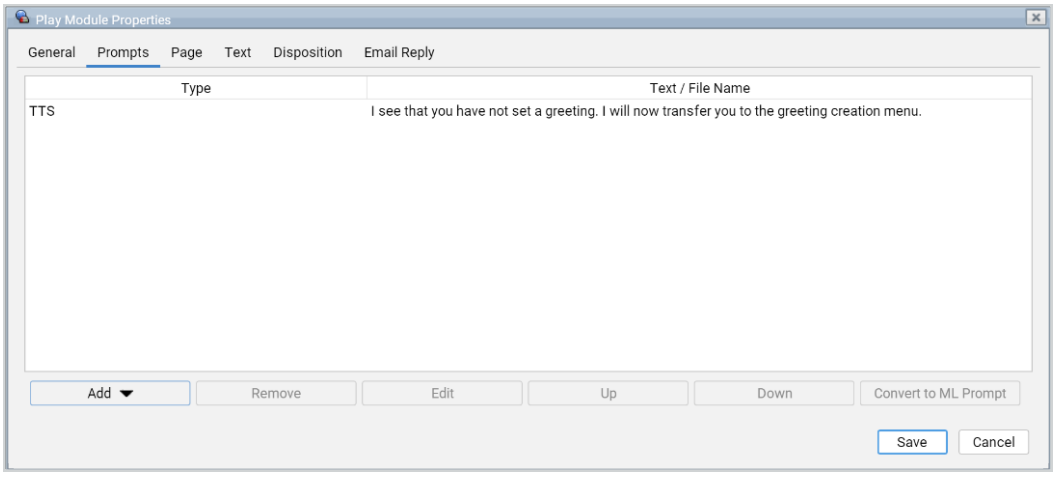
If/Else Module

Use this module to check the greeting variable to check for the presence of an existing voicemail greeting. A null value indicates no greeting and sends the caller to the Recording a Voicemail Greeting (see Recording a Voicemail Greeting) branch.



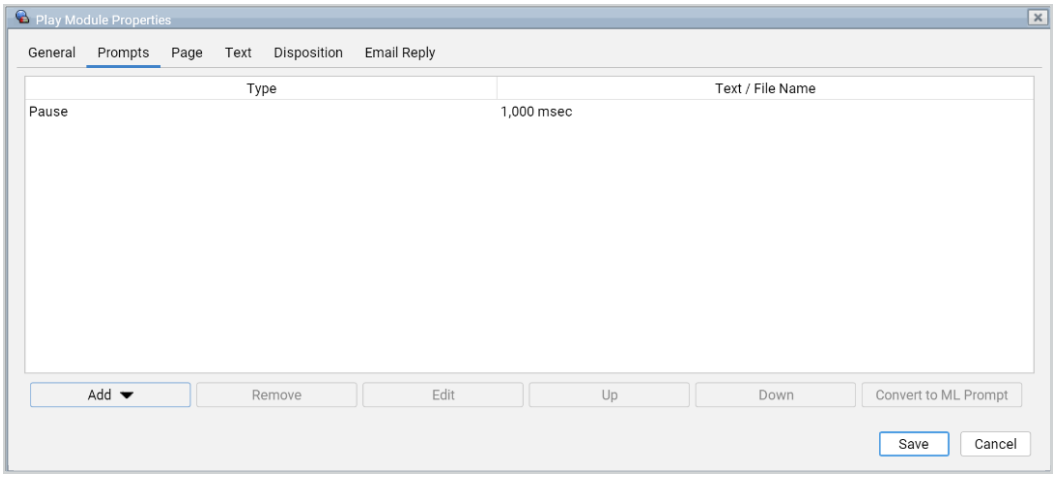
Play Module

Use this module to inform the caller that they are being redirected to create a voicemail greeting.



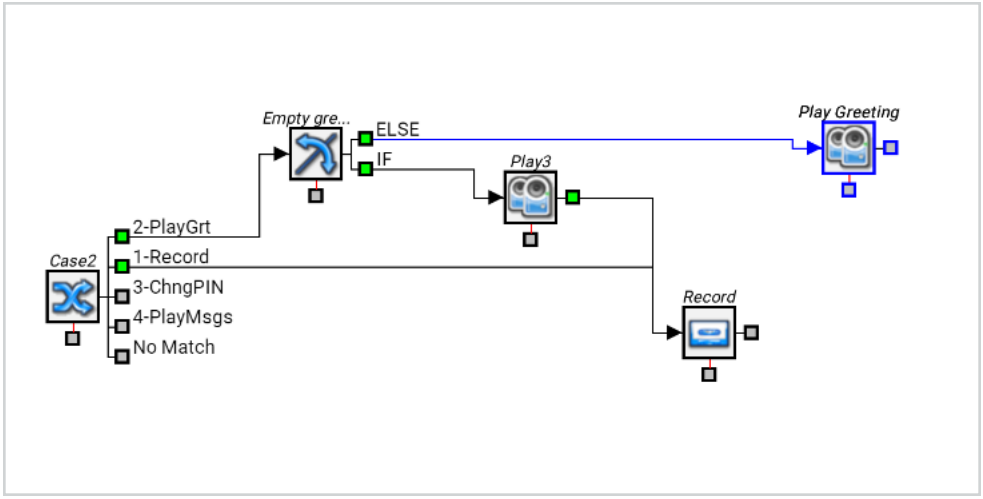
Play Greeting Module

Use this module to retrieve the Greeting variable and play the current voicemail greeting for this caller.



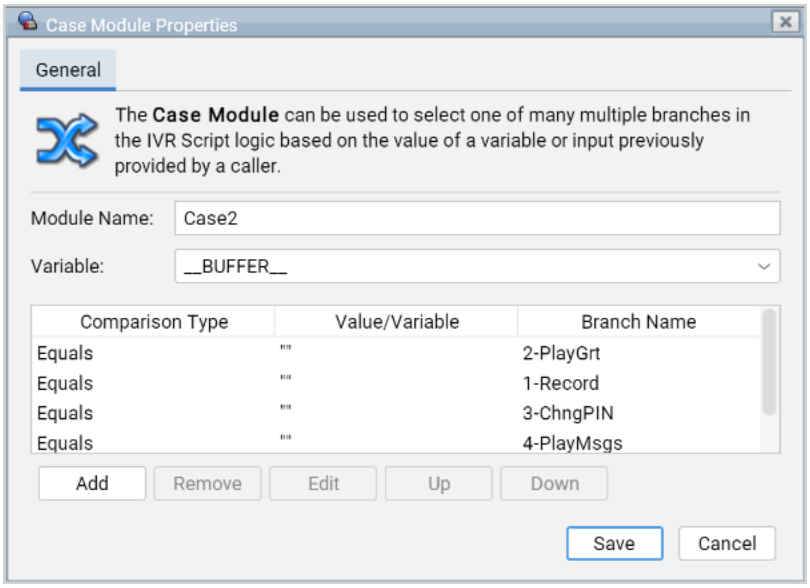
Recording a Voicemail Greeting

This branch of the script enables the recording and storage of a new voicemail greeting. This may be used for new voicemail configuration or for existing users that want to update their current greeting.



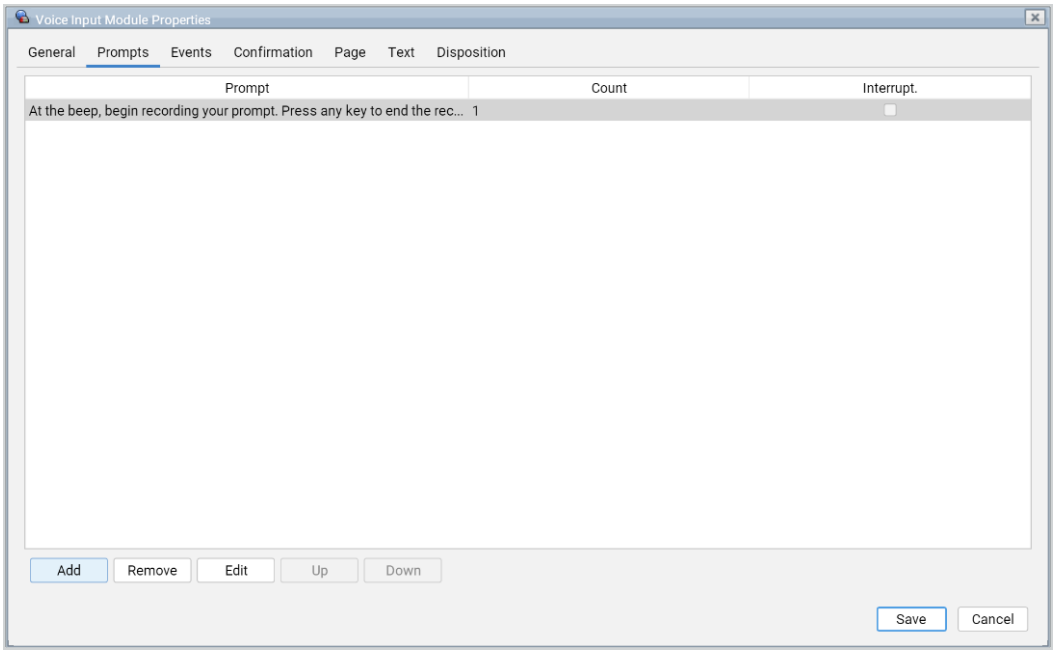
Case Module

Use this module as your main menu selection. Configure this module with menu selection options that direct the call flow through the caller's selection. For this branch of the script we will focus only on the record new greeting option. Other options will be detailed in the subsequent branches. This module stores the caller input in the buffer.

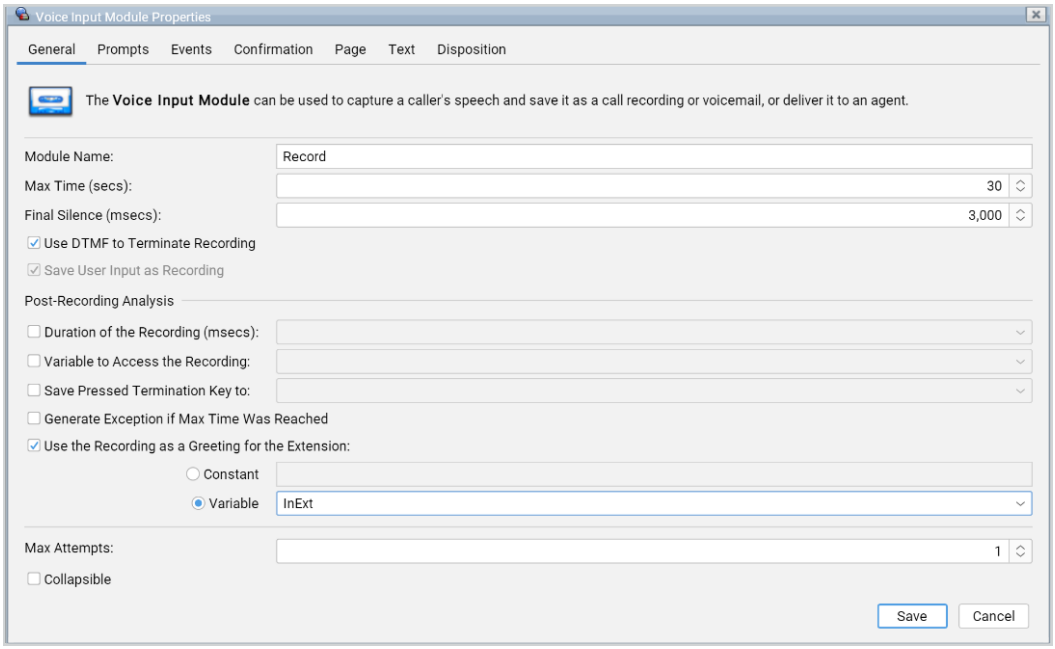


Voice Input Module

Use this module to prompt the caller to record a voicemail greeting.

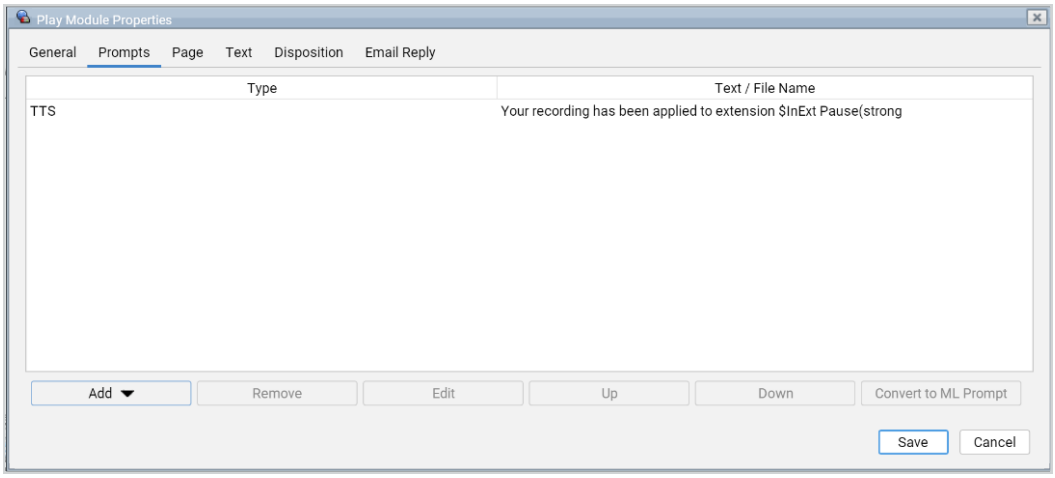


Configure this module to store the recording as a greeting for the user's extension.



Play Module

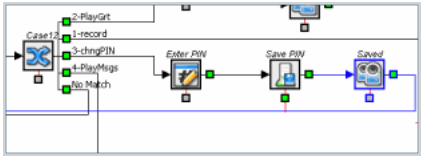
A final Play module confirms to the caller that the new greeting has been applied to their extension.



Connect the output of this module to the input of the main menu options Case module (see Case Module).

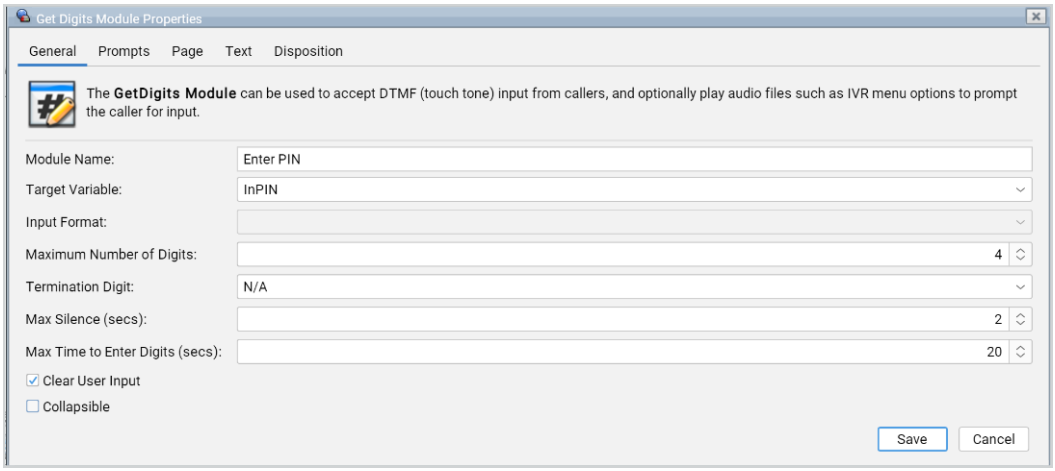
Changing an Existing Voicemail PIN

Use this branch to enable users to establish a new PIN for their voicemail account.



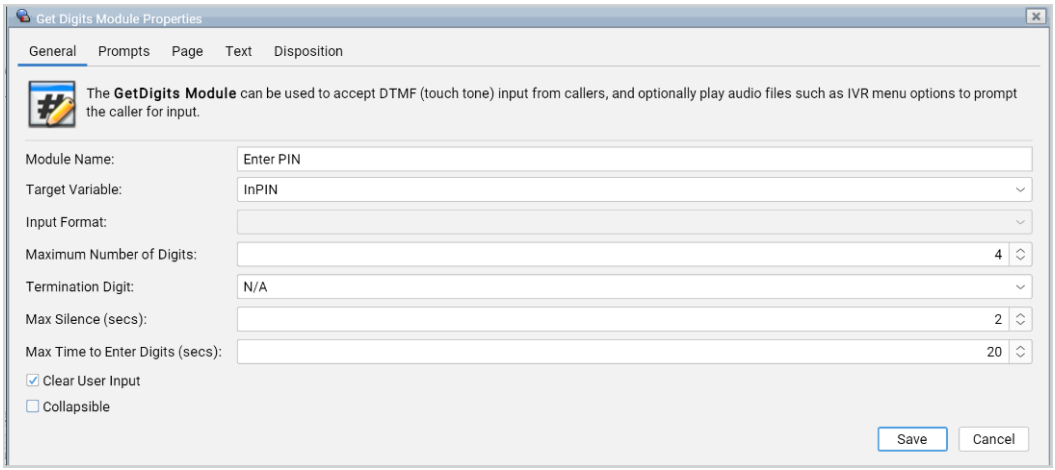
Get Digits Module

Configure this module to allow entry of a four-digit PIN to store in the InPIN variable. Connect the output of this module to the input of an Update System Info module to store the new PIN.



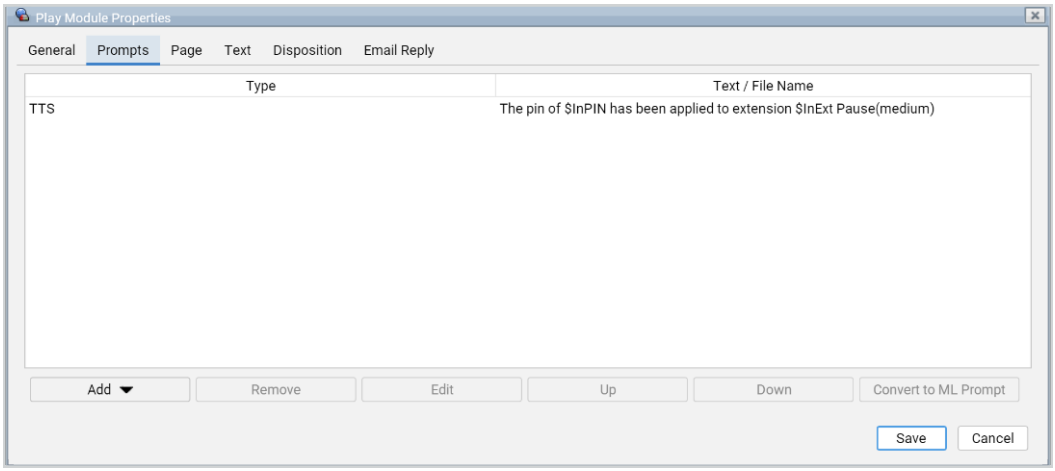
Update System Info Module

Configure this module to store the new PIN established in the previous module n the InPIN variable.



Play Module

Configure this module to provide verbal confirmation that the new PIN has been saved to the caller's extension.



Connect the output of this module to the input of the main menu options Case module (see Case Module).

Creating an Opt-Out IVR Script

This example creates a IVR script that allows call recipients to opt out of telemarketing calls. It only applies to outbound campaigns.

FCC regulations require that all call recipients can add their dialed phone number to the Do Not Call list (DNC) for all abandoned calls during a recorded telemarketing message. When a person answers the phone, a call is considered abandoned or dropped if an agent is not available within 2 seconds of the completed greeting.

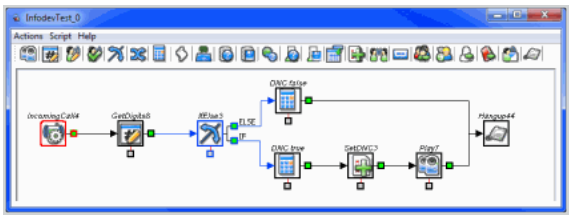
> **Note:** The abandon rate 2-second rule calculation option allows you to use a queue time of 2 seconds or higher to identify outbound calls as abandoned. The **Outbound Campaign Abandon Rate % 2 Seconds Rule** standard report shows these values.

According to FCC guideline FCC 03-153, the message played must provide this information:

- Caller: business, Entity, or individual on whose behalf the call is made.
- Purpose: Telemarketing
- Phone number: To enable call recipients to place their number on the DNC list.

- Opt-out process: Phone key or IVR option that enables call recipients to add their number automatically to the DNC list before ending the call.

This example describes how to create this IVR script:

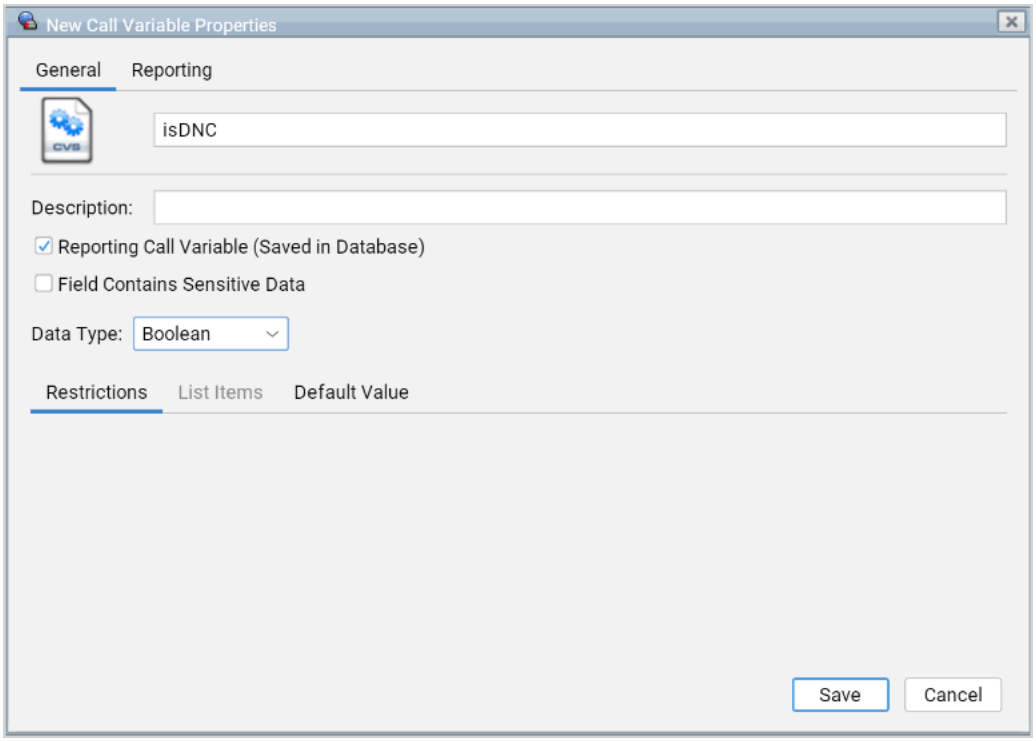


Creating a Variable to Track Calls and Numbers Added to the DNC List
Creating the IVR Script
Configuring the Outbound Campaign Properties
Testing Your IVR Script and Outbound Campaign

Creating a Variable to Track Calls and Numbers Added to the DNC List

This variable may contain either a boolean or string value. For example, in your Call Variables folder, create the boolean variable isDNC. When true, the variable tracks the DNIS added to the DNC list.

To include the variable in call log reports, check **Reporting Call Variable (Saved in Database)**. Under the Reporting tab, associate the variable with the disposition named Abandon.



Creating the IVR Script

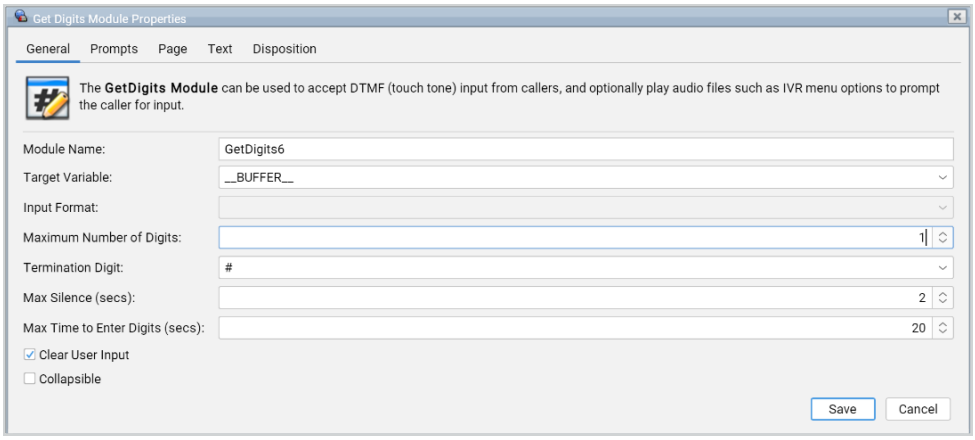
The IVR script that you link to the outbound campaign must contain these elements:

- Get Digits Module
- If/Else Module
- Set Variable Modules
- Set DNC Module
- Play Module
- Hangup Modules

Get Digits Module

This module routes calls according to the digits that it receives. In this case, a single digit is sufficient.

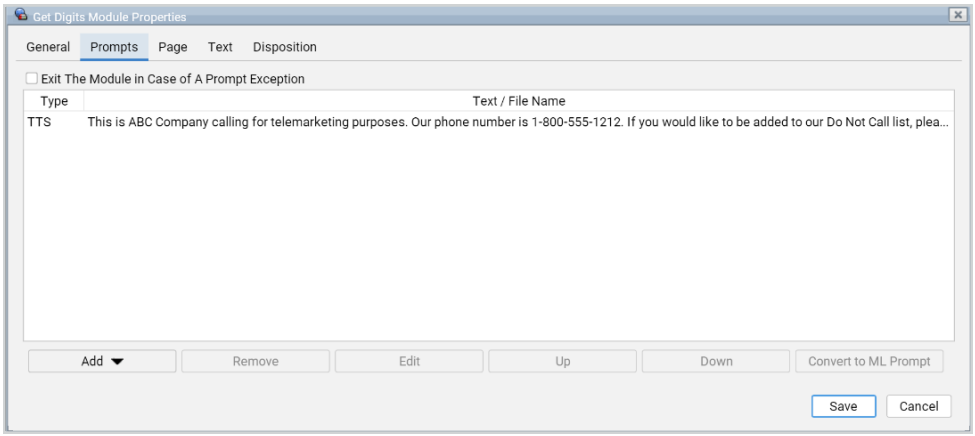
1 In the General tab, set the Maximum Number of Digits to 1.



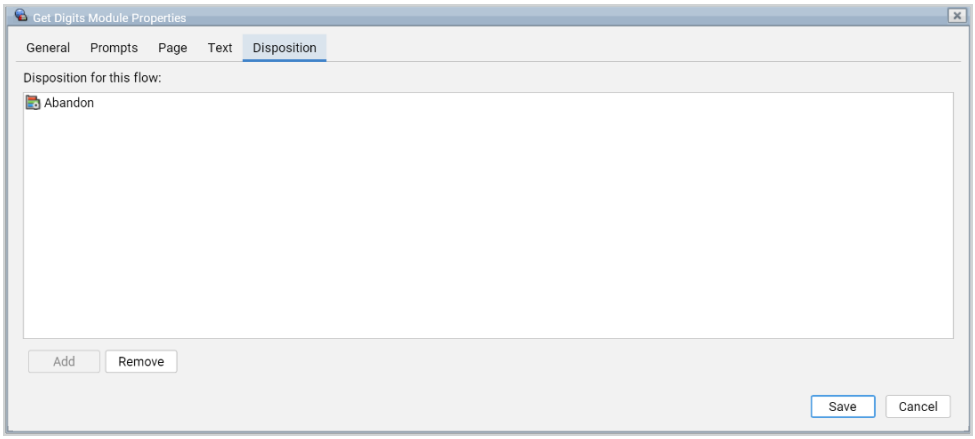
2 In the Prompts tab, add a prompt to describe the call to recipients and the option to add their number to the DNC list.

For example, you can use a recorded prompt or a TTS prompt with the following text:

This is ABC Company calling for telemarketing purposes. Our phone number is 1-800-555-1212. If you would like to be added to our Do Not Call list, please press 9 now.

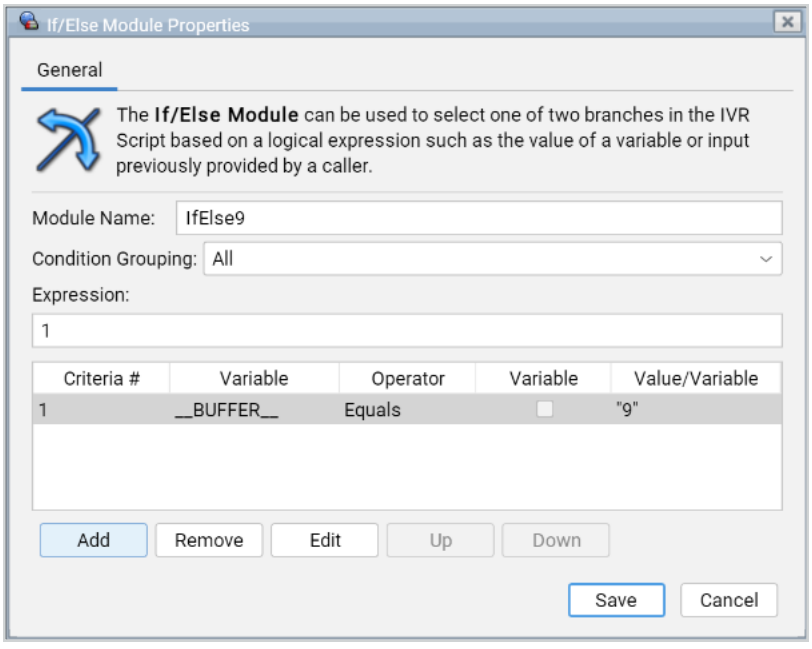


3 On the Disposition tab, set the Disposition to Abandon.



If/Else Module

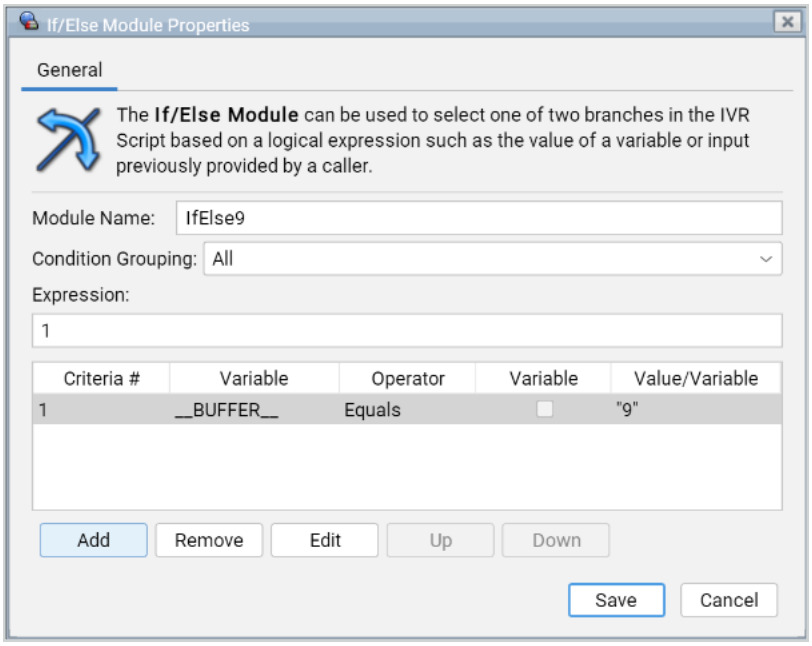
This module processes the response from the call recipient. Configure the if (true) branch as follows: `BUFFER = 9`. Later you will use the Set DNC module to add the called number to the DNC list. In all other cases, the number is not added to the DNC list.



Set Variable Modules

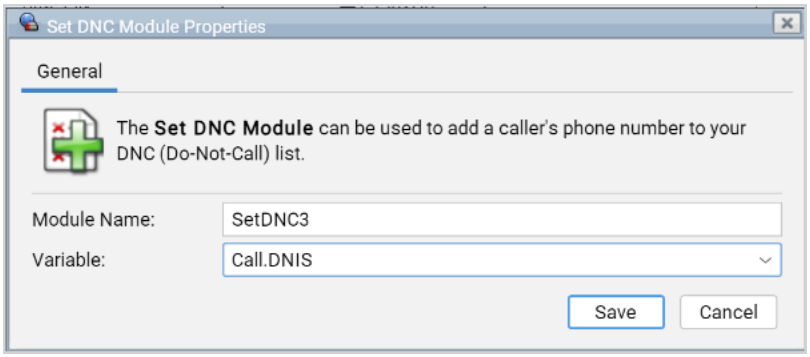
Connect the If/Else branches to the Set Variable module as follows:

- If branch to DNCTrue
- Else branch to DNCFalse



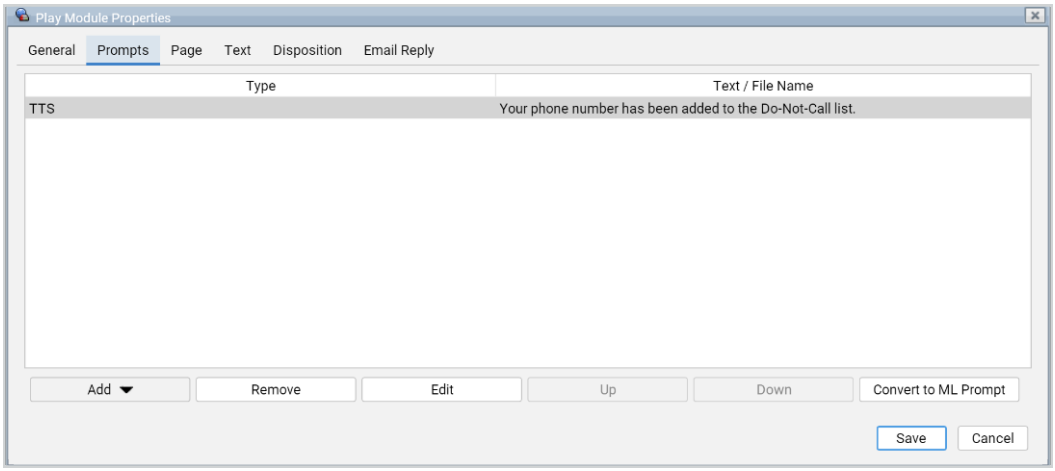
Set DNC Module

Add the Set DNC module to the If branch and use the Call.DNIS variable value.



Play Module

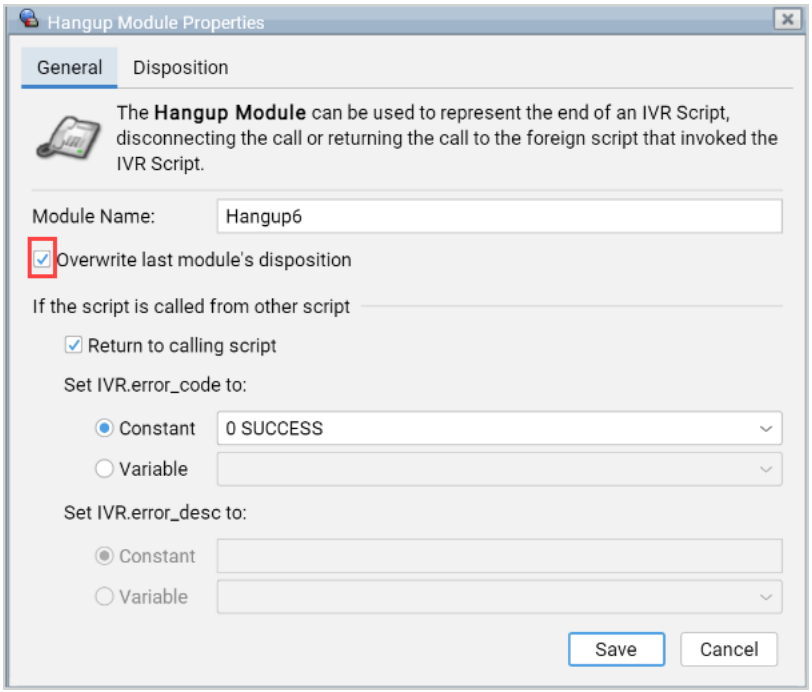
Use this module to confirm to call recipients that you placed their phone number on the DNC list. Set the disposition to Abandon.



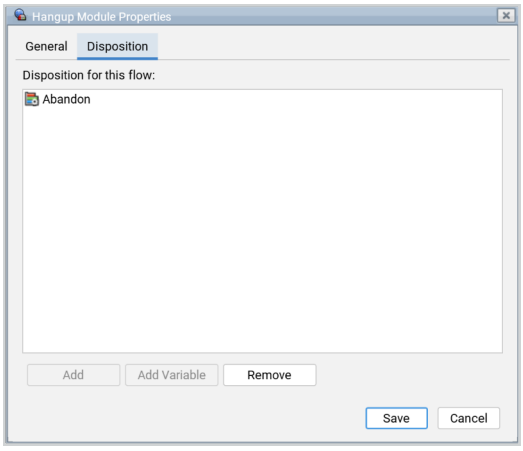
Hangup Modules

Configure the Hangup module in the main workspace and the module in the lower pane in the same manner. This last module is used if the call is dropped before the Get Digits module.

1 In the General tab, check **Overwrite last module's disposition** to activate the **Disposition** tab.

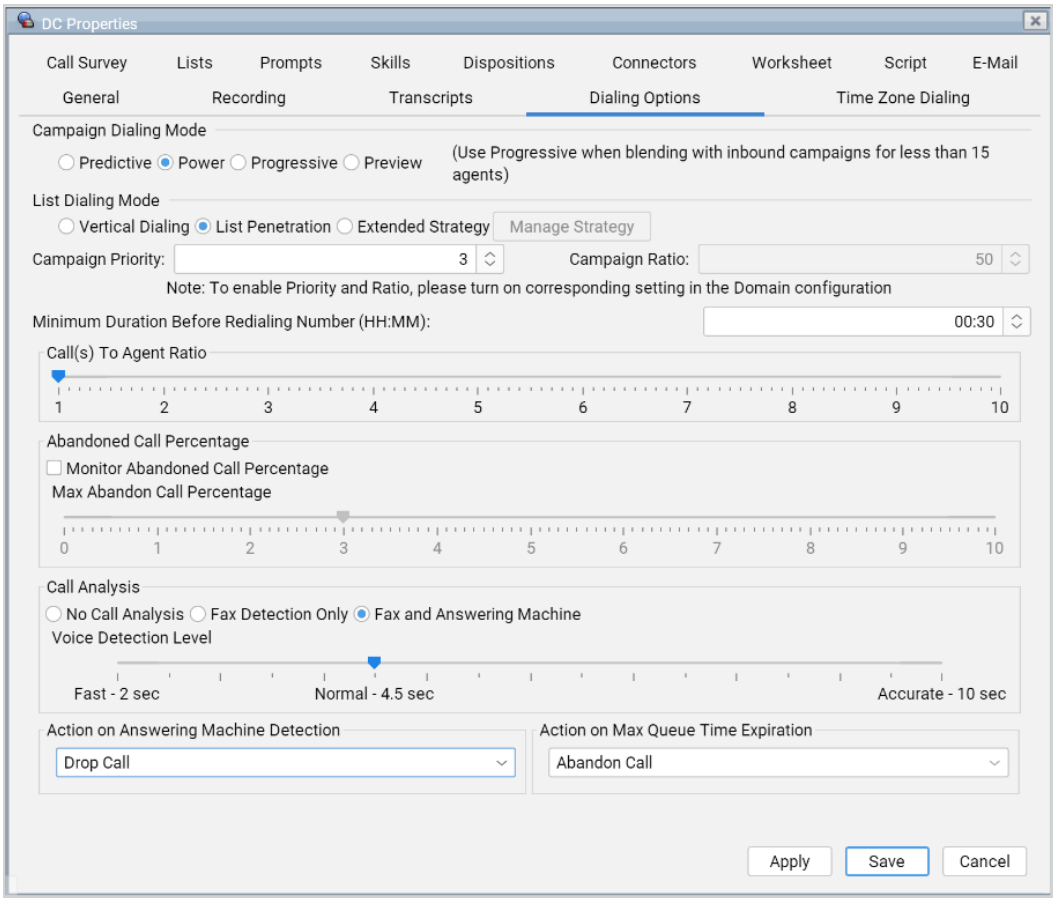


2 In the Disposition tab, set the disposition to **Abandon**.



Configuring the Outbound Campaign Properties

The outbound campaign properties must comply with FCC regulations.



In the General settings tab, set the Max Queue Time to 1 second. In the Dialing Options tab, set these options:

- **Dialing Mode**: Add the opt-out feature to these campaign dialing modes:
  - Predictive
  - Power
  - Progressive

  Note

  The preview mode gives the call to the agent first so the agent can add the caller to the DNC list.

- **Dropped Call Percentage**: Check **Monitor Dropped Call Percentage** and set the slider appropriately to comply with FCC regulations, for example: 3%.

- **Action on Max Queue Timeout Expiration**: Select the IVR script that you created in the previous section.

Testing Your IVR Script and Outbound Campaign

To test your outbound campaign, at least one agent with the correct skill must be logged in with the status **Ready for Call**. If no agent is logged in, calls are not dialed.

1. Start your campaign.

   All numbers in the list are dialed, including a number that will reach you.

2. Listen to the prompt, press 9, and listen the confirmation message.

   The number is added to the DNC list.

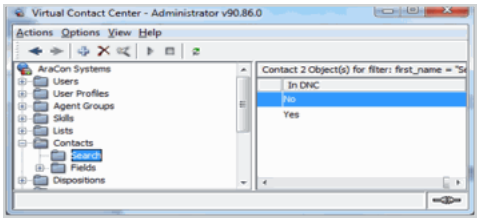
3. Restart the campaign.

4. Right-click and select **Reset List Position** or another resetting actions.

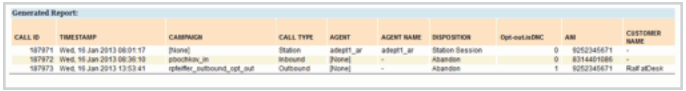
   The number assigned to the DNC is not called.

5. Validate the Results.

   - In the **Contacts > Search** folder, find the contact. In the In DNC column, the value is **Yes** as shown below:

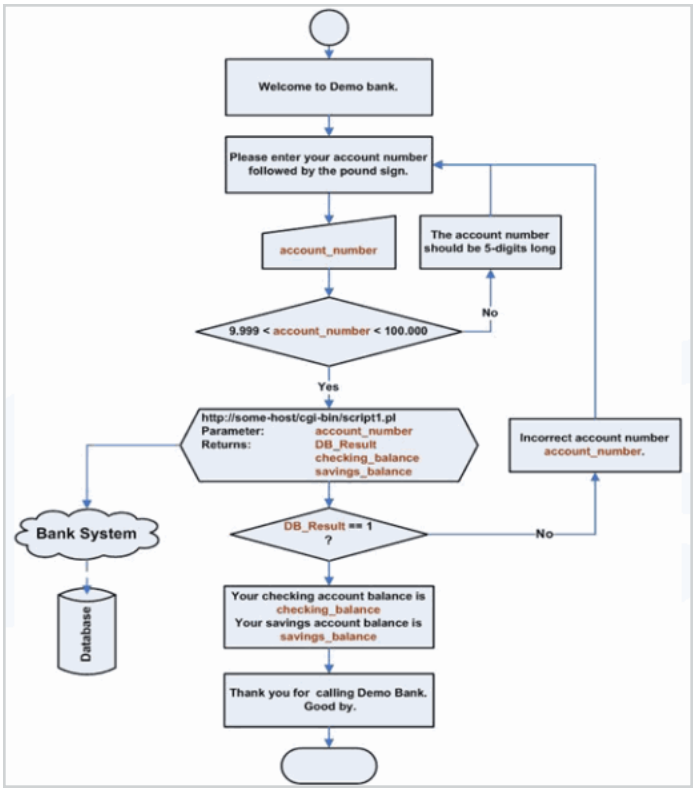
     

   - The variable appears in the Call Log report. The disposition value for the call is Abandon as shown below:

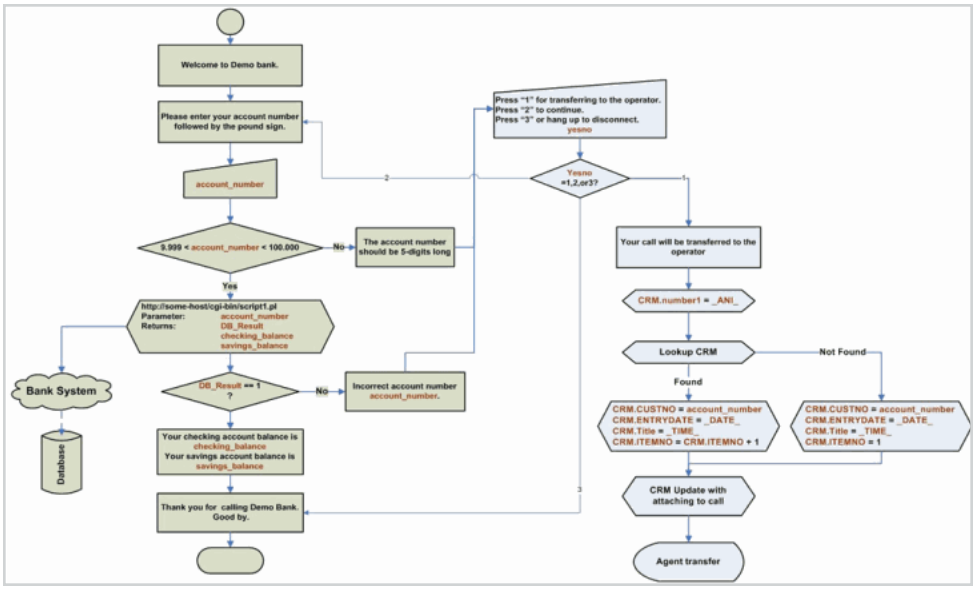
     

Flowcharts

This section contains flowcharts for complex IVR scripts. Before creating an IVR, always map your script in this manner.



More complex example:


Welcome to Demo bank.
Please enter your account number followed by the pound sign.
account_number
9.999 < account_number < 100.000
No
The account number should be 5-digits long
Yes
http://some-host/cgi-bin/script1.pl
Parameter: account_number
Returns: DB_Result
checking_balance
savings_balance
Bank System
Database
DB_Result == 1 ?
No
Incorrect account number account_number.
Your checking account balance is checking_balance
Your savings account balance is savings_balance
Thank you for calling Demo Bank. Good by.
Press "1" for transferring to the operator.
Press "2" to continue.
Press "3" or hang up to disconnect.
yesno
Yesno =1,2,or3?
2
1
3
Your call will be transferred to the operator
CRM.number1 = _ANI_
Lookup CRM
Not Found
Found
CRM.CUSTNO = account_number
CRM.ENTRYDATE = _DATE_
CRM.Title = _TIME_
CRM.ITEMNO = CRM.ITEMNO + 1
CRM.CUSTNO = account_number
CRM.ENTRYDATE = _DATE_
CRM.Title = _TIME_
CRM.ITEMNO = 1
CRM Update with attaching to call
Agent transfer

Error Messages

This table contains the errors that can occur for each module.

Code	Condition	Description	Modules
		No records selected in the SysInfoModule.	Update System Info
		System Object and Found in Module are incompatible.	Update System Info
		Found in Module is not populated.	Update System Info
	INCORRECT_DATA	Variables contain incorrect values.	Update System Info
1001	SYSTEM_ERR	System error	
1002	TTS_ERROR	TTS error	
1003	TTS_OUT_OF_ LICENSE	TTS or ASR out of licenses	
1050	INVALID_USER_ INPUT	Invalid user input	Get Digits
1051	NO_USER_INPUT	No user input	Get Digits
1100	VARIABLE_ERROR	Incorrect operation with variable	Set Variable
1101	INVALID_RESPONSE	Invalid response from server	Query
1102	MALFORMED_URL	Malformed URL	Query
1103	FAILED_TO_ CONNECT	Failed to connect to server	Query
1104	REQUEST_TOO_BIG	Size of request to Web server exceeds limit	Query
1105	AUTH_PROFILE_ NOT_FOUND	Auth profile does not exist	Query
1106	JS_EXECUTION_ TIMEOUT	JS function execution timeout	Query
1107	SECURE_VARS_IN_ URL_ENCODED_ PARAMS	Secure variables are used in URL encoded parameters	Query
1108	SECURE_VARS_IN_	HTTP requests cannot use secure	Query

Code	Condition	Description	Modules
	HTTP_REQUEST	variables	
1150	CANT_ASSIGN_ ARGUMENTS	Cannot assign arguments while calling foreign script	Foreign Script
1200	CRM_RECORD_NOT_ FOUND	Contact record does not exist	Lookup Contact Record
1201	CRM_NOT_UNIQUE	More than one contact record found	Lookup Contact Record
1202	CRM_IS_NOT_ SELECTED	Contact record not selected	Contact Update
1203	CRM_ADVANCED_ CRITERIA_TOO_WIDE	Result contains more than 100 records	Lookup Contact Record
1204	DB_REQUEST_ TIMEDOUT	Database request is timed out	Lookup Contact Record
1250	CRM_RECORD_ ALREADY_EXISTS	Cannot add contact record because it already exists in the database	Contact Update
1251	CRM_FIELD_VALUE_ INCORRECT	Incorrect value of contact field	Contact Update
1300	INVALID_VALUE_IN_ CONDITION	Failed to calculate condition because of invalid arguments	Case, If/Else
1400	ANSMACH_ UNDEFINED	Cannot determine answer machine state	Answering Machine
1401	FAX_DETECTED	Fax detected	Answering Machine
1500	INVALID_NUMBER	Invalid number	Set DNC, Third Party Transfer
1501	NO_CHANNEL_ AVAILABLE	No phone line available to make a call	Set DNC, Third Party Transfer
1600	PROMPT_DOESNOT_ EXIST	Invalid prompt name	Play
1601	ANSWERMACHINE_ DETECTION_IN_ PROGRESS	Cannot perform operation while answer machine detection is in progress	Play
1700	INVALID_AGENT_ OR_EXTENSION	User with specified agent name or extension was not found, agent inactive, or user does not have agent role.	Agent/Voice Mail Transfer
1701	TRANSFER_TO_	Transfer to campaign failed. Check	Agent/Voicemail Transfer

Code	Condition	Description	Modules
	CAMPAIGN_FAILED	that the campaign is active.	
1800	ITERATOR_INDEX_ OUT_OF_RANGE	Iterator index is out of range	Iterator
1801	ARRAY_IS_EMPTY_ OR_DOES_NOT_ EXIST	Array is empty or does not exist	Iterator
1900	INPUT_NOT_ CONFIRMED_OR_ NO_INPUT	User has not entered or confirmed the input	Input, Voice Input
1901	ATTEMPTS_MAX_ NUMBER_REACHED	Maximum number of attempts is reached	Input, Voice Input
1950	MAX_ SIMULTANEOUS_ RECORDINGS_ REACHED	Maximum number of simultaneous recording reached	Voice Input
2000	NO_CHOICES_TO_ CHOOSE	No available choices or referenced data is not initialized	Menu
2100	NO_RECORDS	SystemInfo for given conditions does not exist	System Info
2101	SYSTEM_INFO_NOT_ UNIQ	More than one System Info record found	System Info
2102	WEB_ANALYTICS_ NOT_ALLOWED	Web analytics is not allowed	System Info
2200	DATA_RESTRICTION_ VIOLATION	Data type or restriction violation	Agent/Voicemail Transfer, Answering Machine, Case, Conference, Contact Update, Extension Transfer, Foreign Script, Get Digits, Hangup, If/Else, Input, Iterator, Lookup Contact Record, Menu, Play, Query, Set DNC, Set Variable, Skill transfer, System Info, Third Party Transfer, Voice Input, Voicemail Transfer
2201	INVALID_ CAMPAIGN_NAME_ OR_EXTENSION	Invalid campaign name or extensions	System Info

Code	Condition	Description	Modules
2300	INVALID_SKILL	Skill does not exist. Appears if the list of skills returned in a System Info module is empty.	Iterator, Skill transfer
2400	INCORRECT_DATA_ TO_UPDATE	System update is failed due to incorrect data	System Update
2500	NOT_APPLICABLE_ MODULE	The module cannot be executed in current media	Agent/Voicemail Transfer, Conference, Extension Transfer, IVA Transfer, Third Party Transfer, Voicemail Transfer
2600	LANGUAGE_NOT_ EXIST	Language does not exist in this script	Language
2601	VARIABLE_NOT_ FOUND	Variable is not found	Language
2602	URI_INVALID	Incorrect reference to grammar file	Language
2603	GRAMMAR_INVALID	Incorrect content of grammar file	Language
2604	CRM_IS_OBSOLETE	Contact Record is obsolete	Contact Update
2700	FAILED_TO_GET_ DATA_TO_SEND_TO_ 3RD_PARTY	Failed to get data to send to third party	Third Party Transfer
2701	TIMEOUT_3RD_ PARTY_CALL	Call duration on third party side exceeds max timeout	Third Party Transfer
2702	FAILED_MAKE_3RD_ PARTY_CALL	Failed to make third party call	Third Party Transfer
2703	FAILED_TRANSMIT_ DATA_TO_3RD_ PARTY	Failed to transmit data to third party	Third Party Transfer
2704	FAILED_RECEIVE_ DATA_FROM_3RD_ PARTY	Failed to receive data from third party	Third Party Transfer
2705	THIRD_PARTY_ DESCENDANT_NOT_ DEFINED	Third party transfer does not have a descendant	Third Party Transfer
2706	RINGING_TIMEOUT	No answer during ringing timeout	Third Party Transfer
2800	FAILED_TO_GET_ DATA_TO_SEND_TO_	Failed to get data to send to IVA	IVA Transfer

Code	Condition	Description	Modules
	IVA		
2801	TIMEOUT_IVA_CALL	Call duration on IVA side exceeds max timeout	IVA Transfer
2802	FAILED_MAKE_IVA_CALL	Failed to make IVA call	IVA Transfer
2803	IVA_DESCENDANT_NOT_DEFINED	IVA transfer doesn't have descendant	IVA Transfer
91	CUSTOM_ERR_1		
92	CUSTOM_ERR_2		
93	CUSTOM_ERR_3		
94	CUSTOM_ERR_4		
95	CUSTOM_ERR_5		

Digital Engagement

Administrator's Guide

October 2025

Learn how to use the Digital Engagement Administrator's Console to offer digital engagement interactions to your customers.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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What's New

This table lists the changes made in the last six releases of this document:

Release	Change	Topic
Oct 2025	Added new Dynamic Web Messenger content.	Dynamic Web Messenger in Admin Console
Jun 2025	Audio option has been relocated for improved accessibility.	
May 2025	Added new Consent Groups content.	Consent Groups
Jan 2025	Added new 10DLC content.	10DLC Vetting Tips and Guidelines
Dec 2024	Added new Custom CSS and SMS Surcharge Content.	SMS Surcharges
Nov 2024	Added new Markdown and Cards content.	Markdown

Understanding Digital Channels

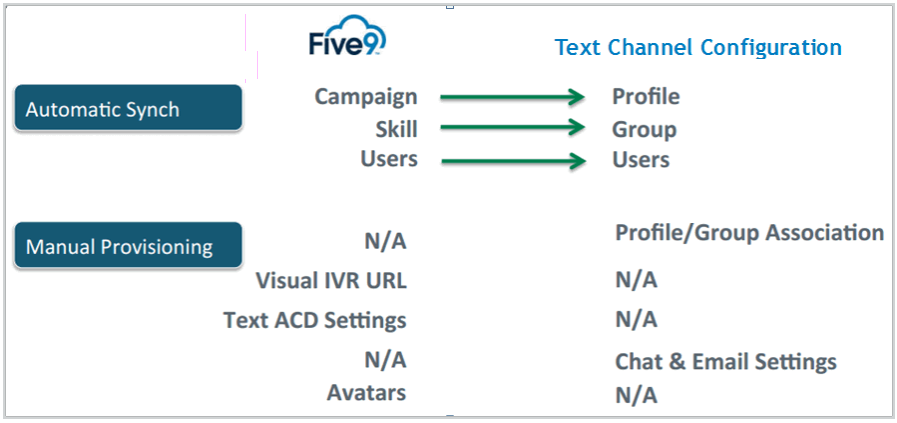
Agents who are assigned digital channel skills can interact with customers through email, chat, and social media channels. To configure and enable digital channel features, you use the VCC Administrator application and the Digital Engagement Administrator's Console.

Before configuring digital channels, ensure that Five9 has enabled these features in your VCC domain.

Synchronization Between the VCC and the Digital Engagement Console
Character Limits for Domain Components
Reference Files for the Consoles and Proactive Chat
Priority of Text Interactions

Synchronization Between the VCC and the Digital Engagement Console

This figure shows how components of the VCC and Digital Engagement Console are synchronized.



Always modify campaigns, skill groups, and users only in the VCC Administrator's Application. Never do so in the Digital Engagement Console because changes in the console are overwritten when changes are made in the VCC.

In the Digital Engagement Administrator's Console, modify the components that are not synchronized from the VCC to the digital engagement channel server.

Character Limits for Domain Components

If you use digital engagement channels or plan to do so in the future, you must adhere to character limitations when assigning names to campaign components. Otherwise, the digital engagement server does not communicate with the VCC server.

Component	Characters
Digital Engagement Profile and VCC Campaign	255
Digital Engagement Group and VCC Skill	255
User (also email address)	50
Password	64
First Name	32
Last Name	32

Reference Files for the Consoles and Proactive Chat

The Five9-Consoles-and-Proactive-Chat-Examples.zip package that contains examples and URLs for the consoles and proactive chat. After you download the archive, follow the configuration instructions in the respective chapter.

Examples

This archive contains files, icons, and scripts that you can use as templates to implement the chat and email consoles, and Proactive Chat in your web site:

Root of the archive	Example JavaScript configuration file: `config.js`.
Chat	• CSS: Contains the default look and feel. You may customize as needed. • Fields: How to customize the chat console. • Frame: How to customize the console frame and embedded behavior in an `<iframe>` tag. • Logo: How to add a custom logo. • SimpleChat: How to add the chat console in a multi-page web site. • Theme: How to use a custom theme. • Usability: How to customize print, sound, and font options.
Email	Example email console in a multi-page web site.
Icons	Example icons that you can use to customize the consoles.
Proactive Chat	Example integration for triggered chat prompts, including a default CSS, a JavaScript configuration file, and options to customize print, sound, and font options.

Resources

This resource is used by the consoles:

Social Widget JavaScript	`https://app.five9.com/consoles/SocialWidget/five9-social-widget.min.js`

These resources are used by proactive chat:

Chat Console	`https://app.five9.com/consoles/ChatConsole/index.html`
Proactive Chat JavaScript	`https://app.five9.com/consoles/ProactiveChat/javascripts/five9proactivechat.min.js`

Chat and Email Console URLs

These demo URLs are available for Plus applications and Java-based clients:

Plus Applications	
Chat URL	`https://app.five9.com/consoles/ChatConsole/ChatDemo.html?tenant= <tenantname>&profiles=<profileName>`
Email URL	`https://app.five9.com/consoles/EmailConsole/EmailDemo.html?tenant= <tenantname>&profiles=<profileName>`

Java-Based Clients	
Chat URL	`https://sococare.five9.com/SoCoCare/ChatConsole/ChatDemo.html?tenant= <tenantname>&profiles=<profileName>`
Email URL	`https://sococare.five9.com/SoCoCare/EmailConsole/EmailDemo.html?tenant= <tenantname>&profiles=<profileName>`

Priority of Text Interactions

The Automatic Interaction Distributor (AID) routes incoming text interactions to available agents based on the priority assigned to each interaction. Priorities of HIGH, MEDIUM, or LOW are determined by business rules, language used in the text of the interaction, and waiting time in the media queue.

Note

Voice interactions are always prioritized and distributed before chat interactions. When multiple voice and chat interactions are in queue, the chats will not be distributed to ready agents for voice and text until all voice interactions in that queue are engaged.

Agent skill priority can only be set for calls and doesn't affect how chats will be distributed. Even though the initial priority for calls and chat can be set, this doesn't overrule that we always prioritize calls

You can influence the priority of text interactions by setting waiting times, or *starvation* periods: after a number of seconds, the priority of a text interaction is changed from 3 or 2 to 1 so that the AID routes it first.

This feature is located under **Profiles > Information > Increase email priority after (seconds)**. Configure each profile separately. To give priority to a profile, set the starvation periods to a low number.

Aligning VCC and SCC Priorities. Digital Engagement priorities range from 1-100, with 100 being the highest priority. These values are set in the Priority tab of the IVR Skill Transfer module and align with SCC priorities of one through three, with one being the highest priority. These priorities align as follows:

- VCC priority 61-100 = SCC priority 1
- VCC priority 31-60 = SCC priority 2
- VCC priority 0-30 = SCC priority 3

To avoid starvation, set priorities to VCC 100/SCC 1, VCC 99/SCC 2, VCC 98/SCC 3 for existing items in queue.

Profiles with varying priority:

Profile	Default	High Priority	Medium Priority	Low Priority
Email	300 seconds	5 seconds	200 seconds	400 seconds
Chat	30 seconds	1 second	15 seconds	40 seconds
Social	300 seconds	5 seconds	200 seconds	400 seconds

To test routing priority, follow these steps:

1. Ensure that agents are set to AID mode for the text items.
2. Send email, chat, and social interactions with low priority first, followed by medium priority, and finally high priority.

   The high priority interactions are routed before the medium priority interactions, which are routed before the low priority interactions.

Business Rules and Interaction Processing

By default, Agent Desktop Plus assigns incoming interactions the MEDIUM priority and routes items to agents on a first-in-first-out (FIFO) basis. Any business rules that you define to override the default FIFO round-robin routing algorithm take precedence over the system defaults. For example, you might define business rules that a HIGH priority to items coming into the queue from a certain Facebook fan page; those interactions

will be processed first, and might even be sent to agents belonging to a specific skill group.

In addition to business rules, you set *starvation* periods to prevent items of MEDIUM and LOW priorities don't wait endlessly in the media queue. A starvation period is the period of time an item waits for some action such as, assignment to an agent or transfer of an item to a different agent or returning the item to the media queue.

As the NLP engine learns to recognize terms used in text interactions for a certain profile, it might also assign priorities to incoming items as they enter the queue.

Priority Updates for Items in the Media Queue

After an item enters the media queue, the priority can be based on activity, rules, and waiting times. These events can increase the priority:

- An item reaches the maximum waiting time for a specified starvation period.
- An item is transferred to another agent.
- An item is returned to the media queue because it was not accepted by an agent before the time-out.

When an item is returned to the media queue, the priority is automatically raised to the next priority level. Starvation settings apply.

Digital in Admin Console

This content guides you through the process of migrating from SCC Admin to Admin Console. The migration introduces several key features designed to enhance administrative capabilities and streamline management processes.

Features:

- Migrate Existing SCC Admin Data: Seamlessly transfer all existing SCC admin data to the new Admin Console, ensuring a smooth transition with minimal disruption.
- Configure Digital Entities: Admin Console now allows you to configure various digital entities including email, chat, and global digital settings, providing a centralized platform for digital management.
- New Email Authentication Method: Introduce an additional user authentication method for email, enhancing security and flexibility for user access.

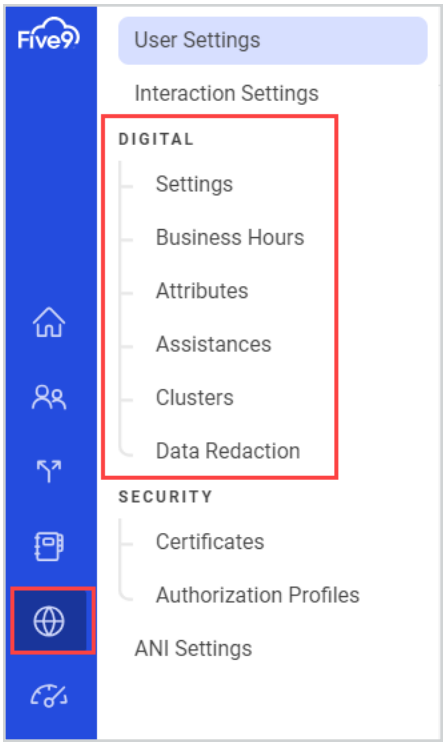
Benefits:

- Unified Administrator Experience: Admin Console offers a unified experience where administrators can configure and manage both Digital and Voice settings in one place, simplifying the administrative workflow.
- Intuitive User Interface: Enjoy a new, intuitive user experience in the Admin Console that makes navigation and configuration easier and more efficient.

To initiate the migration, select any Digital tab under Manage Environment. During the migration, Chat and Email operations will not be affected. All SCC Admin data will be accessible in the Admin Console under the corresponding pages.

Note

After enabling the domain for Admin Console in Digital, SCC Admin will switch to read-only mode for Email, Chat, and Global Digital Settings. Admin can access the Reports tab in SCC Admin.

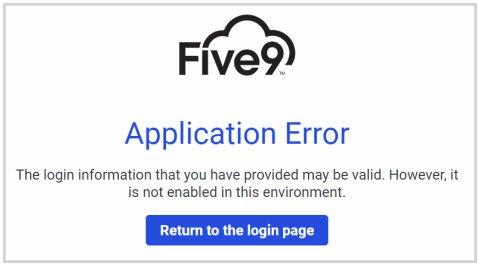


Logging into Admin Console

You use the Five9 Administrator Console to log into your Five9 account and access Admin Console.

1. Enter the URL that applies to your location.
   - US domains: https://admin.us.five9.net/
   - Canadian domains: https://admin.ca.five9.net/
   - UK domains: https://admin.uk.five9.net/
   - European domains: https://admin.eu.five9.net/
2. Enter your credentials (username and password).

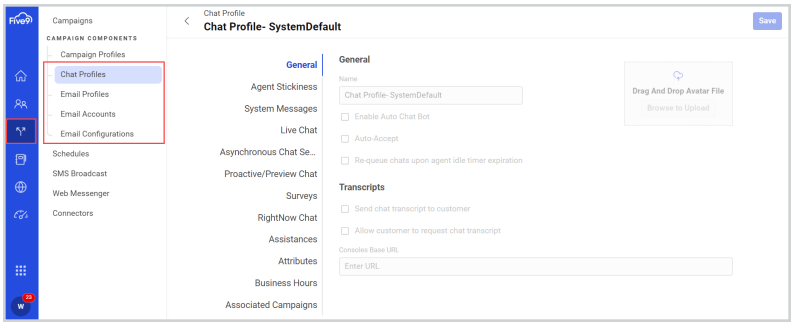
This message indicates that you may have valid credentials to access Admin Console, but may not be enabled for the selected region. Ensure that the region you select represents your contact center locale.



SCC Admin to Digital Admin Console Mapping

The mapping table ensures a smooth transition from SCC Admin to the Digital Admin Console. It outlines how each feature, function, or data element in SCC Admin corresponds to its counterpart in the Digital Admin Console.

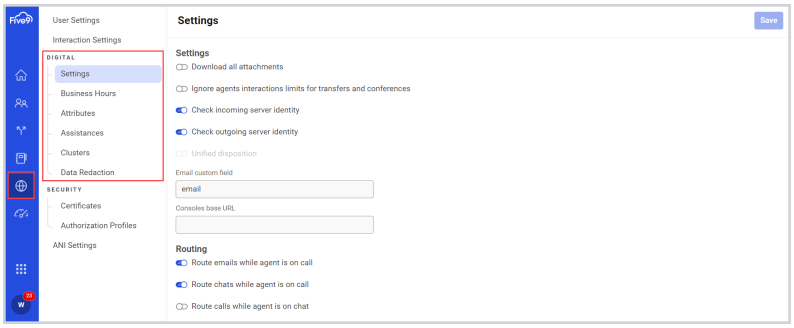
Digital Components



SCC Admin	Digital Entity in Admin Console
Profiles > Information	• Chat related information has moved to **Manage Campaigns > Chat Profile > General** • Email related information has moved to **Manage Campaigns > Email Profile > General**

SCC Admin	Digital Entity in Admin Console
Profiles > Assistances	• **Manage Campaigns > Chat Profile > Assistances** • **Manage Campaigns > Email Profile > Assistances**
Profiles > Dispositions	**Manage Campaigns > Campaigns > Dispositions**
Profiles > Chat	**Manage Campaigns > Chat Profile**: • System Messages • Live Chat • Asynchronous Chat Settings • Proactive/Preview Chat
Profiles > Email	**Manage Campaigns > Email Configuration**
Profiles > Survey	**Manage Campaigns > Chat Profile > Survey**
Profiles > Rules & NLP	**Manage Campaigns > Campaign > Digital** > Rules file can be uploaded
Profiles > Attributes	• **Manage Campaigns > Chat Profile > Attributes** • **Manage Campaigns > Email Profile > Attributes**
Profiles > Data Redaction	• **Manage Campaigns > Chat Profile > Data Redaction** • **Manage Campaigns > Email Profile > Data Redaction**
Profiles > Agent Stickiness	• **Manage Campaigns > Chat Profile > Agent Stickiness** • **Manage Campaigns > Email Profile > Agent Stickiness**
Profiles > EW	**Manage Campaigns > Campaign > Interaction Flow > EW options for Email, Chat, Case**
Profiles > Business Hours	**Manage Campaigns > Chat Profile > Business Hours**
Profiles > RightNow Chat	**Manage Campaigns > Chat Profile > RightNow**

Digital Settings



SCC Admin	Digital Entity in Admin Console
Users	Exists as Manage Users in Admin Console
Groups	**Manage Campaigns > Campaigns > Skills > Digital Skill**
Clusters	**Manage Environment > Digital - Clusters**
Disposition	**Manage Environment > Campaigns > Dispositions**
Assistances	**Manage Environment > Digital - Assistances**
Attributes	**Manage Environment > Digital - Attributes**
Data Redaction	**Manage Environment > Digital - Data Redaction**
Global Settings > General	**Manage Environment > Digital - Settings**
Global Settings > Routing	**Manage Environment > Digital - Settings**
Global > Business Hours	**Manage Environment > Digital - Business Hours**
Global > Notifications	**Manage Environment > Digital - Settings**

Enabling Campaigns for Digital

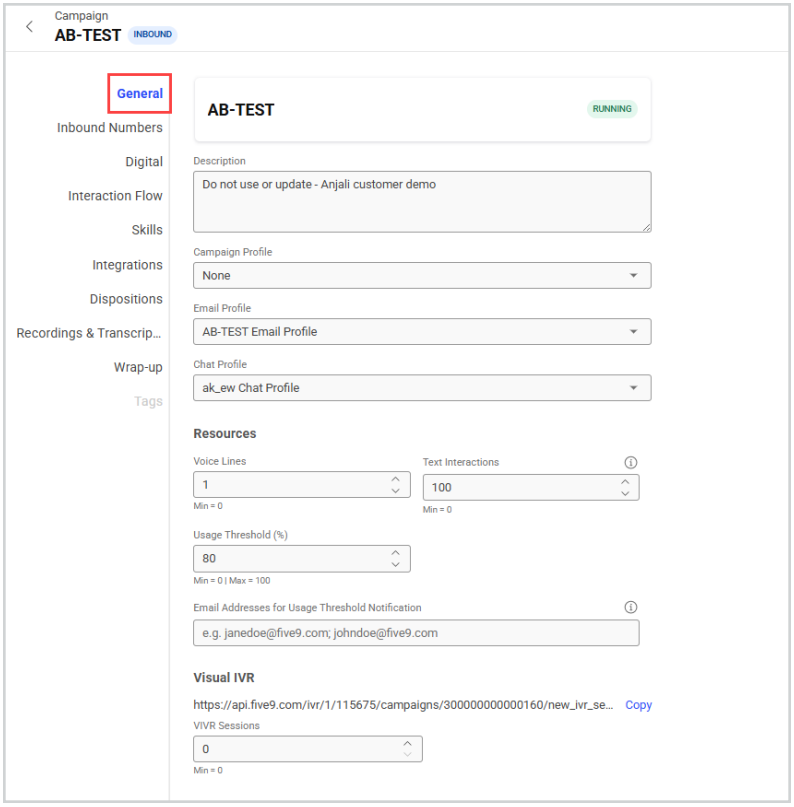
To configure an existing campaign or create a new one, administrators must enable the following settings within Campaigns for chat and/or email functionality.

Important

You cannot associate an OAuth2 token with more than one campaign. Tokens are campaign-specific and cannot be reused across multiple campaigns. Ensure each token is assigned to a single campaign to maintain proper functionality.

General Tab Configuration

Use the **General** tab to define the main settings and resources for a campaign.



- **Description**: Enter an optional description to help identify the campaign.
- **Campaign Profile**: Select the campaign profile, which defines operating hours and dialing rules.
- **Email Profile**: (Optional) Select the email profile if the campaign handles email interactions.

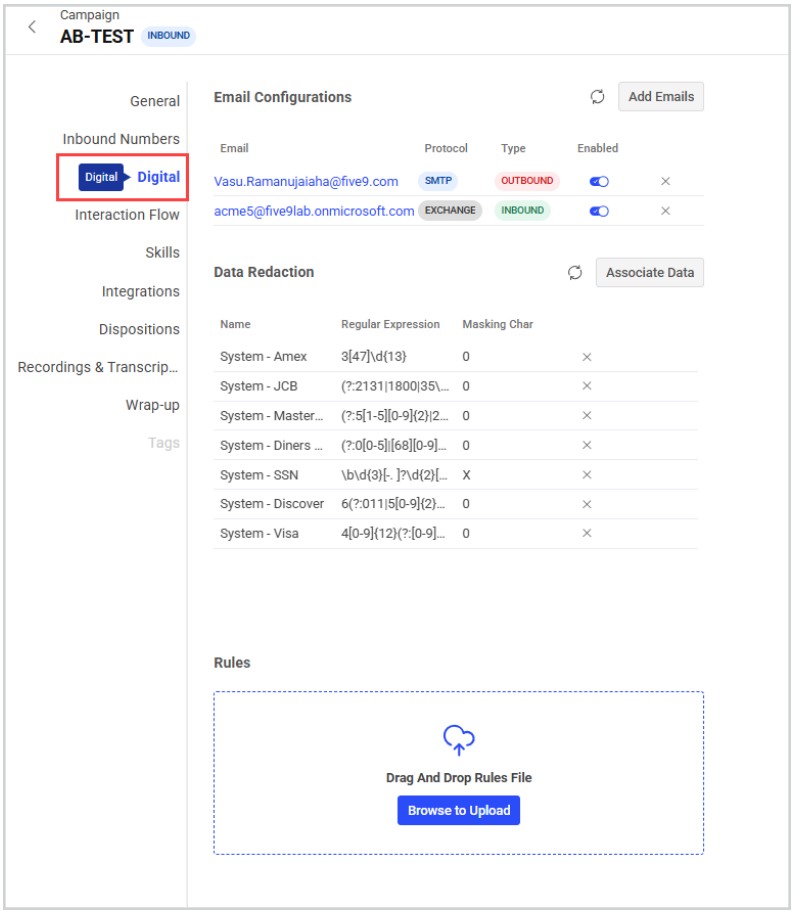
- **Chat Profile**: (Optional) Select the chat profile if the campaign handles chat interactions.
- **Voice Lines**: Enter the maximum number of simultaneous voice lines available to the campaign.
- **Text Interactions**: Enter the maximum number of concurrent text interactions.
- **Usage Threshold (%)**: Enter the percentage of allocated resources that triggers a notification.
- **Email Addresses for Usage Threshold Notification**: Enter one or more addresses to receive usage threshold notifications.
- **VIVR Sessions**: Enter the maximum number of concurrent Visual IVR sessions.
- **VIVR URL**: Displays the API endpoint for Visual IVR sessions. Select **Copy** to copy the URL.

Important

If the campaign exceeds the configured usage threshold, the system generates notifications but does not block new interactions. Use thresholds to monitor system load and resource allocation, not to enforce limits.

Digital Tab Configuration

Use the **Digital** tab to configure email connections and data redaction rules for a campaign.



Email Configurations: Displays the list of configured email accounts. Each entry shows the email address, protocol, type (inbound or outbound), and enabled status.

- To add a new email configuration, select **Add Emails**.
- To enable or disable an existing account, use the toggle next to the email address.
- To remove an email configuration, select the **X** icon.
- Select the refresh icon to update the list of available configurations.

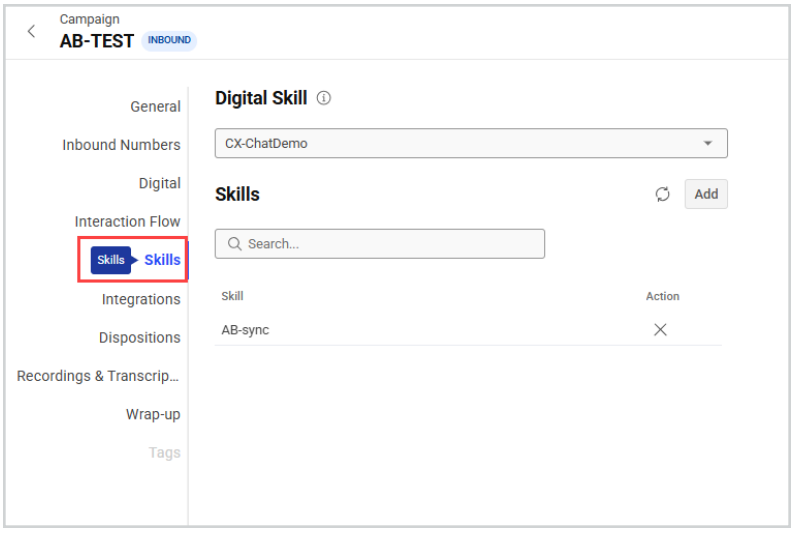
Data Redaction: Provides predefined rules that mask sensitive data in campaign interactions. The system includes default patterns for credit card numbers and Social Security Numbers (SSNs).

- To enable or disable a rule, select the **X** icon.
- To update or refresh the rules, select **Associate Data**.
- To add custom rules, drag and drop a file into the **Rules** box or select **Browse to Upload**.

> **Note:** To create Campaign Profiles, refer to Campaign Profiles in Admin Console for more information.

Skills Tab Configuration

Assign skills to a campaign to determine which agents can handle interactions. Skills define agent availability and routing for digital campaigns.



- **Digital Skill (Required)**: Select the digital skill for the campaign. A digital skill is required when creating or editing a digital campaign.
- **Skills**: Displays the list of skills associated with the campaign.
  - To add a skill, select **Add** and choose from the available list.
  - Use the search bar to filter skills.

- To remove a skill, select the **X** icon next to it.
- Select the refresh icon to update the list of available skills.

Important

You must assign a digital skill to an Outbound SMS campaign. If you do not, outbound interactions sent via API will not appear in Five9 Digital Channel reports. The API will still send the SMS, but the interaction will not be tracked in reporting.

Digital Chat Profiles

A chat profile consists of chat-specific characteristics that allow customers to tailor chat interaction dynamics for a campaign. You can associate the same chat profile with one or more campaigns.

Note

Before you begin, log in to Admin Console. You must enable Chat Profiles and assign Digital Chat Profiles Permission Sets.

Important

If you have not yet migrated to the Digital Admin Console, refer to Configuring Profiles to Support Proactive and Preview Chat in SCC Admin.

Use the following topics to create Chat Profiles in Admin Console.

Digital Chat Profiles Permission Sets
Creating Digital Chat Profiles
Digital Chat Profiles General Tab
    Transcripts
Digital Chat Profiles Agent Stickiness Tab
Digital Chat Profiles System Messages Tab
    Enable Comfort Message
    Enable Auto-Close

Digital Chat Profiles Live Chat Tab
Digital Chat Profiles Surveys Tab
Digital Chat Profiles RightNow Tab
Digital Chat Profiles Assistances Tab
Digital Chat Profiles Attributes Tab
Digital Chat Profiles Business Hours Tab
Digital Chat Profiles Associated Campaigns Tab

Digital Chat Profiles Permission Sets

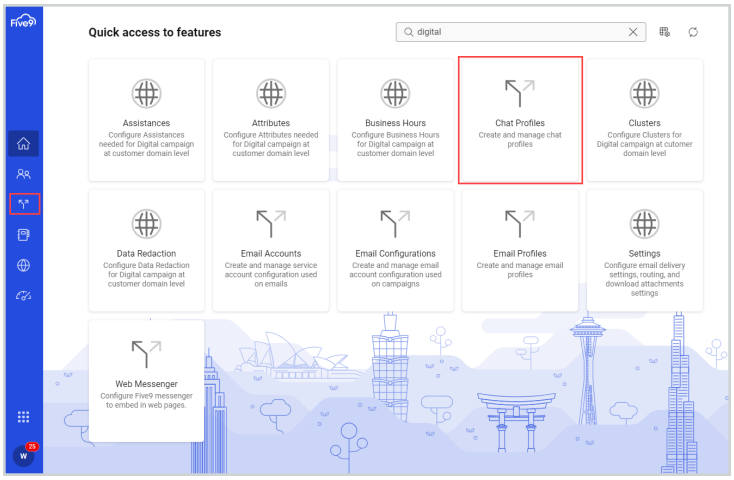
This section lists the permissions required to view digital chat profiles in Admin Console. These permissions allow users to access profile configurations that define how chat interactions are routed and displayed.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	chatprofiles	View Chat Profiles	Grants read-only access to view digital chat profiles and their associated configurations.

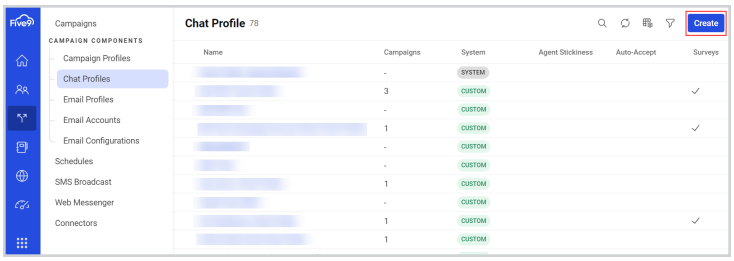
Creating Digital Chat Profiles

1 Select the **Chat Profiles** card or the **Manage Campaign** icon in the sidebar navigation.



The **Chat Profile** page displays.

2 Select the **Create** button.



3 Enter a name for the chat profile and select **Save**.

The **General** page displays.

Digital Chat Profiles General Tab

In this tab, you can configure the chat presentation options, such as Enable Auto Chat Bot, Time to accept, Auto-Accept, queuing options, and also define your transcript options.

The Auto-Accept option automatically accepts interactions on behalf of agents. When enabled, the timer is disabled, and agents automatically receive interactions in their assigned queues without the ability to reject them.

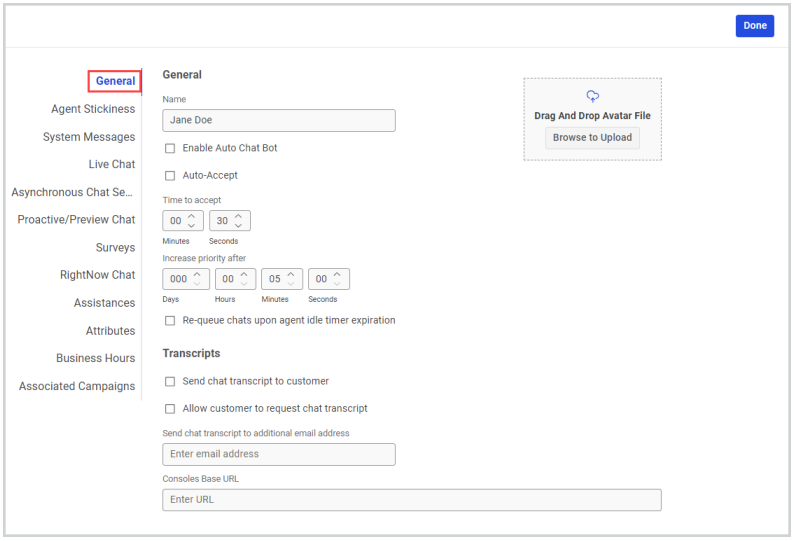
If manual selection is enabled, interactions are added to the agents' list of assigned interactions. These interactions open in their application when agents click the browser notification of a new digital engagement interaction. To prevent agents from

automatically accepting new interactions when they click browser notifications, you can:

- Disable browser notifications (see Managing Browser Notifications for Agents).
- Disable Auto-Accept for one or more channels.

Agents must accept interactions within a specified number of seconds. The Time to accept setting applies to the AID mode and can be set for each interaction type. The default setting is 30 seconds, but you can increase it up to 60 seconds.

When routing interactions by priority, the default value for email and social interactions is 5 minutes. For chat interactions, the recommended value is 5 minutes. New profiles are automatically set to 5 minutes.



Transcripts

Option	Definition
Send chat transcript to customer	• **Enabled**: Chat transcript is sent to customer using the email provided by the customer. • **Disabled**: Chat transcript option is not available to customer. **Important:** Outgoing email settings must be configured to send transcript.

Option	Definition
Allow customer to request chat transcript	**Enabled**: Customer can request chat transcript within the chat interface. This is independent from the **send chat transcript to customer** option but will not send duplicate email transcripts. • **Disabled**: Chat transcript option is not available to customer within the chat interface. **Important:** Outgoing email settings must be configured to send transcript.
Send chat transcript to additional email addresses	Identify additional email addresses for chat transcript here. Multiple addresses must be separated by semicolons.

Digital Chat Profiles Agent Stickiness Tab

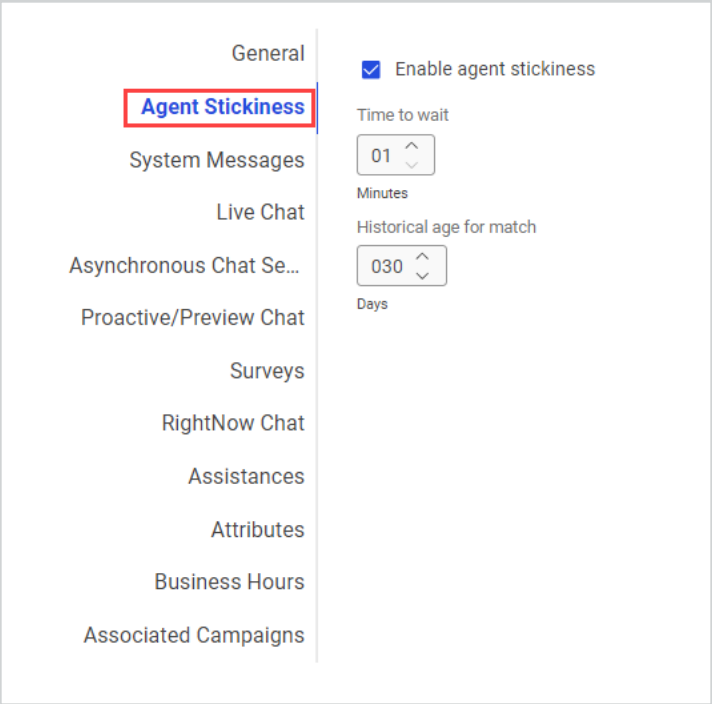
Agent Stickiness allows you to define how the system assigns digital engagement interactions for returning contacts. For new contacts, the system ignores these settings and routes the item to the next available agent.

This feature enables the system to manage the distribution of digital engagement interactions instead of the ACD. Before distributing an item, the system checks which agent previously handled the returning contact within the configured historical age for a match. If that agent becomes available within the configured minutes to wait, the system offers the interaction to that same agent.

If the timer expires, or if the assigned agent rejects or ignores the interaction, the system returns the interaction to the queue for distribution. If an agent logs out while there is an offered sticky interaction, the system will return the interaction to the queue even if the timer has not expired yet.

Note

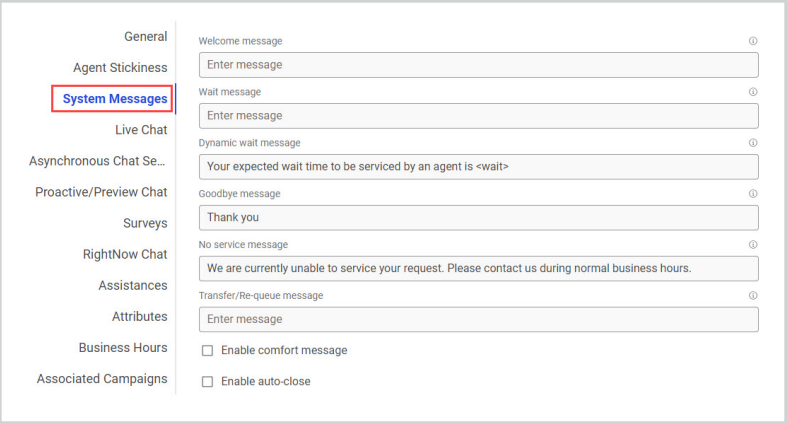
An agent logged in with cherry-pick mode can lock an interaction while it is being offered to another agent due to stickiness. Agent stickiness settings do not consider business hours.



Enable agent stickiness	Enables Agent Stickiness.
Time to wait	Maximum time to wait in minutes for the previous agent to become available and receive the chat interaction.
Historical age for match	Number of days to search the contact's history to locate the last agent who handled the previous interaction with the contact. If the interaction is older than the setting, Agent Stickiness is not applied. This setting is a sliding 24-hour window and refers to calendar days. This setting does not consider business hours or holidays.

Digital Chat Profiles System Messages Tab

Define the automated messages customers see during chat sessions by entering the desired text for each message.



Welcome message	Displayed once the chat interaction is accepted by the agent.
Wait message	If configured, this message is displayed while the customer is waiting to be connected to an agent.
Dynamic wait message	In situations where the wait time surpasses one minute, this prompt takes precedence over the standard Wait Message. Otherwise, the system will revert to displaying the designated Wait Message. If the message contains the tag "<wait>" then the system replaces the tag in the message with the estimated wait time in minutes. The system calculates the waiting time every three minutes based on the past hour. This calculation includes only chats that are assigned to an agent. During the three-minute intervals, the same waiting time is displayed regardless of how many or how quickly chat interactions are delivered to agents. The wait time is rounded up to the next minute, so the wait time is two minutes if the calculated time is 61 seconds.
Goodbye message	Displayed once the chat interaction has ended.
No service message	Displayed when no agents are logged into the profile.
Transfer/Re-queue message	Displayed when the assigned agent has become unavailable, the chat is being assigned to another agent.

Enable Comfort Message

Define the automated comfort messages displayed to a contact if the agent is taking too long to reply. The timer begins when the customer responds and restarts when the agent sends a message. Similarly, inactivity by the contact can start an option to automatically close the chat window.

Note

The customer-idle time restarts when a chat interaction is transferred to another agent.

Important

If you use the agent-idle timer and the automatic close option you can potentially send confusing messages to your customers. You must carefully plan the timing of your agent-idle timer messages and the close inactive interaction timer to avoid these situations.

Example

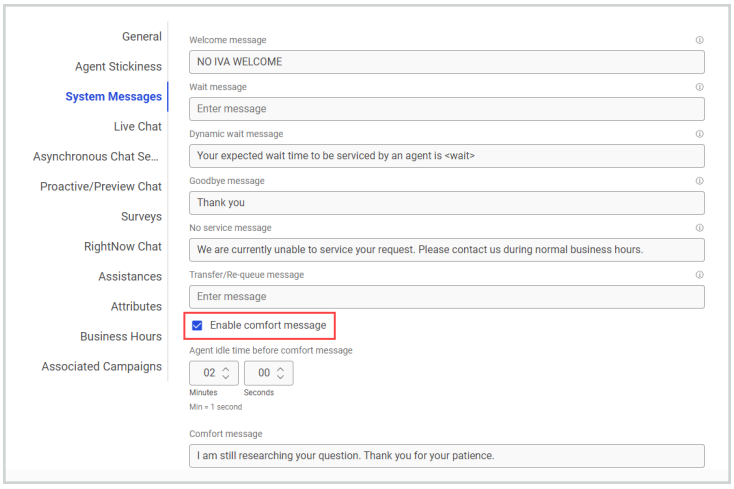
In this scenario, the agent idle timer is configured for 30 seconds and an automatic close timer configured for 180 seconds. If agents are unresponsive, you can produce a confusing interaction for your customers, as outlined below:

- The agent is busy. A comfort message is sent at 30th, 60th, and 90th second saying `I am still researching your ...`
- At the same time, at the 90th second, a warning is displayed to the customer: `I have not heard from you for a while...`
- Now the customer is confused. The customer has nothing to say because the agent is still researching. So the customer waits.
- At 120th and 150th second intervals, additional comfort messages are displayed to the customer: `I am still researching your…` because the agent is still busy or unresponsive.
- At the 180th second the chat is automatically closed due to inactivity.

No timer setting is generic for all because every contact center is different. You must carefully balance the timing of your messages with the responsiveness and task load of your agents. If your agents typically respond to chat interactions within 30 seconds, the scenario described above presents no problem or confusion to your customers. They would never receive the agent-idle comfort messages. Once an agent initially responds to the chat, the agent-idle timer is turned off and the customer no longer receives agent-idle comfort messages.

The reminder message is disabled by default. To configure the reminder message:

1 Select the **Enable Comfort Message** option.



2 Configure the agent-idle time interval.

You can configure a time interval from 30 to 600 seconds (default is 120 seconds). Any text entry in the chat by the agent resets this timer. With no agent activity this message is sent at the defined interval.

3 Define a Comfort message containing up to 2,000 characters.

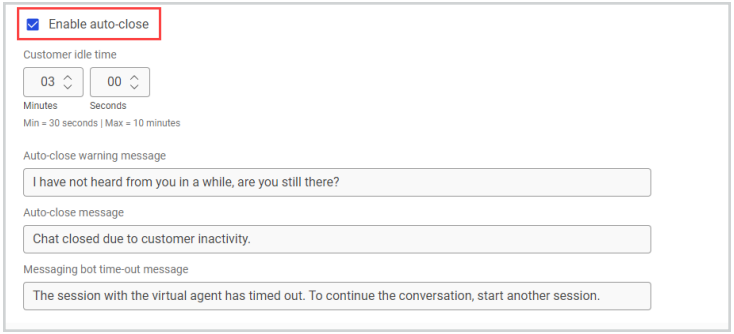
The default Comfort message is `I am still researching your question. Thanks for the patience`. If you enable this option, you must define a comfort message.

Enable Auto-Close

The chat automatic close feature is disabled by default. To configure automatic close for inactive chat sessions:

1 Select the **Enable auto-close** option.

2



3 Set an inactivity time limit.

You can configure any time from 30 to 600 seconds. The default time to automatically close an inactive interaction is 180 seconds.

4 Define a Auto-close warning message containing up to 2,000 characters.

The default message is `I haven't heard from you in a while, are you still there?`

The Auto-close warning message displays when one half of your customer idle timer has passed. The idle timer restarts with any new text entry from the customer.

5 Define a Auto-close message comtaining message up to 2,000 characters.

The default message is `Chat closed due to customer inactivity`. If you enable this option, you must define automatic close warning and timer settings.

No timer setting is generic for all because every contact center is different. You must carefully balance the timing of your messages with the responsiveness and task load of your agents. If your agents typically respond to chat interactions within 30 seconds, the scenario described above presents no problems or confusion to your customers, they would never receive the agent-idle comfort messages.

6 Define a Messaging bot time-out message up to 2,000 characters.

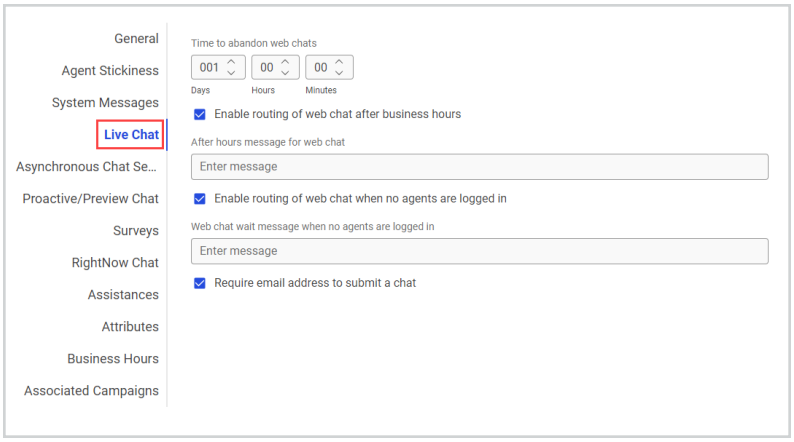
The default message is `The session with the virtual agent has timed out. To continue the conversation, start another session`. If you enable this option, you must define automatic close warning and timer settings.

Digital Chat Profiles Live Chat Tab

Define the behavior of web chat and asynchronous messages when they are received after business hours and when no agents are logged into the system. Enabling each routing setting below allows you to define the system message that is displayed to the corresponding setting.

Five9 also abandons native chats automatically if the end-user chat client disconnects and the end-user does not re-connect within approximately three minutes.

> **Note**
>
> If an inbound web chat or asynchronous message is transferred to another campaign, the time to abandon and business hour settings of the originating campaign persist.



Time to abandon web chats	Set the time you want Five9 to abandon a still-open web chat that is unassigned. By default, web chats are abandoned after 1 day (24 hours), but you can keep them up to 7 days (168 hours). The system displays a warning message if you set a time less than 30 minutes or more than 7 days.
Enable routing of web chat after business hours	Web chats received outside of business hours are routed as usual. If you enable this setting, you may also define the **After hours message for web chat**.
Enable routing of web chat when no agents are logged in.	Web chats are routed as usual even if no agents are logged in and active. If you enable this setting, you may also define the **Web chat wait message when no agents are logged in**.
Require email address to submit a chat.	Requires an email to be added to submit a chat.

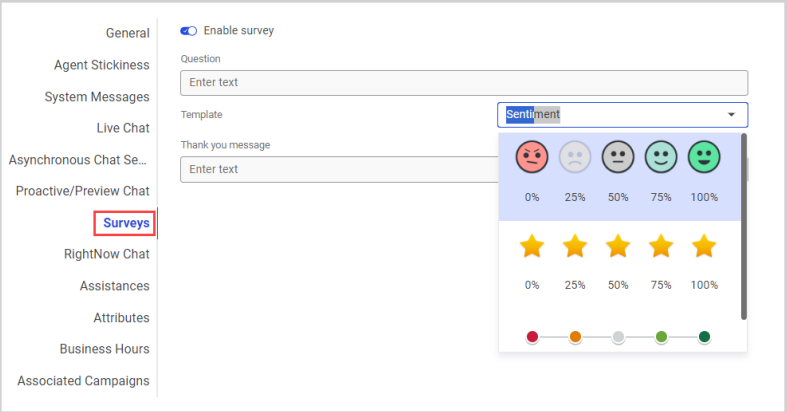
Time to abandon asynchronous messages	You can specify the time for Five9 to abandon an unassigned, still-open chat. By default, non-SMS asynchronous messages are abandoned after 7 days, but you can set this period to less than 7 days. Note that the system displays a warning if you set a time less than 30 minutes or more than 7 days.
Enable routing of non-SMS asynchronous messages after business hours.	When enabled, this setting routes non-SMS asynchronous messages received outside of business hours as usual. You can also define the "After hours" message for these scenarios.
Enable routing of non-SMS asynchronous messages when no agents are logged in.	If routing after business hours is not enabled, this setting routes non-SMS asynchronous messages even if no agents are logged in. You can also define the "Non-SMS asynchronous wait" message for these scenarios.

Enable proactive chat	Enables proactive chat at your web site.
Enable preview chat	Enables preview chat at your web site.
Preview contact edit allowed	Enables customers to enter or edit their contact information before they submit the chat request. Use cautiously because every additional step you ask a customer to take makes it less likely they ultimately engage with your agent.
Preview auto-accept	Enables preview chats to be automatically accepted by agents.
Preview auto-engage	Enables preview chats to be automatically engaged by agents. When agents are assigned preview chats, either by locking or by accepting automatically, a connection to the agent waiting to chat is displayed to the customer. The default message displayed to the customer is the message configured for proactive chat.
Auto-	Displayed once the chat is accepted by the agent.

engage message	
Proactive chat question	Question that your visitor sees in the proactive chat prompt.
Chat offer condition	Condition that prompts the chat offer.

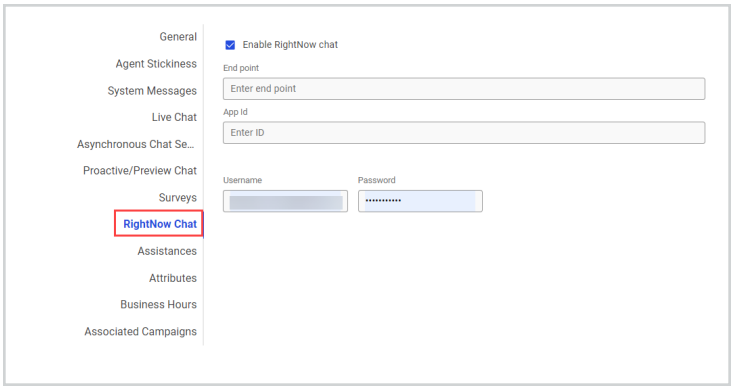
Digital Chat Profiles Surveys Tab

Customize the survey question for each profile and select a template for the rating scale. View the survey results in the Social Reports section of the Dashboards and Reports application.



Digital Chat Profiles RightNow Tab

1 Select **Enable RightNow chat**.



2 Complete the fields:

- End point: Endpoint for the chat service in this format: `https:<Oracle_URL>/cgi-bin/<Oracle_interface_name>.cfg/services/chat_soap?wsdl`

  Example

  `https://five9-2013.rightnowdemo.com/cgi-bin/five9-2013.cfg/services/chat_soap?wsdl`

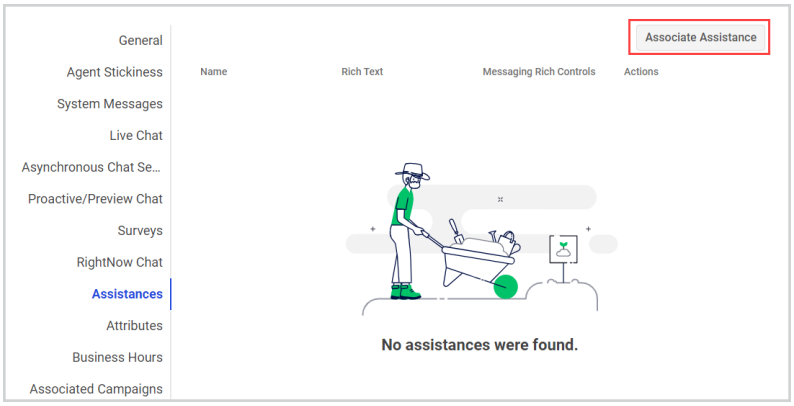
- App id: **Enter Five9_RN_CHAT**.
- Username: Oracle Service Cloud user name for the chat API.
- Password: Oracle Service Cloud password for the chat API.

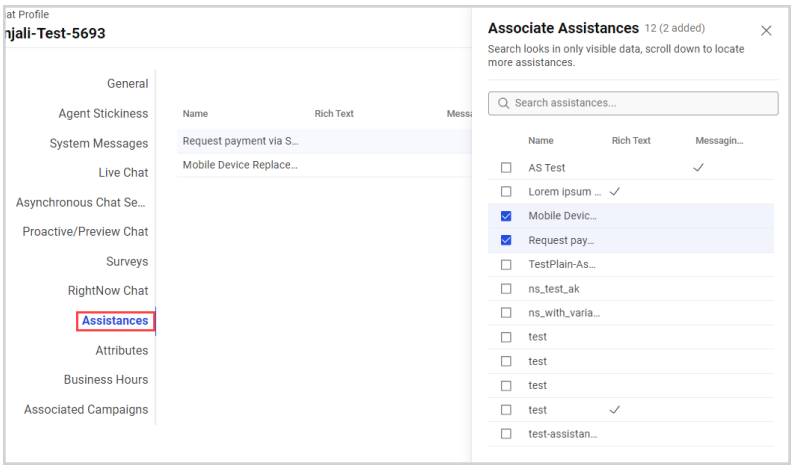
3 Select **Done**.

Digital Chat Profiles Assistances Tab

Assistances are predefined responses that agents can use during chat, email, or social posts to respond to the customer's question by sending a predefined answer. These predefined responses for assistance are designed to answer typical questions or to provide directions for a common situation.

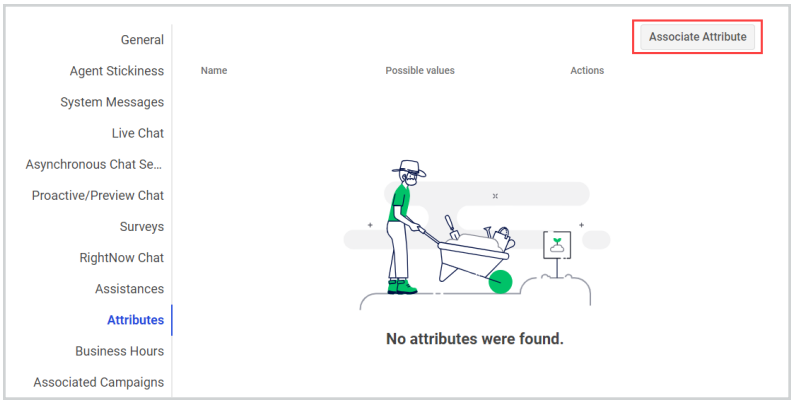
To associate an assistance with a profile, select the **Associate Assistance** button and select from the list.

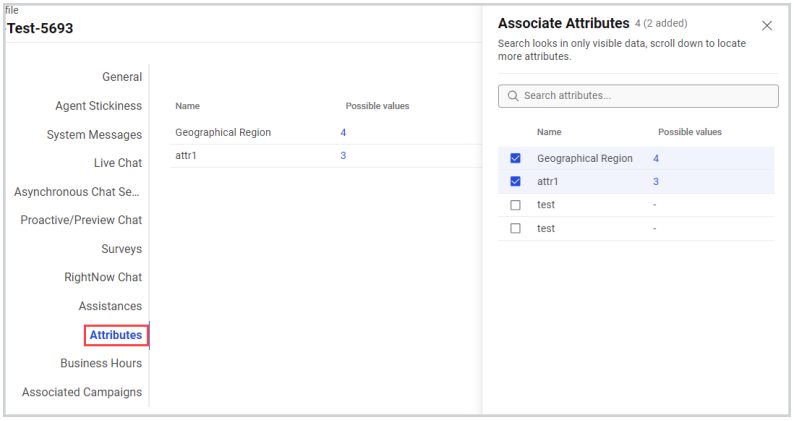




Digital Chat Profiles Attributes Tab

Assign predefined attributes to a profile to gather metrics about text post authors processed by agents assigned to the profile. Select the **Associate Attribute** button and select the attribute definitions you want to assign to the chosen profile.





Digital Chat Profiles Business Hours Tab

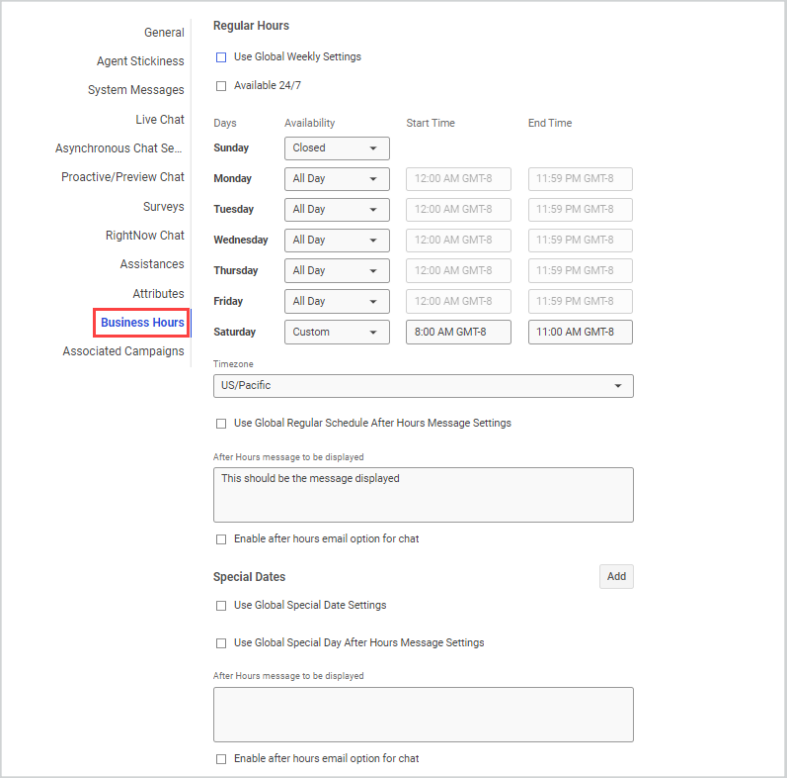
Customize chat hours of operation and include an after-hours message when agents are unavailable. Allow customers to submit emails outside business hours through the chat console.

To define special dates, such as holidays, select **Add** next to Special Dates. Add or delete multiple special date ranges individually. Special dates override weekday hours with the same schedule. Special messages override standard messages when defined for the same period.

Configure unique after-hours messages for weekdays, special dates, and global settings. To communicate that there is no service outside of your defined business hours, enter your message into the After Hours Message text box.

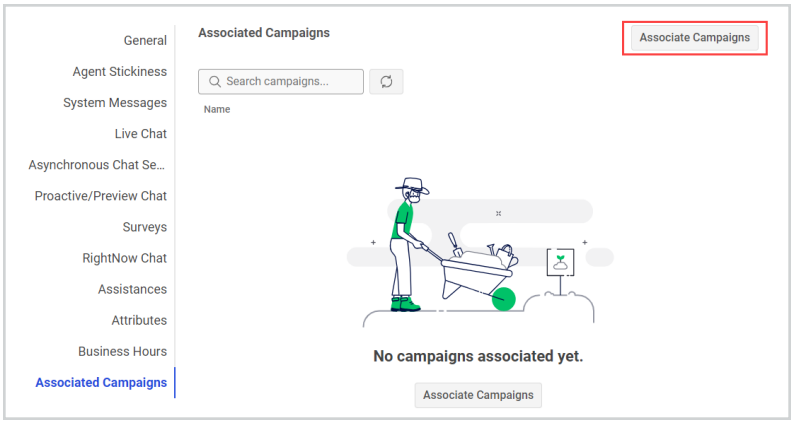
Create standard business hours in a single time zone, such as your domain time zone, for all seven days. Define special days, such as holidays, using a specific time zone for each special day.

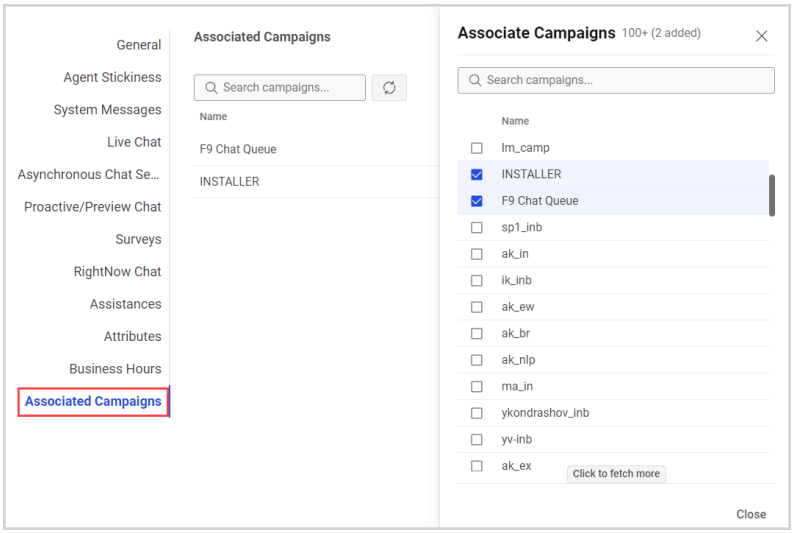
To use global settings for your domain, click **Use Global Weekly Settings**. By default, global settings are fully open, or all day every day. If no custom message is defined, the After Hours message in the Business Hours tab is shown.



Digital Chat Profiles Associated Campaigns Tab

To associate specific campaigns with a chat profile, select the **Associate Campaigns** button and select from the list.





Digital Email Profiles

An email profile consists of chat-specific characteristics that allow customers to tailor chat interaction dynamics for a campaign. You can associate the same email profile with one or more campaigns.

Note

Before you begin, log in to Admin Console. You must enable Email Profiles and assign Digital Email Profiles Permission Sets.

Important

If you have not yet migrated to the Digital Admin Console, refer to Email Profiles in SCC Admin.

Use the following topics to create Email Profiles in Admin Console.

Digital Email Profiles Permission Sets
Creating Digital Email Profiles
Digital Email Profiles General Tab
Digital Email Profiles Agent Stickiness Tab
Digital Email Profiles Assistances Tab
Digital Email Profiles Attributes Tab
Digital Email Profiles Associated Campaigns Tab

Digital Email Profiles Permission Sets

This section lists the permissions required to manage digital email profiles in Admin Console. These permissions allow users to create, view, edit, and delete profiles used to control the behavior of email interactions in campaigns.

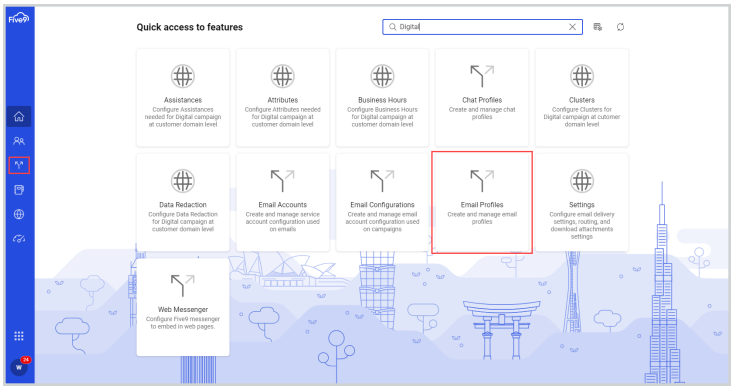
To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	digital-profile	Create digital profile	Allows users to define a new digital email profile with campaign-specific behavior settings.
		Delete digital profile	Allows users to permanently remove an existing digital email profile.
		Edit digital profile	Grants access to update the configuration or assignment of an existing email profile.
		View digital profile	Grants read-only access to view the configuration of digital email profiles.

Creating Digital Email Profiles

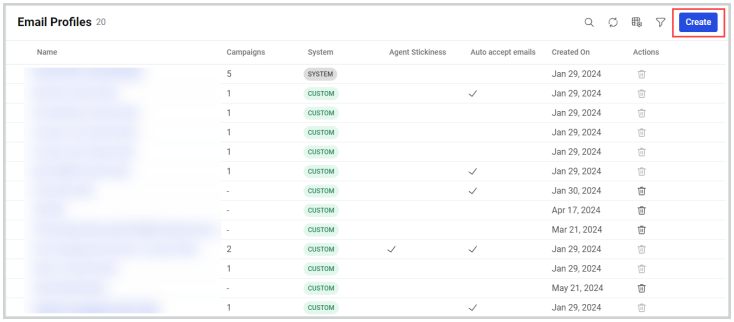
> **Note**
>
> You cannot save an email profile or campaign unless at least one Skill is assigned. The option to remove an existing Skill is disabled. This ensures that all email interactions remain properly assigned and reportable.

1 Select the **Email Profiles** card or the Manage Campaign icon in the sidebar navigation.



The **Email Profile** page displays.

2 Select the **Create** button.



3 Enter a name for the email profile and select **Save**.

Digital Email Profiles General Tab

In this tab, you can configure basic features of an email profile such as Auto accept emails, Time to accept, and email priority.

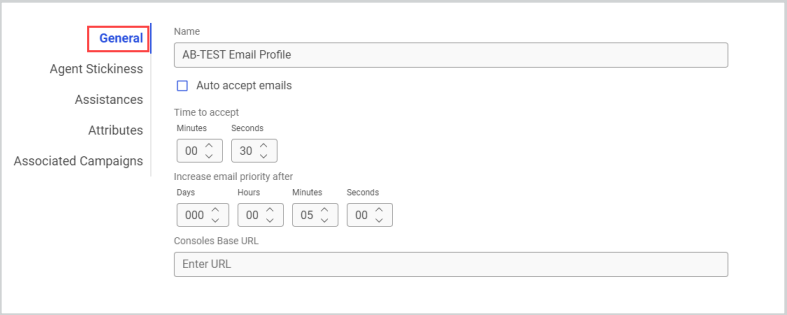
The **Auto accept emails** option automatically accepts interactions on behalf of agents. When enabled, the timer is disabled, and agents automatically receive interactions in their assigned queues without the ability to reject them.

If manual selection is enabled, interactions are added to the agents' list of assigned interactions. These interactions open in their application when agents click the browser notification of a new digital engagement interaction. To prevent agents from automatically accepting new interactions when they click browser notifications, you can:

- Disable browser notifications (see Managing Browser Notifications for Agents).
- Disable **Auto Accept** for one or more channels.

You must accept interactions within a specified number of seconds. The Time to accept setting applies to the AID mode and can be set for each interaction type. The default setting is 30 seconds, but you can increase it up to 60 seconds.

When routing interactions by priority, the default value for email and social interactions is 5 minutes. For chat interactions, the recommended value is 5 minutes. New profiles are automatically set to 5 minutes.



Digital Email Profiles Agent Stickiness Tab

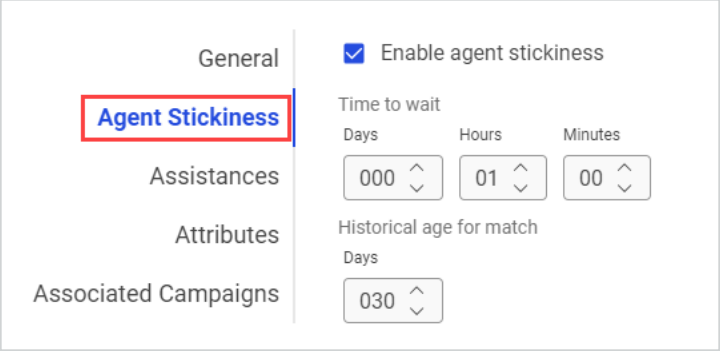
Agent Stickiness allows you to define how the system assigns digital engagement interactions for returning contacts. For new contacts, the system ignores these settings and routes the item to the next available agent.

This feature enables the system to manage the distribution of digital engagement interactions instead of the ACD. Before distributing an item, the system checks which agent previously handled the returning contact within the configured historical age for

a match. If that agent becomes available within the configured minutes to wait, the system offers the interaction to that same agent.

If the timer expires, or if the assigned agent rejects or ignores the interaction, the system returns the interaction to the queue for distribution. If an agent logs out while there is an offered sticky interaction, the system will return the interaction to the queue even if the timer has not expired yet.

> **Note**
>
> An agent logged in with cherry-pick mode can lock an interaction while it is being offered to another agent due to stickiness. Agent stickiness settings do not consider business hours.

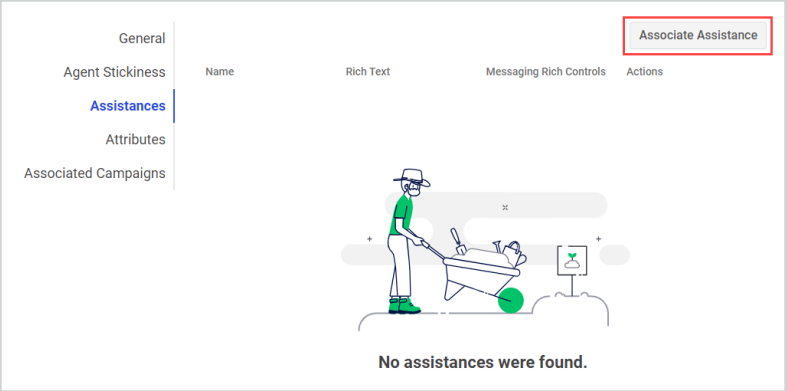


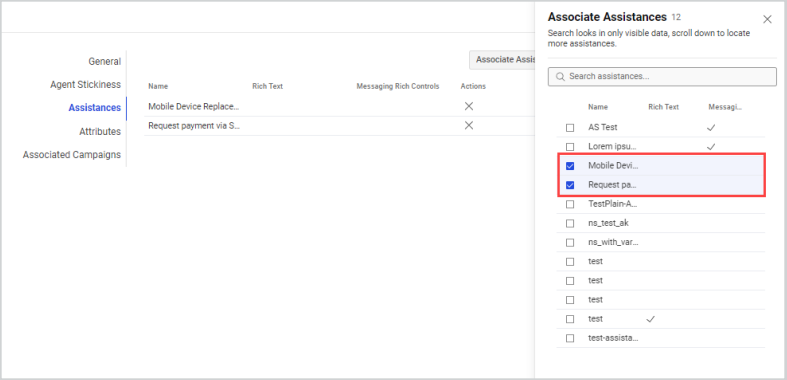
Field	Description
Enable agent stickiness	Enables Agent Stickiness.
Time to wait	Maximum time to wait in minutes for the previous agent to become available and receive the chat interaction.
Historical age for match	Number of days to search the contact's history to locate the last agent who handled the previous interaction with the contact. If the interaction is older than the setting, Agent Stickiness is not applied. This setting is a sliding 24-hour window and refers to calendar days. This setting does not consider business hours or holidays.

Digital Email Profiles Assistances Tab

Assistances are predefined responses that agents can use during chat, email, or social posts to respond to the customer's question by sending a predefined answer. These predefined responses for assistance are designed to answer typical questions or to provide directions for a common situation.

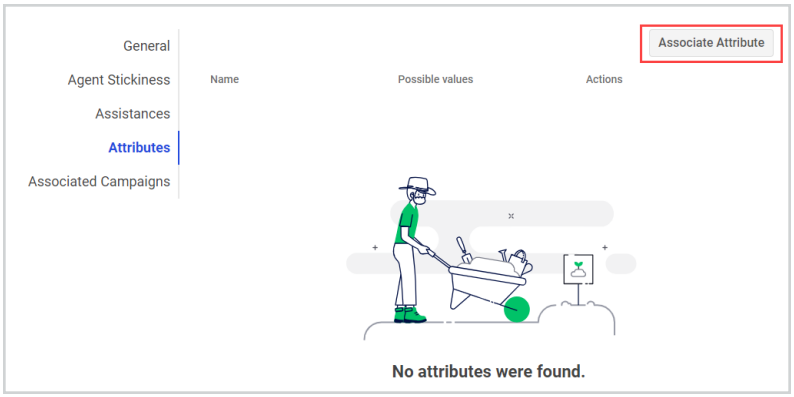
To associate an assistance with a profile, select the **Associate Assistance** button and select from the list.

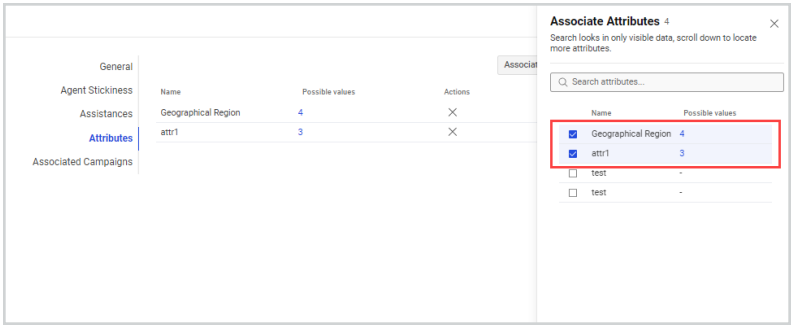




Digital Email Profiles Attributes Tab

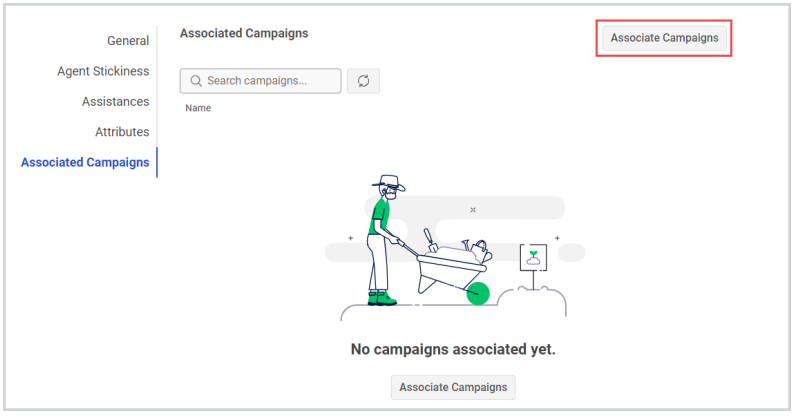
Assign predefined attributes to a profile to gather metrics about text post authors processed by agents assigned to the profile. Select the **Associate Attribute** button and select the attribute definitions you want to assign to the chosen profile.

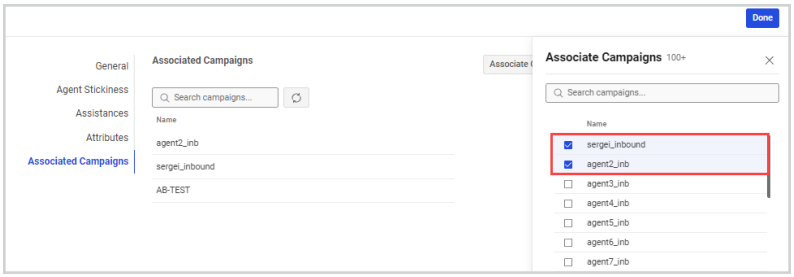




Digital Email Profiles Associated Campaigns Tab

To associate specific campaigns with an email profile, select the **Associate Campaigns** button and select from the list.





Digital Email Accounts

Digital email accounts let you create and manage service account configurations for secure email integration with Five9.

Before you begin

Make sure you complete the following prerequisites before creating digital email accounts:

- Configure the required service accounts in Microsoft Azure.
- Grant Five9 permission to access the designated inboxes. This access enables seamless communication between your organization's email system and the Five9 platform.
- Review the setup steps in Get started with Office 365 Management APIs.

Access requirements

- Log in to Admin Console.
- Assign the required Digital Email Accounts Permission Sets to the users who will manage these accounts.

Important

If your organization has not yet migrated to Admin Console, see Creating Email Accounts in SCC Admin.

Digital Email Accounts Permission Sets

To create and manage digital email accounts in Admin Console, users need specific permissions. These permissions control who can create, edit, view, or delete service account configurations.

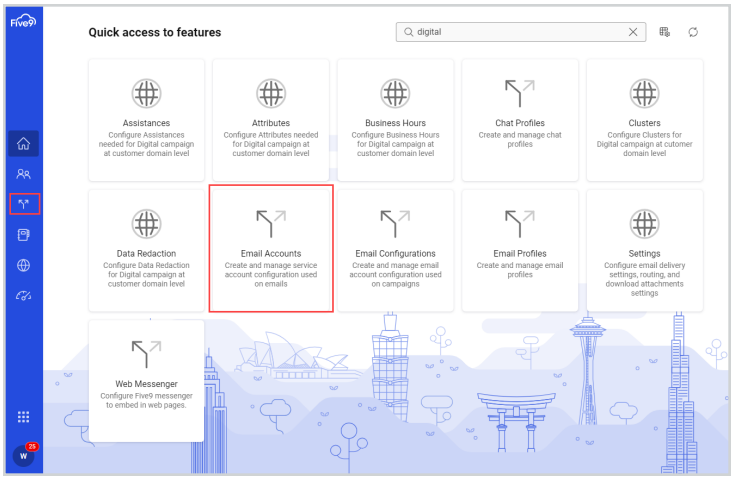
To assign permissions to multiple users or to create a reusable permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	service-account	Create service account	Allows users to create new service accounts for secure email communication.
		Delete service account	Allows users to delete existing service account configurations.
		Edit service account	Grants access to update service account details, including credentials and email settings.
		View service account	Grants read-only access to view service account configurations.

Creating Digital Email Accounts

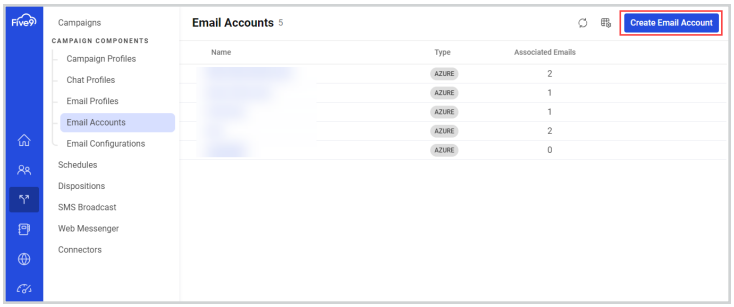
After you log in, the Admin Console home page opens.

1. Select **Email Accounts** on the home page, or select the **Manage Campaigns** icon in the sidebar.

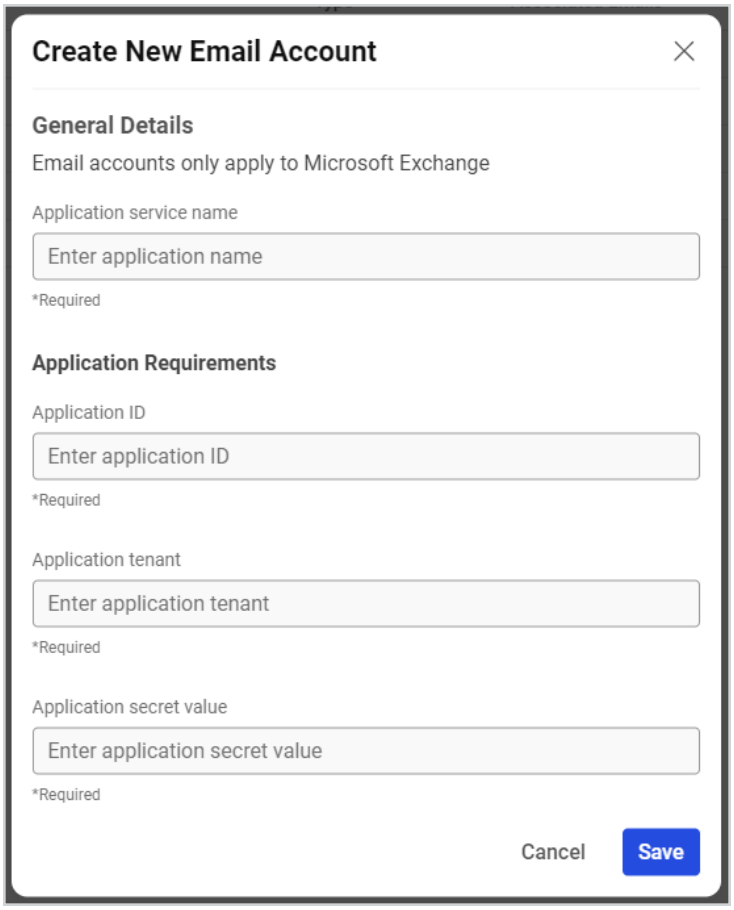


The **Email Accounts** page opens.

2 Select **Create Email Account**.



3 Enter the required information from your Microsoft Azure account:



Field	Description
Application ID	A unique identifier assigned to a registered app in Azure Active Directory (Azure AD). Azure AD uses this ID to identify and authenticate the application when it connects to services or APIs.
Application tenant	The dedicated instance of Azure AD your organization or developer account uses to manage app identities and access.
Application secret value	AA confidential string that acts as the app's password. The secret, combined with the Application ID, allows the app to obtain tokens from Azure AD during authentication. **Note:** Save the application secret value in a secure location. Azure does not display it again after you leave the page.

4 Select **Save**.

5 Choose an email configuration for the new account.

> **Note**
> To edit an existing account, return to the Email Accounts page and select the account.

Digital Email Configurations

Configure and manage email accounts to ensure secure and efficient communication for campaigns. Proper email configurations enable reliable interactions between your system and email services, ensuring smooth campaign operations.

This section provides instructions for creating and managing email account configurations in Admin Console. You will define email protocols, configure OAuth2 authentication, and manage client credentials to meet security and compliance standards.

This is a reminder that before you begin, you must log in to Admin Console. Here, you can enable Email Configurations and assign permissions and permission sets.

> **Important**
> If you have not yet migrated to the Digital Admin Console, refer to Creating Email Accounts in SCC Admin.

Use the following topics to configure emails in Admin Console.

OAuth2 Client Credential Digital Email Configurations
    Creating OAuth2 Client Credential Digital Email Configurations
OAuth2 for Office 365 Exchange Server Digital Email Configurations
    Granting Administrator Consent
Creating OAuth2 for Office 365 Exchange Server Digital Email Configurations
Gmail Digital Email Configurations
Creating Generic Digital Email Configurations

OAuth2 Client Credential Digital Email Configurations

Set up an email configuration to utilize a single main service account for Microsoft 365 (o365) while integrating additional sub-mail accounts. These sub-mail accounts, granted access to the main account, are processed through the Five9 Email Proxy. This approach enables authentication via the main service account, removing the need for individual authentication of each sub-mail account.

Before starting, ensure that you configure the service accounts in Microsoft Azure and grant Five9 the necessary permissions to access the designated inboxes. This setup guarantees smooth email communication between your organization's email system and the Five9 platform.

When selecting this authentication type, the interface allows you to choose from existing service accounts or create a new one. The configured service account will manage both inbound and outbound email configurations.

Important

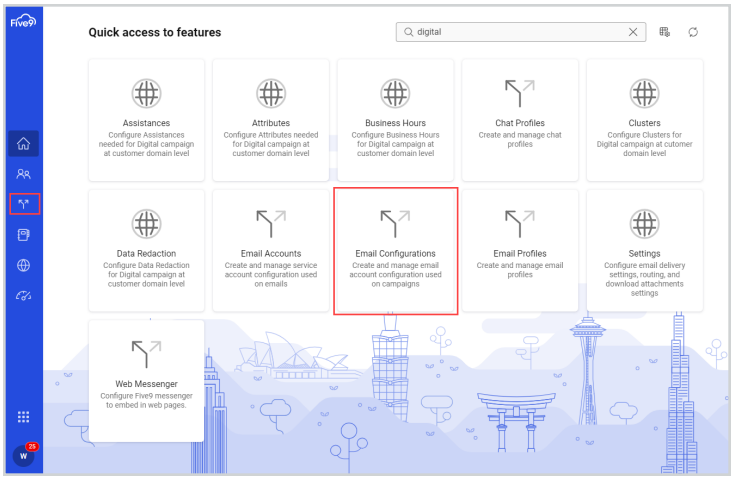
You cannot associate an OAuth2 token with more than one campaign. Tokens are campaign-specific and cannot be reused across multiple campaigns. Ensure each token is assigned to a single campaign to maintain proper functionality.

Note

This feature is available only for Microsoft 365 Online, not for Hosted Exchange Outlook 365.

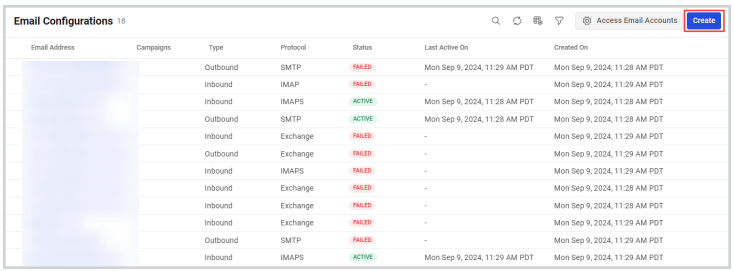
Creating OAuth2 Client Credential Digital Email Configurations

1. On the Admin Console home page, select the **Email Configurations** card or the **Manage Campaign** icon in the sidebar navigation.



The **Email Configurations** page displays.

1 Select **Create**.



2 Enter your email address.

3 From the dropdown menu, select a **Type**. The configured service account will handle both inbound and outbound email configurations.

4 Select **Exchange**. Note that SMTP, IMAP, and POP3 are not supported.

5 Select **Office 365**.

6 Select **OAUTH2 Client Credential**.

7 If you have an existing email account, select it from the dropdown. If not, create a new one by selecting the **Associate New Email Account** button. For more information, refer to the section on Digital Email Accounts.

Note

To edit an email configuration, select an email address from the Email Configurations page.

OAuth2 for Office 365 Exchange Server Digital Email Configurations

Microsoft has announced the end of support for Basic authorization in Office 365 Exchange Server. Therefore, if your accounts still use Basic authorization, you must upgrade to OAuth2. When you select the POPS, IMAPS, or Exchange protocol with Office 365 Exchange Server, you can assign OAuth2 authentication for email interactions.

If the Azure AD tenant administrator has disabled the ability to consent to applications accessing company data, users will see a consent screen after authentication when adding a token.

In this scenario, your domain administrator must grant admin consent to the Five9 application before you can configure OAuth2. To grant corporate consent for OAuth2 configuration, you need administrative approval from a global administrator, application administrator, or cloud application administrator.

Important

You cannot associate an OAuth2 token with more than one campaign. Tokens are campaign-specific and cannot be reused across multiple campaigns. Ensure each token is assigned to a single campaign to maintain proper functionality.

Granting Administrator Consent

You have three options for consent.

Option 1: Sign in Using Administrator Credentials

To obtain admin consent using administrator credentials, follow these steps:

1. Select **Have an admin account? Sign in with that account**, and sign in using domain administrator credentials.
2. After authentication, select **Consent on behalf of your organization**.

> **Important**
>
> Ensure that you are signed in to the correct account for your business. When generating a token, Microsoft O365 will default to your currently logged-in account. Five9 will download emails from the current account. Five9 recommends using the same credentials for both the Campaign Email Address and OAuth2 configuration AD administrator.

Option 2: Authenticate Using Administrator Consent

To authenticate using administrator consent, follow these steps.

1. Share the appropriate admin consent screen link with the tenant administrator based on your location:

location	URL
US	https://login.microsoftonline.com/common/adminconsent?client_id=628fc081-b066-4302-9878-69974e6bb61e
CA	https://login.microsoftonline.com/common/adminconsent?client_id=628fc081-b066-4302-9878-69974e6bb61e
EU	https://login.microsoftonline.com/common/adminconsent?client_id=f24962af-4f46-494f-a64d-344361177216
UK	https://login.microsoftonline.com/common/adminconsent?client_id=f24962af-4f46-494f-a64d-344361177216

2. Replace `<us_client_id>` and `<eu_client_id>` with the actual Five9 application IDs.
3. When prompted, authenticate and select **Accept**.
4. Once consent has been granted, you can begin adding tokens.

Option 3: Authenticate Using Powershell and Azure AD

To obtain admin consent using PowerShell and Azure AD, follow these steps:

1. Connect to Azure AD in PowerShell and create a new service principal using one of the following commands, based on your location:
   - For Five9.com users:

     ```
     New-AzureADServicePrincipal -AppId <us_client_id>
     ```

   - For Five9.eu users:

     ```
     New-AzureADServicePrincipal -AppId <eu_client_id>
     ```

2 Replace `<us_client_id>` and `<eu_client_id>` with the actual Five9 application IDs.

3 Open the Azure AD administration screen, go to Enterprise Applications, and search for Five9 applications.

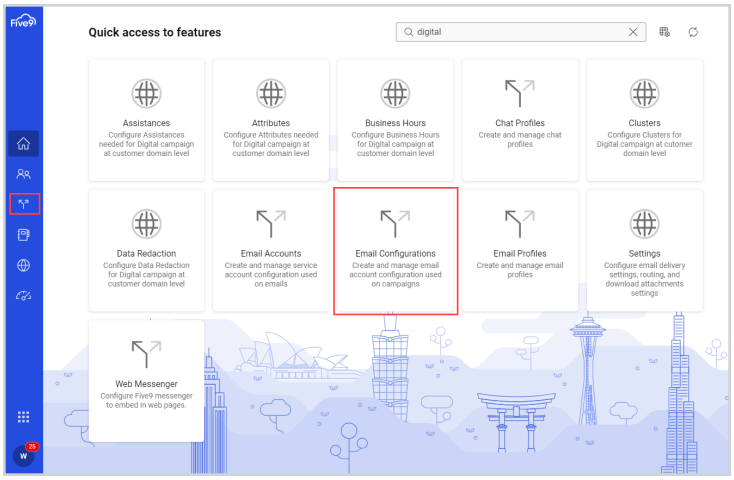
4 Select the application name, then go to **Permissions**.

5 Select **Grant consent for <application>**, then select **Accept**.

6 Once permissions are granted, you can begin adding tokens.

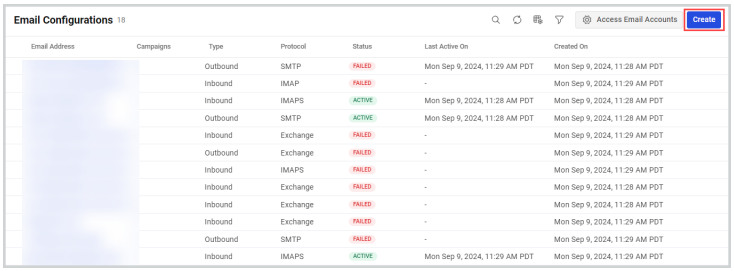
Creating OAuth2 for Office 365 Exchange Server Digital Email Configurations

1 On the Admin Console home page, select the **Email Configurations** card or the **Manage Campaign** icon in the sidebar navigation.



The **Email Configurations** page displays.

1 Select **Create**.



2 Enter your Email address.

3 Select a Type from the drop down list.

4 Select a protocol. OAuth2 is supported in POPS, IMAPS, and Exchange.

5 Confirm that **OAuth2** is selected as your Authorization type.

6 If you are not the account owner, proceed to step 9.

7 To add a token, click **Add token**.

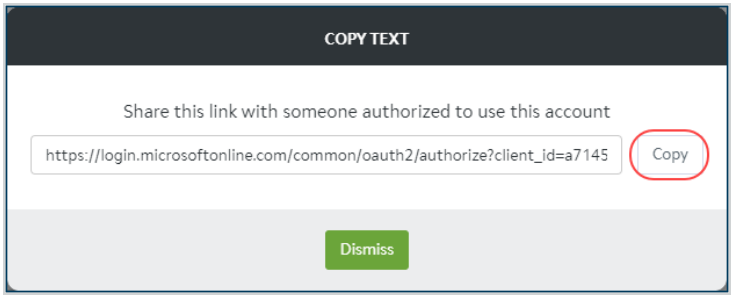
8 Follow the instructions to log into your Microsoft Exchange account.

This window closes once authentication is verified.

9 Proceed to step 11.

10 If you are not the account owner, click **Generate add token link**.

This button generates a link that you can send to the account owner to grant OAuth2 access to your Office 365 Exchange instance.



11 Send the generated link to the Office365 Exchange account owner to grant OAuth2 access to your Office 365 Exchange instance.

Once accepted, the OAuth2 token appears in your token list. You can refresh the list to see any updates.

12 Select the authenticated token from your token list.

If this is your first authorization token, it is selected automatically.

13 To verify that your OAuth2 setup is complete, click **Test**.

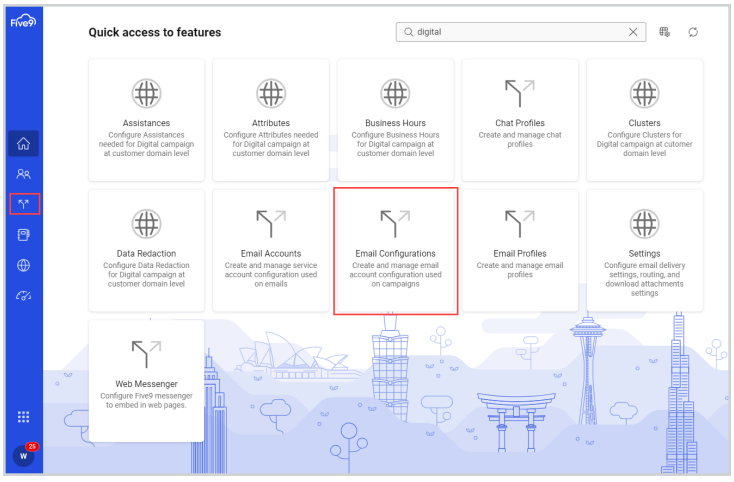
> **Note**
>
> Five9 recommends to connect Exchange Online with Exchange protocol, although it is possible to connect with IMAPS or POP3S protocols and Oauth2 authentication type.

Gmail Digital Email Configurations

New Gmail accounts use basic authentication and require additional configuration for Five9 to pull email interactions from your Gmail account. To complete your Gmail configuration, see sign in with app passwords.

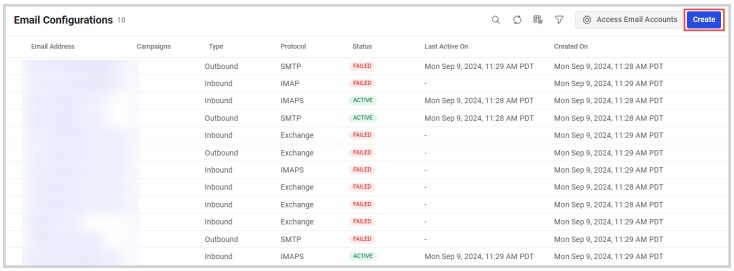
Creating Generic Digital Email Configurations

1 On the Admin Console home page, select the **Email Configurations** card or the **Manage Campaign** icon in the sidebar navigation.



The **Email Configurations** page displays.

2 Select **Create**.



3 Enter your email address.

4 Select **Inbound** or **Outbound** and complete the fields as needed. The image shows Exchange selected as Protocol.

Field	Description
Save Original Inbound Email	Creates a new folder to store a copy of processed emails. **Disabled (default):** No additional folders are created and emails are deleted after processing. **Enabled:** Five9 creates a folder, Five9Processed_<ProfileName>, to store a copy of processed email interactions.
Enable Auto-pushback	Returns email interactions to the queue so that the interactions are reassigned if the agent who owns the interaction has not responded after the time specified in the Auto-pushback Interval field below.

Note

To edit an email configuration, select an email address from the Email Configurations page.

Digital Settings

Use Digital Settings to configure system-wide behavior for email delivery, routing, and attachment handling. These settings apply across all campaigns that support chat and/or email.

> **Note**
>
> Before you begin, log in to Admin Console. You must enable Settings and assign Digital Settings Permission Sets.

> **Important**
>
> If you have not yet migrated to the Digital Admin Console, refer to Enable Global Settings in SCC Admin.

Use the following topics to configure Digital Settings in Admin Console.

Digital Settings Permission Sets
Configuring Digital Settings
Digital Routing
Digital Email Notifications

Digital Settings Permission Sets

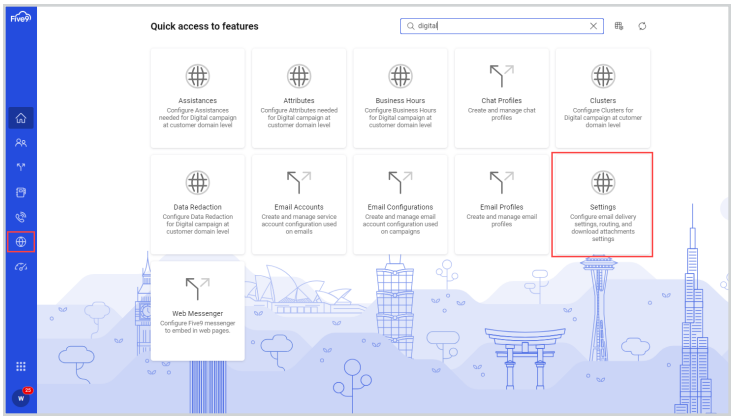
This section lists the permissions required to manage global digital settings in Admin Console. These permissions allow users to create, view, edit, and manage configuration settings that control the behavior of digital interactions across campaigns.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	settings	Create Digital Settings	Allows users to define new global digital settings, such as email routing and attachment preferences.
		Delete Digital Settings	Allows users to permanently remove existing global digital settings.
		Edit Digital Settings	Grants access to modify global digital settings applied across campaigns.
		View Digital Settings	Grants read-only access to review current global digital settings.

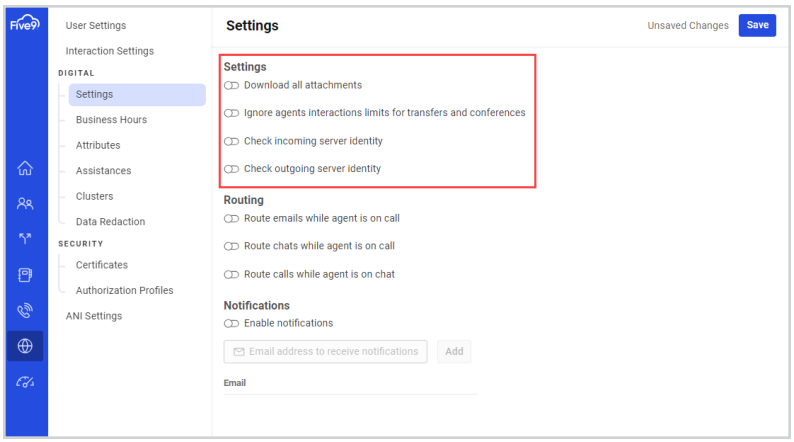
Configuring Digital Settings

1 Select the **Settings** card or the **Manage Environment** icon in the sidebar navigation.



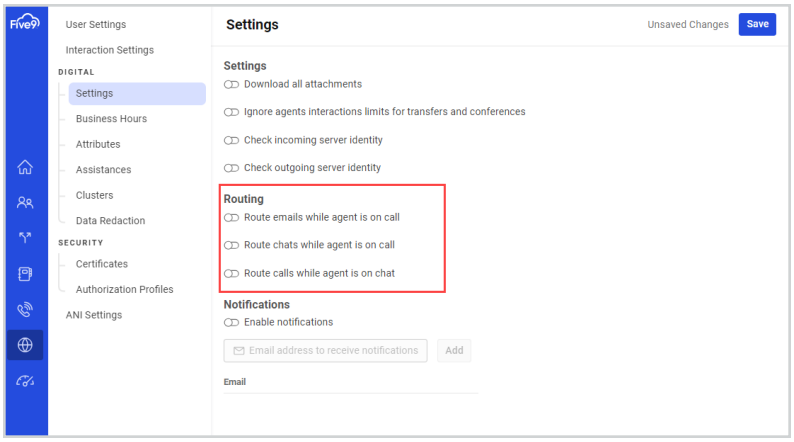
The **Digital Settings** page displays.

To override the number of concurrent digital engagements set in the VCC Administrator application, enable Ignore Agent Interaction Limits for Transfers. This action allows agents to receive additional email messages, chat conferences, and social interactions beyond the preset limits, ensuring that transferred interactions are automatically routed to the appropriate agents.



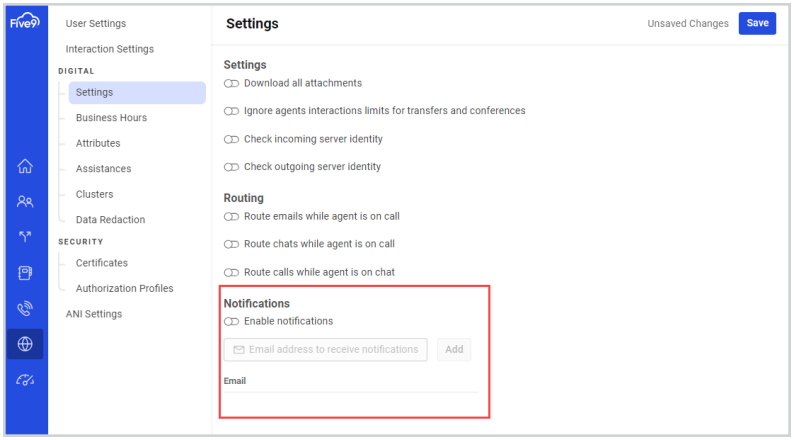
Digital Routing

Specify the interaction types to be distributed in this section.



Digital Email Notifications

Enable notifications for email account errors, such as expired tokens, expired passwords, or failed authentication, in this section.



You can configure notifications for up to 20 email addresses. Notifications are sent on the 1st, 3rd, 5th, and 7th days after an error is detected, with details specific to the error. If the configuration error persists beyond the 7th day, email accounts with the same settings for inbound and outbound email will be disabled.

To enable email notifications, follow these steps:

1. Select **Enable notifications**.
2. Enter a valid email address to receive notifications.
3. Select **Add**.
4. Repeat steps 2 and 3 to add up to 20 email addresses.
5. Select **Save**.

Digital Business Hours

Configure chat hours of operation and provide an after-hours message when you are unavailable. Allow customers to submit emails outside business hours via the chat console. This setting applies to all chat-enabled campaigns, except those with business hours defined in the associated chat profile.

> **Note**
> Before you begin, log in to log in to Admin Console. You must enable Business Hours and assign the required Digital Business Hours Permission Sets.

> **Important**
> If you have not yet migrated to the Digital Admin Console, refer to Business Hours in SCC Admin.

Use the following topics to configure Business Hours in Admin Console.

Digital Business Hours Permission Sets

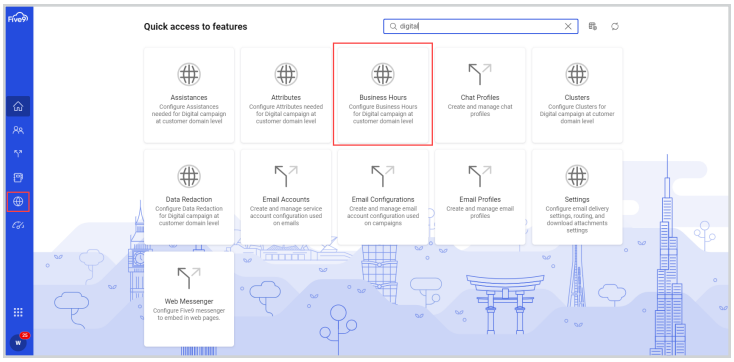
This section lists the permissions required to manage business hour settings in Admin Console. These permissions allow users to create, view, edit, and delete business hour configurations.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	business-hours	Create attribute	Allows users to define new sets of business hours.
		Delete attribute	Allows users to remove existing business hour configurations.
		Edit attribute	Grants access to modify existing business hour settings.
		View attribute	Grants read-only access to view business hour configurations.

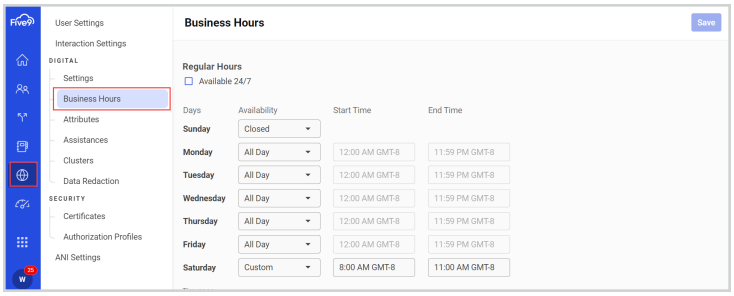
Configuring Digital Business Hours of Operation

1 Select the **Business Hours** card or the **Manage Environment** icon in the sidebar navigation.



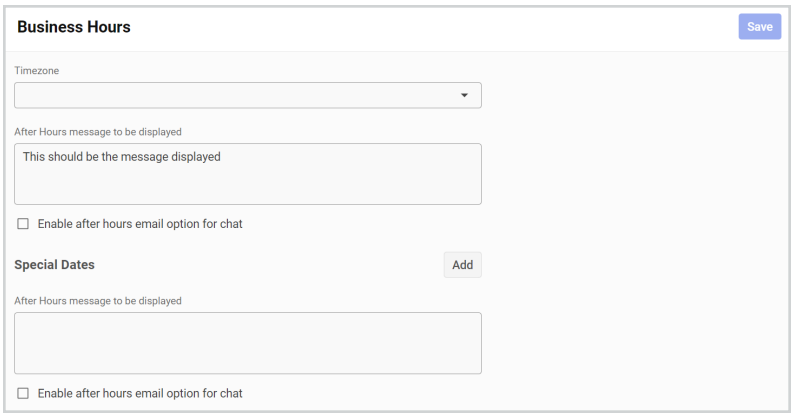
The **Business Hours** page displays.

2 Modify the desired fields and set your Timezone.



Digital Special Dates and After Hours Messages

Define special days, such as holidays, using a specific time zone for each special day. Special Dates override predefined business hours on overlapping weekdays. Special messages replace standard messages during defined special dates or hours.



Digital Attributes

Tag interactions with predefined attributes to facilitate filtering for reporting purposes. Multiple attributes can be assigned to a single interaction.

Note

Before you begin, log in to log in to Admin Console. You must enable Attributes and assign the required Digital Attributes Permission Sets.

Important

If you have not yet migrated to the Digital Admin Console, refer to Attributes in SCC Admin.

Digital Attributes Permission Sets

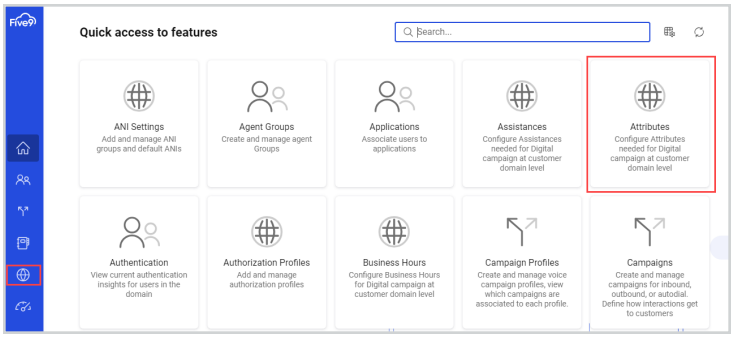
This section lists the permissions required to manage attributes in the Admin Console. These permissions allow users to create, edit, and delete attribute configurations used to tag and filter digital interactions.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	attribute	Create attribute	Allows users to define new digital attributes for tagging interactions.
		Delete attribute	Allows users to remove existing attributes from the system.
		Edit attribute	Grants access to modify the name, values, or settings of existing attributes.
		View attribute	Grants read-only access to view defined attributes and their settings.

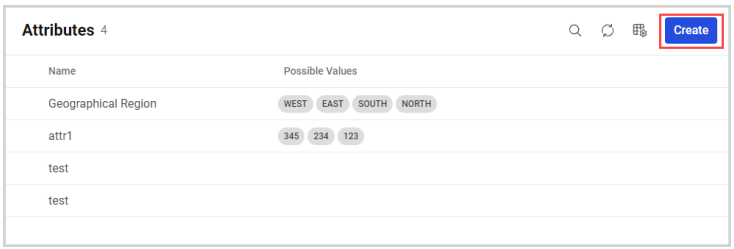
Creating Digital Attributes

1 Select the **Attributes** card or the **Manage Environment** icon in the sidebar navigation.

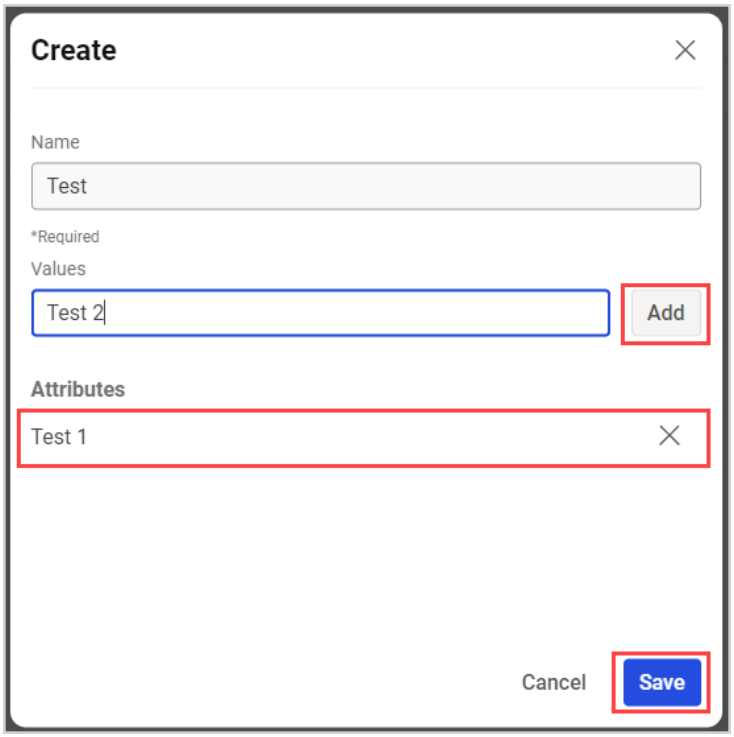


The **Attributes** page displays.

2 Select **Create** and enter the name and values of the attributes.

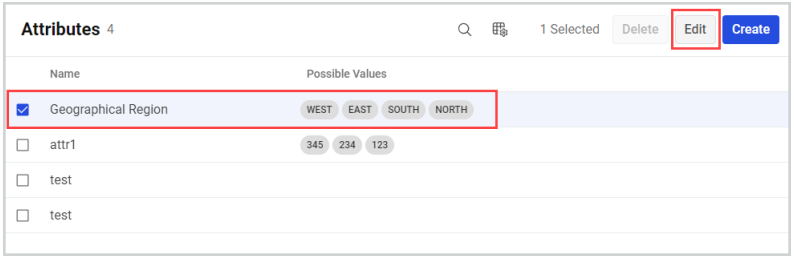


3 Select the **Add** button to add the Attributes to the Values field.



4 Select **Save**.

To edit the values, select a value in the table and then the **Edit** button.



Digital Assistances

Assistances are predefined responses used in chat, email, or social media interactions to provide consistent and accurate answers to customer inquiries. Designed for typical questions and common scenarios, assistances streamline workflows by saving time and effort.

These responses are essential for routine interactions, ensuring uniformity and efficiency, and enhancing the customer service experience. For example, an assistance may include step-by-step instructions for resetting a password or a link to detailed guidelines.

By using assistances, you can efficiently manage repetitive tasks, allowing you to focus on more complex customer needs.

Note

Assistance responses do not pass inline images for all email providers.

Note

Before you begin, log in to Admin Console. You must enable Assistances and assign Digital Assistances Permission Sets.

Important

If you have not yet migrated to the Digital Admin Console, refer to Assistances in SCC Admin.

Use the following topics to create Digital Assistances in Admin Console.

Digital Assistances Permission Sets
Creating Digital Assistances
Associating a Digital Assistance with a Profile

Digital Assistances Permission Sets

This section lists the permissions required to manage assistances in Admin Console. These permissions allow users to create, view, edit, and delete assistance templates used to support digital interactions.

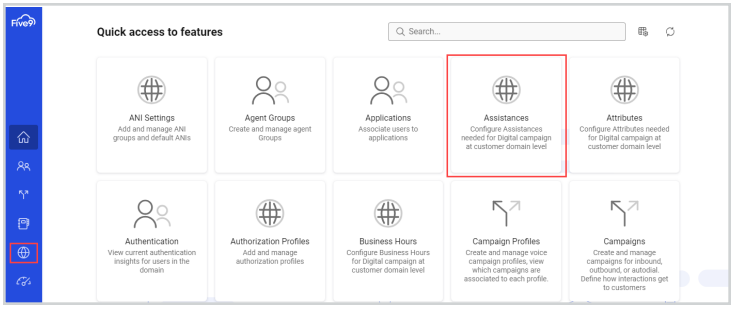
To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	assistance	Create assistance	Allows users to create new assistances for use in digital interactions.

Group	Subset	Permission	Description
		Delete assistance	Allows users to permanently remove existing assistance templates.
		Edit assistance	Grants access to update the content or configuration of an existing assistance.
		View assistance	Grants read-only access to view assistance templates and details.

Creating Digital Assistances

1 Select the **Assistances** card or the **Manage Environment** icon in the sidebar navigation.



The **Assistances** page displays.

2 In the **Name** field, enter a descriptive title for the assistance.

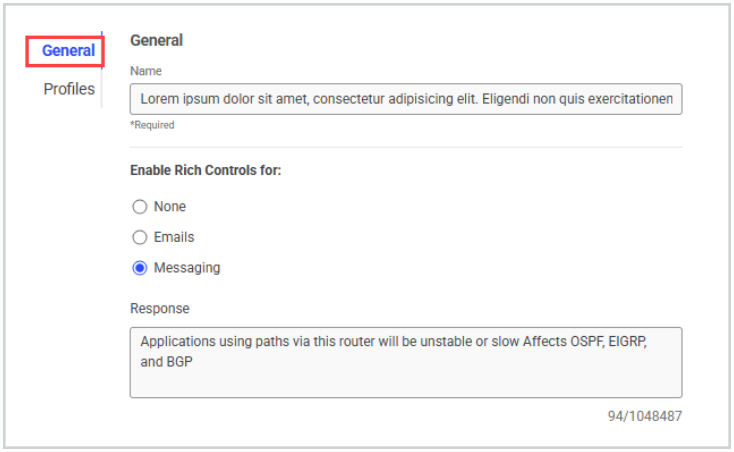
This field is required.

3 Under **Enable Rich Controls for**, select how the system should handle text formatting and media support:

- **None** – Disables all rich control features.
- **Emails** – Enables formatting and media for email responses.
- **Messaging** – Enables formatting and media for messaging interactions.

4 In the **Response** field, enter the text to display to users. You may include URLs, variables, or formatted text, depending on the selected communication channel.

> **Example:** *Applications using paths via this router will be unstable or slow. Affects OSPF, EIGRP, and BGP.*



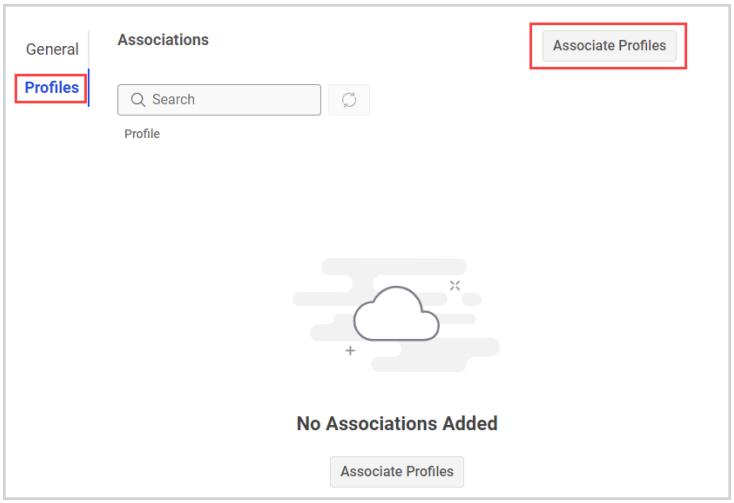
> **Note:** The system displays a character count in the lower-right corner of the response field to help you manage message length.

5 Select **Done**.

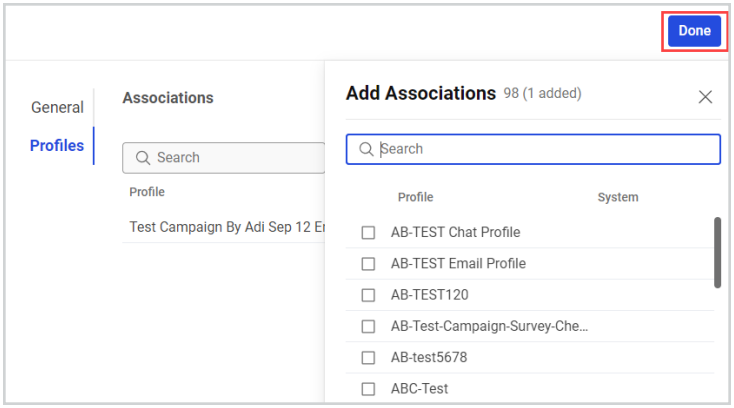
Associating a Digital Assistance with a Profile

To associate an assistance with a profile:

1 In the **Profiles** tab, select the **Associate Profiles** button.



2 Select a profile from the list and select **Done**.



Digital Clusters

Digital Clusters identify issues or trending topics based on keywords associated with profiles. These profiles track the progress of outreach to customers and authors of incoming media posts. Use Clusters to tag, categorize, and filter interactions based on static business-related topics or Persistent Business Categories that your company regularly manages.

> **Note**
>
> Before you begin, log in to Admin Console. You must enable Clusters and assign the required Digital Clusters Permission Sets.

Digital Clusters Permission Sets

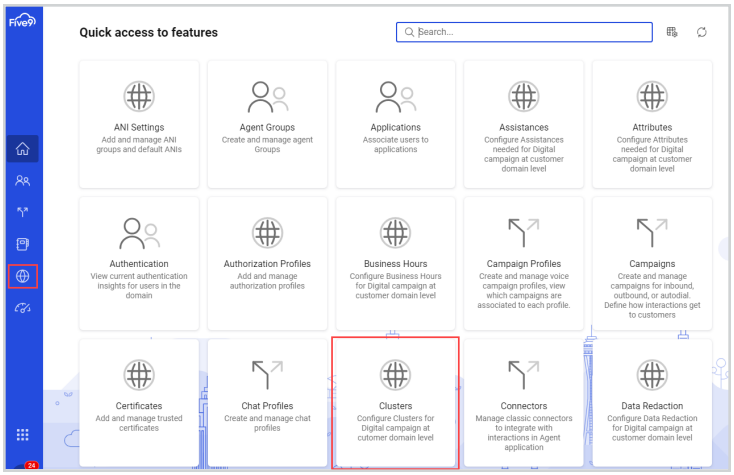
This section lists the permissions required to manage digital clusters in Admin Console. These permissions allow users to create, edit, view, and delete cluster configurations used to group and classify interactions.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	cluster	Create cluster	Allows users to create new digital clusters for tagging and organizing interactions.
		Delete cluster	Allows users to remove existing digital clusters from the system.
		Edit cluster	Grants access to modify cluster names, criteria, or other settings.
		View cluster	Grants read-only access to view existing digital clusters and their configurations.

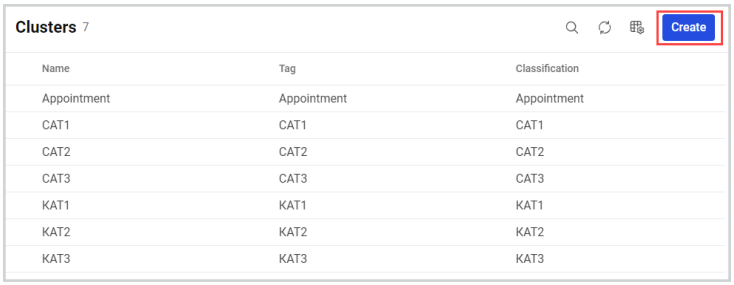
Creating Digital Clusters

1 Select the **Clusters** card or the **Manage Environment** icon in the sidebar navigation



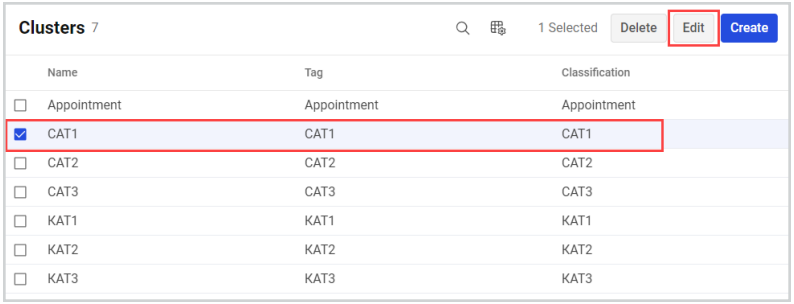
The **Clusters** page displays.

2 Select **Create** and complete the necessary fields.



3 Select **Save**.

To edit the clusters, select a cluster in the table and then the **Edit** button.



Digital Data Redaction

Data redaction removes sensitive information from digital interactions. You can create and associate custom data redaction rules with profiles. System-defined redaction rules in the Administrator Console are read-only. In Admin Console, you can select, deselect, and create new rules using the Data Redaction card. Rules can include regular expressions (RegEx) to define redaction sequences.

Note

Before you begin, log in to Admin Console. You must enable Data Redaction and assign the required Digital Data Redaction Permission Sets.

Important

If you have not yet migrated to the Digital Admin Console, refer to Data Redaction in SCC Admin.

Digital Data Redaction Permission Sets

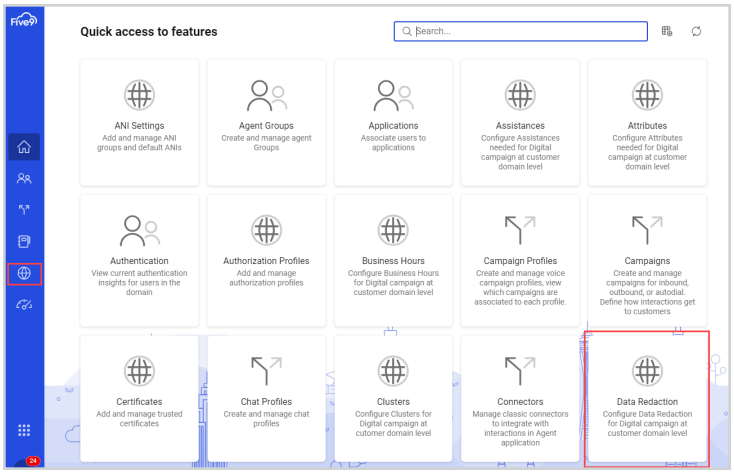
This section lists the permissions required to manage data redaction rules in Admin Console. These permissions allow users to create, edit, delete, and view rule configurations used to redact sensitive data from digital interactions.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	data-redaction	Create data redaction rule	Allows users to define new redaction rules to mask sensitive information using text patterns or RegEx.
		Delete data redaction rule	Allows users to permanently remove existing redaction rules.
		Edit data redaction rule	Grants access to update the pattern, sequence, or behavior of existing redaction rules.
		View data redaction rule	Grants read-only access to view all configured redaction rules.

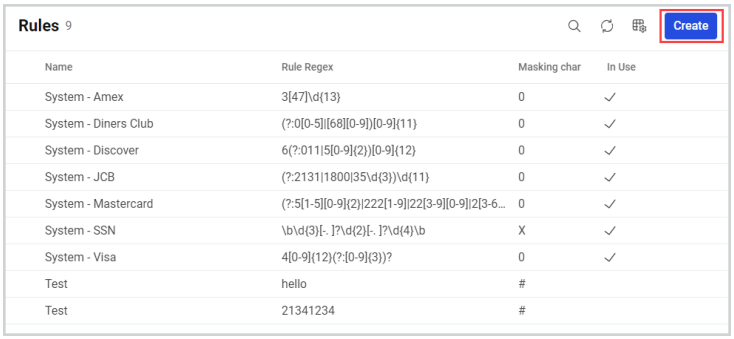
Creating Digital Data Redaction Rules

1 Select the **Data Redaction** card or the **Manage Environment** icon in the sidebar navigation.



The **Rules** page displays.

2 Select **Create** and complete the necessary fields.



3 Select **Save**.

Dynamic Web Messenger in Admin Console

Web Messenger enables real-time communication between users and businesses through a web-based chat interface. It provides a seamless and customizable messaging experience, allowing businesses to engage with customers efficiently.

With Web Messenger, you can:

- Configure chat settings to match your business needs.
- Customize the widget appearance, language options, and messages.
- Enable features such as file uploads, location sharing, and sound notifications.
- Manage chat availability based on business hours.

Web Messenger integrates with existing customer service workflows, improving user engagement and support efficiency.

Web Messenger Permission Sets

This section lists the permissions required to access and manage Dynamic Web Messenger in the Admin Console. These permissions allow users to configure and maintain chat experiences for web-based engagement.

To assign permissions to multiple users or create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation.

Group	Subset	Permission	Description
messaging	web-messenger	Configure web messenger	Grants access to the Web Messenger settings page for general configuration tasks.
		Create Chat Configuration	Allows users to create new chat configurations, including behavior and appearance settings.
		Delete Chat Configuration	Allows users to permanently delete existing chat configurations.
		Deploy Chat Configuration	Grants permission to deploy chat configurations to the live environment.
		Edit Chat Configuration	Allows users to modify existing chat configurations.
		View Chat Configuration	Grants read-only access to view chat configuration settings.

Important

Five9 does not recommend sending shared attachments with personally identifiable information (PII) data. Any attachment with PII should be attached directly to only one contact. If you choose to send an attachment with PII data to multiple users, the compliance responsibility for the California Consumer Privacy Act (CaCPA) and the General Data Protection Regulation (GDPR) is your responsibility to address. Five9 will only purge attachments that are related to a single user. If you use an attachment to send to multiple users when we purge for one of the users then that shared attachment will also be purged.

Web Messenger Configuration

Use the Configurations page to create, edit, or import a Web Messenger configuration. You can define general details, settings, prompts, messages, widget display options, and asynchronous chat settings.

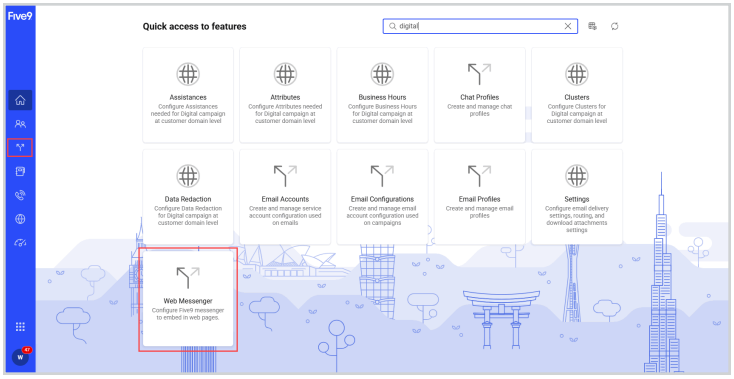
Creating a Web Messenger Configuration
- General Details
- Settings

Pre-Capture Fields
Customize Messages
Widget Display
Importing a Web Messenger Configuration
Deleting a Web Messenger Configuration

Creating a Web Messenger Configuration

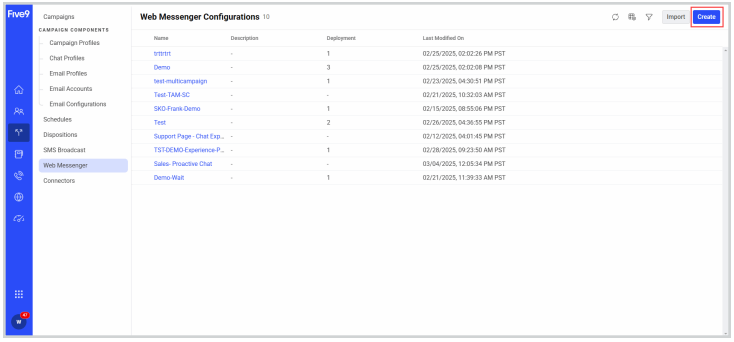
After logging in successfully, the **Admin Console** home page appears.

1 Select the **Web Messenger** card, or choose the **Manage Campaigns** icon from the sidebar navigation.



The **Web Messenger Configurations** page displays.

2 Select the **Create** button.

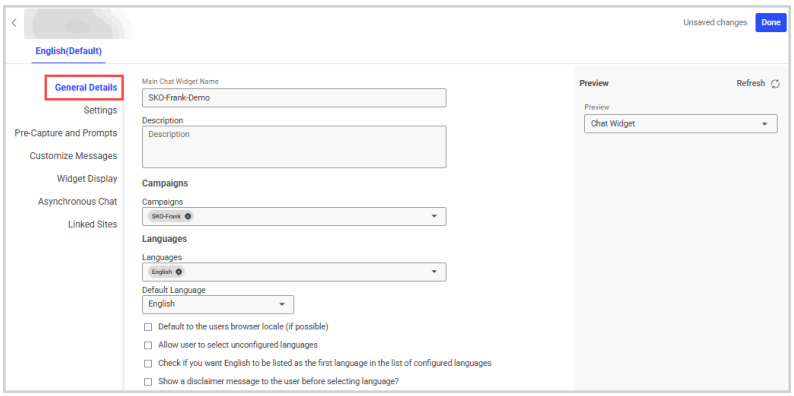


3 The Web Messenger **General Details** page displays.

> **Note**
>
> To edit a Web Messenger configuration, select a name from the **Web Messenger Configuration** page.

General Details

Use the **General Details** tab to configure the core identity and language behavior of your chat widget. This includes assigning a name, description, campaign association, and language options.



Set Widget Identity

1. In the **Main Chat Widget Name** field, enter a descriptive name for the widget. This name helps identify the configuration in the Admin Console.
2. In the **Description** field, enter a summary that explains the widget's purpose or intended use.

Assign a Campaign

1. In the **Campaigns** section, select the campaign that you want to associate with the chat widget from the drop-down list.

   Associating the widget with a campaign ensures the correct routing and reporting for conversations initiated through this configuration.

Configure Language Preferences

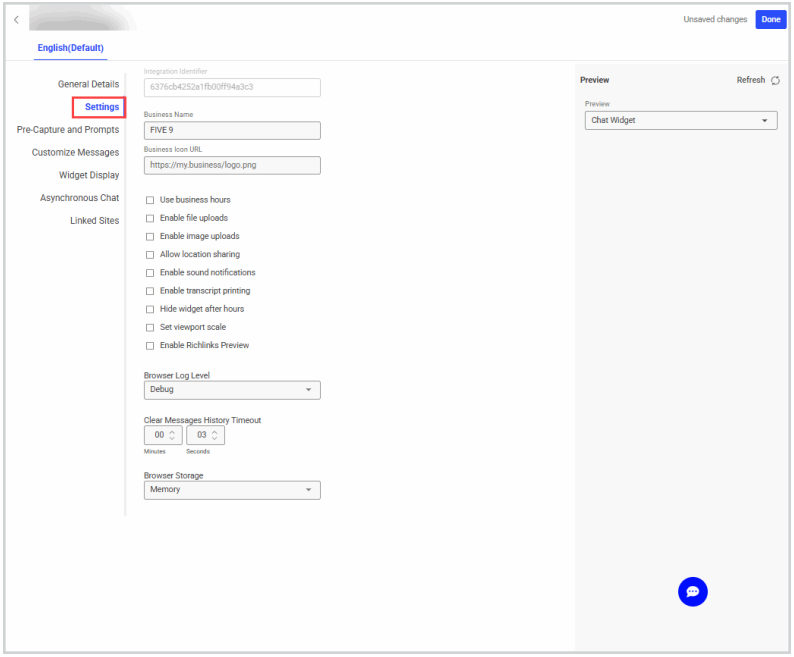
1. In the **Languages** section, select one or more supported languages from the list.
2. From the **Default Language** drop-down, choose the language that the widget will use by default.

You can also configure additional language behaviors by selecting the appropriate checkboxes:

- **Default to the user's browser locale (if possible):** Automatically match the widget language to the user's browser settings.
- **Allow user to select unconfigured languages:** Let users choose languages not explicitly defined in your configuration.
- **Check if you want English to be listed as the first language in the list of configured languages:** Prioritize English at the top of the language selection list.
- **Show a disclaimer message to the user before selecting language?:** Display a custom message before the user selects a language.

Settings

Use the **Settings** tab to define the business name, branding, and chat behavior for your Chat Widget. You can also enable or disable specific features such as uploads, notifications, and browser storage options.



Define Business Details

1. In the Business Name field, enter the name to display in the chat widget header.
2. In the Business Icon URL field, enter the URL for your logo. This image appears in the widget interface.

> **Note**
> The Integration Identifier is system-generated and read-only.

Enable or Disable Chat Features

Select the checkboxes to configure the following features:

- **Use business hours:** Limit widget availability to predefined hours.
- **Enable file uploads:** Allow users to upload files during a conversation.
- **Enable image uploads:** Allow users to upload image files.
- **Allow location sharing:** Enable users to share their geographic location.
- **Enable sound notifications:** Play an alert sound for new messages.
- **Enable transcript printing:** Allow users to print a transcript of the chat session.
- **Set viewport scale:** Enable custom scaling for better display on specific devices.
- **Enable Richlinks Preview:** Show previews when users share rich links in chat.

Set Logging and Message Timeout

- **Browser Log Level**: Use the drop-down list to enable or disable specific log levels (Error, Debug, Info). These controls let administrators manage log verbosity directly in the UI without using the browser console.
- **Clear Messages History Timeout:** Use the spin boxes to set the duration of inactivity (in minutes and seconds) after which the chat message history clears automatically.

Select Browser Storage Mode

From the Browser Storage drop-down list, choose one of the following options:

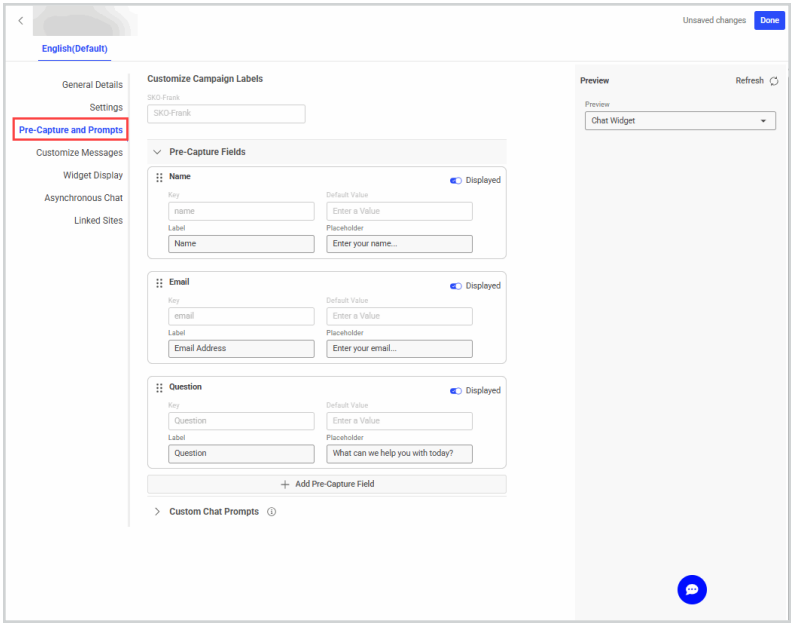
- **Local:** Store data in the browser's local storage. Data persists even after you close and reopen the browser.
- **Session:** Store data only for the active browser session. Data is removed when you close the browser.
- **Memory:** Store data in temporary memory. Data is cleared when you refresh the page or close the browser.

3 Select **Done** in the top-right corner to save the changes.

> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Pre-Capture Fields

Use the **Pre-Capture and Prompts** tab to collect user information before initiating a chat. Pre-capture fields help route conversations appropriately and ensure agents receive context before engaging.



Set Up Pre-Capture Fields

Each pre-capture field includes the following configurable components:

- **Key:** A system-recognized identifier for the field.
- **Default Value:** An optional predefined entry.
- **Label:** The field name shown to users.
- **Placeholder:** Instructional text that appears inside the field before the user types.

By default, the following fields are included and displayed:

Name Field

- **Key:** Name
- **Label:** Name
- **Placeholder:** *Enter your name...*

Email Field

- **Key:** Email
- **Label:** Email Address
- **Placeholder:** *Enter your email...*

Question Field

- **Key:** Question
- **Label:** Question
- **Placeholder:** *What can we help you with today?*

> **Note**
> The **Displayed** toggle controls whether the field is shown or hidden in the chat widget.

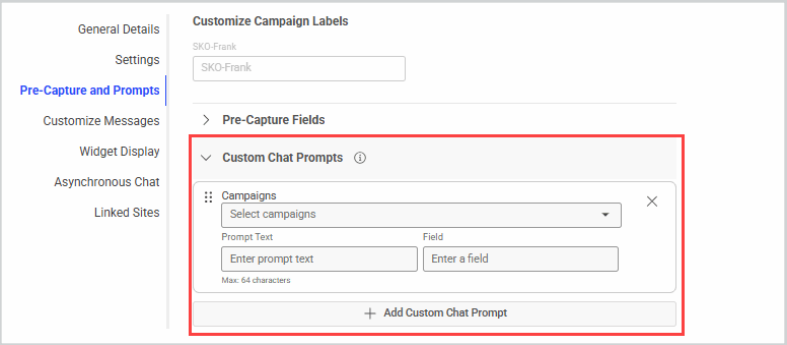
Add a New Pre-Capture Field

1. Select **Add Pre-Capture Field**.
2. Enter a **Key, Default Value, Label,** and **Placeholder.**
3. Use the **Displayed** toggle to show or hide the field in the chat widget.

Select **Done** to save your configuration.

Set Custom Chat Prompts for Proactive Chat Management

Use the **Custom Chat Prompts** section under the **Pre-Capture and Prompts** tab to configure targeted questions that appear before a chat session begins. These prompts help proactively collect user questions and streamline the conversation.



By default, no custom prompts are configured. To add one, follow these steps:

Create a Custom Chat Prompt

1. In the **Pre-Capture and Prompts** tab, expand the **Custom Chat Prompts** section.
2. In the **Campaigns** dropdown, select one or more campaigns that will use the prompt.
3. In the **Prompt Text** field, enter the question you want to display to users (maximum 64 characters).
4. In the **Field** field, specify the location in the linked site where the mouse hover action should be captured to display proactive offers. This is required when the proactive trigger condition is set to Mouse Hover.
5. To add additional prompts, select **Add Custom Chat Prompt** and repeat the steps above.
6. Select **Done** to save your configuration.

> **Note**
>
> These prompts appear automatically when a user meets the proactive trigger condition—for example, spending 10 seconds on a page. Once

the chat prompt is engaged and a session begins, agents receive relevant context from the start.

Note

Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Customize Messages

The **Customize Messages** tab allows you to tailor system-generated chat messages to enhance user experience and maintain a consistent brand voice. This section provides customization options for various chat interactions, including pre-chat form errors, conversation settings, file uploads, location services, business hours messaging, system notifications, and post-chat responses. By modifying these messages, you can ensure clear communication, improve user engagement, and create a more seamless support experience.

Use the following topics to **Customize Messages**.

Pre Capture Form Errors

Conversation Settings

Image and Attachment Messages

Location, Sound, and Transcript Messages

Out-of-Business Hours Messages

System Chat Messages

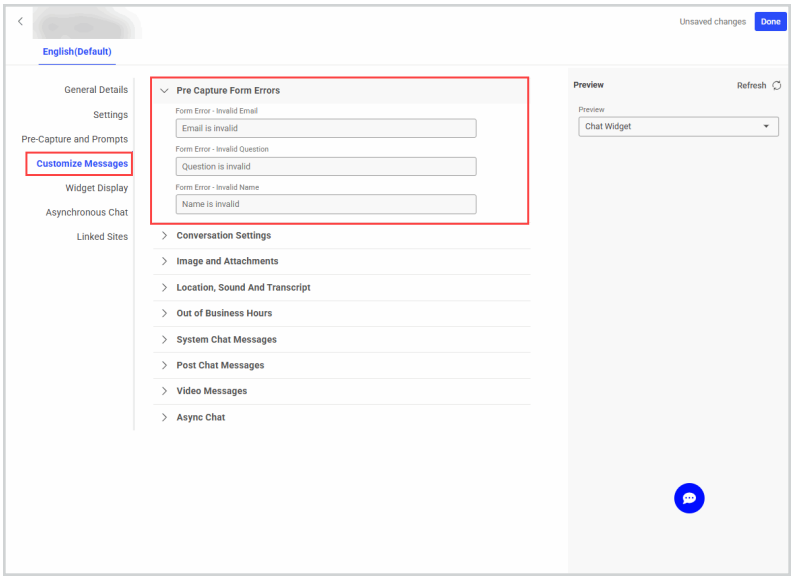
Post Chat Messages

Video Messages

Pre Capture Form Errors

Use the **Pre Capture Form Errors** section in the **Customize Messages** tab to define the messages shown when users enter invalid input in pre-capture fields. Update the text

to reflect your brand voice or to provide more helpful guidance.



To configure error messages:

1. Expand the **Pre Capture Form Errors** section.
2. In each field, enter a custom error message:
    - **Invalid Email:** Shown when the user enters an email address in an invalid format.
    - **Invalid Question:** Shown when the question field is left empty or improperly formatted.
    - **Invalid Name:** Shown when the name field is left empty or contains unsupported characters.

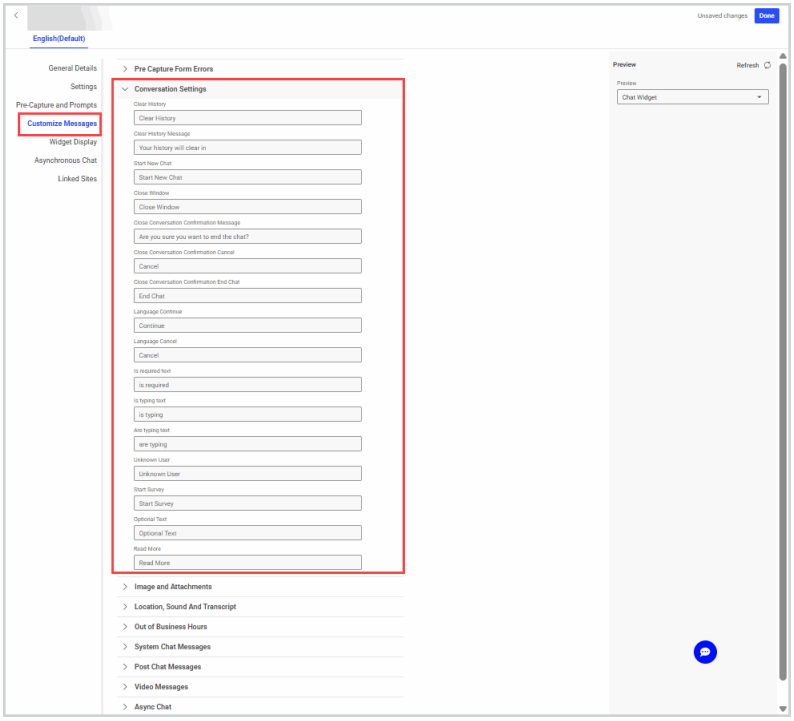
> **Note**
> Keep error messages clear and concise. For example, “Please enter a valid email address” offers more actionable guidance than “Email is invalid.”

3. Select **Done** in the top-right corner to save the changes.

> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Conversation Settings

Use the **Conversation Settings** section under the **Customize Messages** tab to personalize the system text shown during various points in the chat experience. These labels and prompts appear throughout the user's interaction with the chat widget.



Edit Conversation Messages

1. Expand the Conversation Settings section.
2. Modify any of the default text values to match your brand voice or provide clearer messaging:

Field Label	Description
Clear History	Label for the button to clear chat history.

Field Label	Description
Clear History Message	Message shown when chat history is about to clear.
Start New Chat	Button text to begin a new conversation.
Close Window	Button label to close the chat widget.
Close Conversation Confirmation Message	Confirmation message asking the user if they want to end the chat.
Close Conversation Confirmation Cancel	Button to cancel ending the chat.
Close Conversation Confirmation End Chat	Button to confirm ending the chat session.
Language Continue	Label for continuing in the selected language.
Language Cancel	Label for canceling language selection.
Is Required Text	Message shown when a required field is left blank.
Is Typing Text / Are Typing Text	Status text shown when the agent or user is typing.
Unknown User	Placeholder shown when the user identity is unknown.
Start Survey	Button label to start the post-chat survey.
Optional Text	Label used for optional fields.
Read More	Label for expanding a longer message.

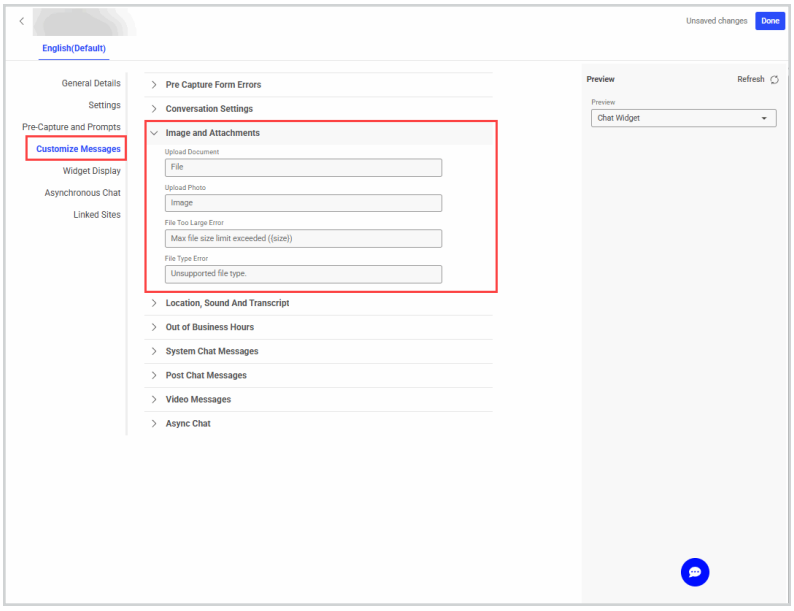
3 Select **Done** in the top-right corner to save the changes.

Note

Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Image and Attachment Messages

Use the **Image and Attachments** section under the **Customize Messages** tab to define system labels and error messages related to file uploads. These messages guide users when they upload documents or images and provide feedback when errors occur.



Configure Upload Labels and Errors

1 Expand the **Image and Attachments** section.

2 Customize the following fields:

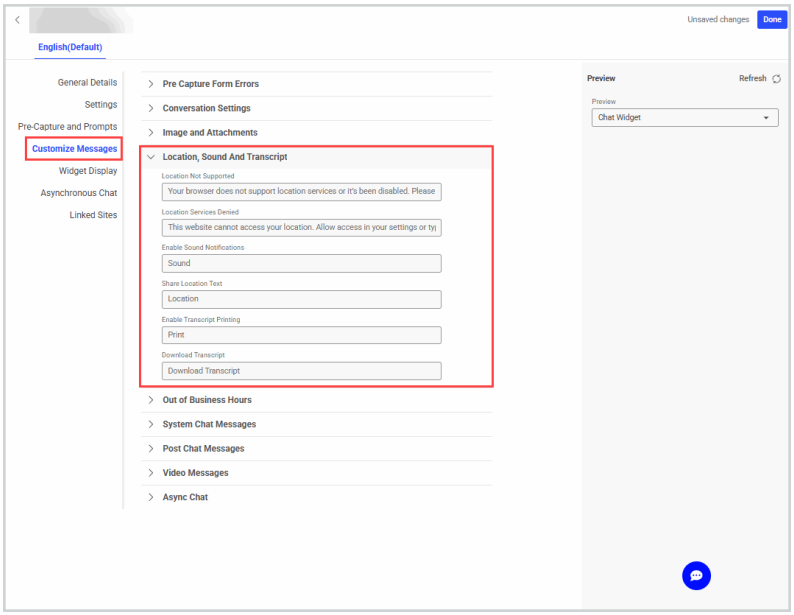
Field Label	Description
Upload Document	Label shown on buttons or prompts for uploading general files.
Upload Photo	Label shown when prompting users to upload an image.
File Too Large Error	Message displayed when a file exceeds the maximum size limit. Use `{{size}}` to dynamically insert the limit value. Example: *Max file size limit exceeded (10MB).*
File Type Error	Message shown when a user attempts to upload an unsupported file format.

3 Select **Done** in the top-right corner to save the changes.

> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Location, Sound, and Transcript Messages

Use the **Location, Sound and Transcript** section under the **Customize Messages** tab to define system text related to location services, sound notifications, and transcript functionality. These messages appear when users interact with features that rely on device capabilities or permissions.



Configure Message Text

1. Expand the Location, Sound and Transcript section.
2. Customize the following message fields as needed:

Field Label	Description
Location Not Supported	Message shown when the browser does not support location services or when location sharing is disabled.
Location Services Denied	Message displayed when the browser blocks location access. Instruct users to enable access via browser or device settings.
Enable Sound Notifications	Label for enabling or disabling sound alerts in the chat widget.
Share Location Text	Label displayed when prompting users to share their current location.

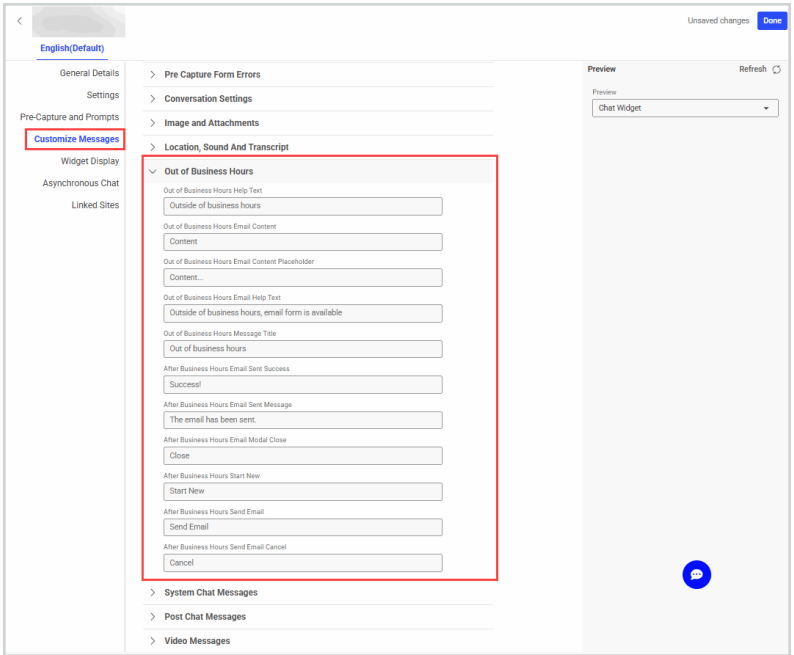
Field Label	Description
Enable Transcript Printing	Label for printing the chat transcript.
Download Transcript	Label for downloading the full chat transcript.

3 Select **Done** in the top-right corner to save the changes.

> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Out-of-Business Hours Messages

Use the **Out of Business Hours** section under the **Customize Messages** tab to configure the system text users see when they initiate a chat outside of support hours. You can tailor these messages to manage expectations, provide alternatives, and confirm email submission.



Configure Message Text

1 Expand the Out of Business Hours section.

2 Update the following fields to reflect your brand tone and support process:

Field Label	Description
Out of Business Hours Help Text	Message shown at the top of the chat widget outside business hours.
Out of Business Hours Email Content	Label for the email content field users fill out.
Out of Business Hours Email Content Placeholder	Placeholder text that appears in the email message field.
Out of Business Hours Email Help Text	Informational text explaining the email form is available.
Out of Business Hours Message Title	Title displayed in the widget during off-hours.
After Business Hours Email Sent Success	Confirmation message shown after the user sends an email.
After Business Hours Email Sent Message	Text that confirms the email was successfully submitted.
After Business Hours Email Modal Close	Label for the button that closes the email confirmation dialog.
After Business Hours Start New	Label for the button to start a new request or session.
After Business Hours Send Email	Label for the email submission button.
After Business Hours Send Email Cancel	Label for canceling the email form or closing the window.

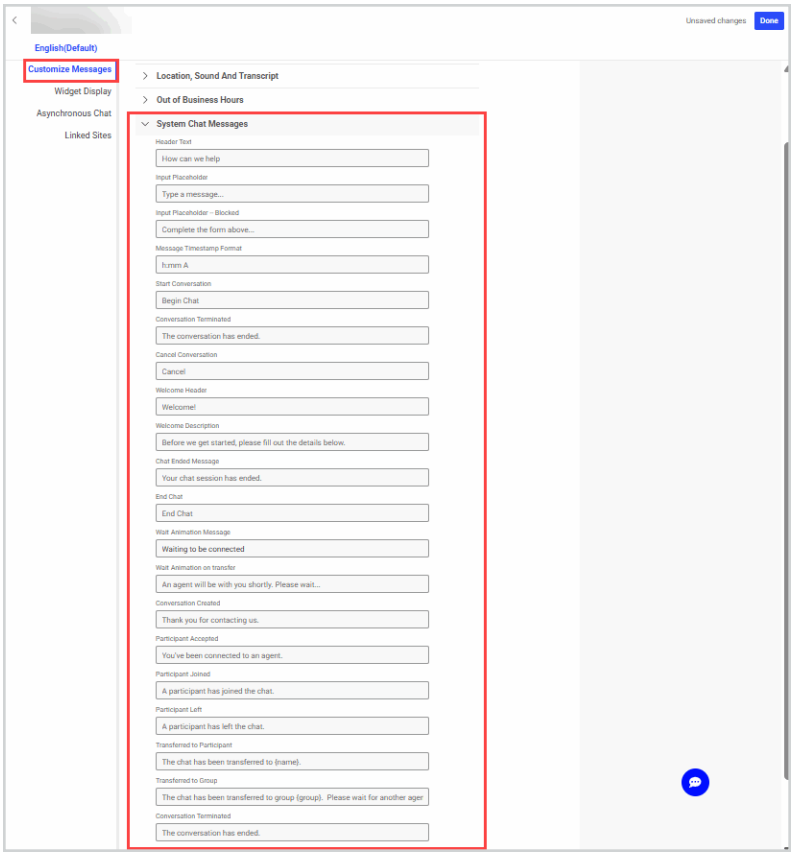
3 Select **Done** in the top-right corner to save the changes.

Note

Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

System Chat Messages

Use the **System Chat Messages** section under the **Customize Messages** tab to define core messaging shown throughout the live chat experience. These messages include UI labels, timestamps, system status updates, and conversation lifecycle events.



Configure System Message Fields

1. Expand the **System Chat Messages** section.
2. Update the following fields to reflect your desired tone and message clarity:

Field Label	Description
Header Text	Text displayed at the top of the chat window.
Input Placeholder	Placeholder text shown in the chat input field before a user types.
Input Placeholder –	Placeholder text shown when input is disabled due

Field Label	Description
Blocked	to missing prerequisites.
Message Timestamp Format	Defines how message time is displayed (e.g., h:mm A).
Start Conversation	Button label for beginning the chat session.
Conversation Terminated	Message shown when the session ends unexpectedly or times out.
Cancel Conversation	Label for the cancel button.
Welcome Header	Welcome message shown at the start of the session.
Welcome Description	Instructional text for users before they begin chatting.
Chat Ended Message	Message confirming the session has ended.
End Chat	Button label to end the chat manually.
Wait Animation Message	Message shown while the chat connects.
Wait Animation on Transfer	Message shown during an agent transfer.
Conversation Created	Message shown when the session is successfully initiated.
Participant Accepted	Message confirming the user has been connected to an agent.
Participant Joined	Notification that a participant has entered the chat.
Participant Left	Notification that a participant has exited the chat.
Transferred to Participant	Message confirming the chat was transferred to a specific agent.
Transferred to Group	Message confirming the chat was transferred to a group.
Conversation Terminated (Repeat)	Duplicate label—used for consistent system behavior at end of session.

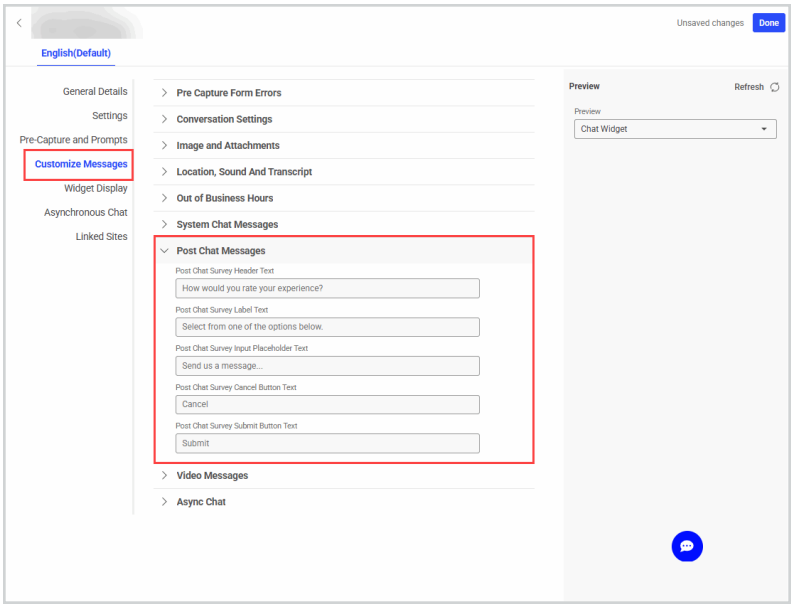
3 Select **Done** in the top-right corner to save the changes.

Note

Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Post Chat Messages

Use the **Post Chat Messages** section under the **Customize Messages** tab to configure the text that appears in the post-chat survey. These messages help gather user feedback after a conversation ends.



Configure Post-Chat Survey Text

1. Expand the **Post Chat Messages** section.
2. Update the following fields to match your preferred language, tone, or branding:

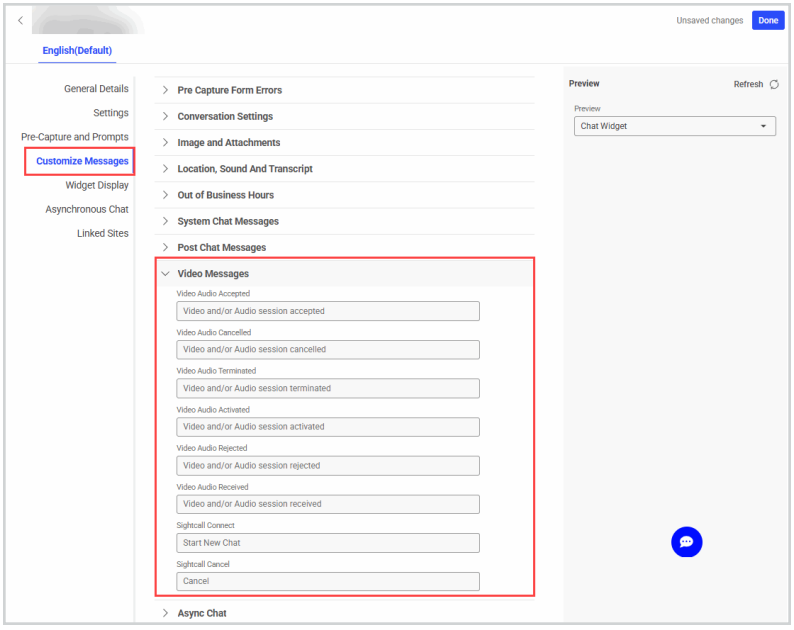
Field Label	Description
Post Chat Survey Header Text	Title text displayed at the top of the post-chat survey.
Post Chat Survey Label Text	Instructional text guiding the user to select a feedback option.
Post Chat Survey Input Placeholder Text	Placeholder text shown in the open-ended comment field.
Post Chat Survey Cancel Button Text	Label for the button that cancels the survey.
Post Chat Survey Submit Button Text	Label for the button that submits the survey response.

3 Select **Done** in the top-right corner to save the changes.

> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Video Messages

Use the **Video Messages** section under the **Customize Messages** tab to configure the text that appears during video and audio interactions. These messages help users understand the status of live communication features such as video calls, audio calls, and SightCall sessions.



Configure Video and Audio Session Text

1 Expand the Video Messages section.

2 Customize the following fields to align with your organization's terminology and tone:

Field Label	Description
Video Audio	Message shown when the user or agent accepts a video or

Field Label	Description
Accepted	audio session.
Video Audio Cancelled	Message shown when the session is cancelled before it begins.
Video Audio Terminated	Message displayed when the session ends unexpectedly or is forcefully closed.
Video Audio Activated	Message shown when a video or audio session begins.
Video Audio Rejected	Message displayed when the session request is declined.
Video Audio Received	Message shown when the video or audio invitation is received.
Sightcall Connect	Label for the button to initiate a new SightCall chat session.
Sightcall Cancel	Label for the button that cancels the SightCall session.

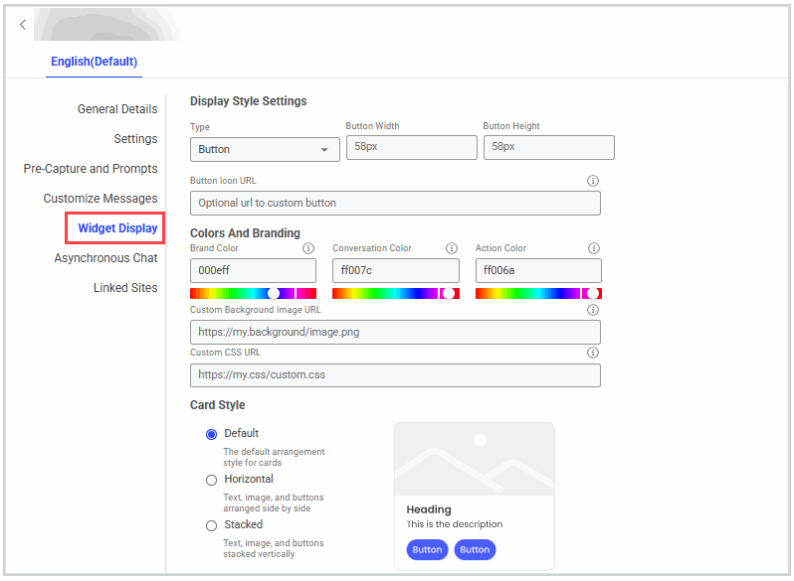
3 Select **Done** in the top-right corner to save the changes.

Note

Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Widget Display

Use the **Widget Display** tab to configure the appearance and layout of the chat widget. You can control button styling, colors, card layout, background imagery, and wait messaging to align the chat experience with your brand.



Configure Display Style Settings

1. From the **Type** drop-down list, select the widget launcher type.
2. Set the **Button Width** and **Button Height** in pixels to define the size of the launcher button.
3. In the **Button Icon URL** field, enter an optional URL for a custom button icon.

Apply Colors and Branding

1. Enter a **Brand Color** to define the primary widget color.
2. Set a **Conversation Color** to style the chat message background.
3. Use the **Action Color** to define the color of buttons and other interactive elements.
4. To apply a custom background, enter a URL in the **Custom Background Image URL** field.
5. To override default styling, enter a URL in the **Custom CSS URL** field.

   Ensure the stylesheet is accessible via HTTPS and uses selectors with higher specificity than the default styles.

Custom CSS Support

The **Custom CSS** feature allows users to override default styles by providing a custom CSS file. To ensure custom styles take precedence, selectors in the custom stylesheet must have **higher specificity** than the default styles. This minimizes conflicts and ensures seamless customization.

Follow the steps below to create and apply a custom.css file.

1. Open a text editor.

   You can use any text editor to create the file, such as:

   a. Notepad (Windows)

   b. TextEdit (Mac, in plain text mode)

   c. VS Code, Sublime Text, or Notepad++ (Recommended for better syntax highlighting)

2. Write Custom CSS Rules.

   Define the styles you want to override. Ensure the CSS selectors have **higher specificity** than the default ones.

   Example: Customizing the Chat Input Box

```
/* Increase specificity to override default styles */
.root .pn-msg-input__wrapper.pn-msg-input__wrapper {
    border-radius: 6px;
    background-color: #f0f0f0;
    border: 1px solid #ccc;
}
```

   Example: Changing Chat Button Color

```
/* Higher specificity ensures this rule takes effect */
.root .chat-button.chat-button {
    background-color: #0099ff;
    color: #ffffff;
    border-radius: 50%;
}
```

3 Save the file.

   a Select **File > Save As**.

   b Name the file **custom.css**.

   c Choose **All Files** as the file type (if using Notepad).

   d Ensure the file extension is `.css`.

4 Upload the CSS File to a Web Server.

   Your **custom.css** file must be accessible online. You can host it on:

   a Your company's web server.

   b A cloud storage service that supports direct file access (e.g., AWS S3, GitHub Pages).

   c A Content Delivery Network (CDN).

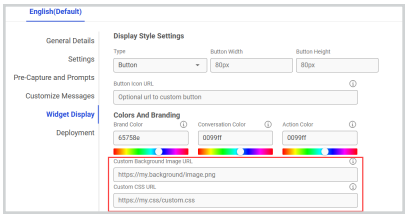
   Example URLs:

   - **Absolute URL:**`https://example.com/custom.css`
   - **Relative URL:**`/custom.css` (assumes it's served from the same domain)

5 Add the Custom CSS URL.

   a Navigate to **Widget Display**.

   b Enter the **Custom CSS URL** in the **Custom CSS URL** field.



   c Select **Save**.

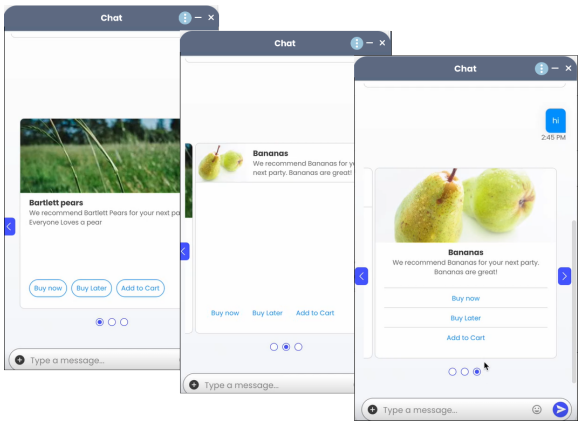
   d Refresh the chat widget to apply the new styles.

Select a Card Style

In the **Card Style** section, choose the layout for chat cards:

- **Default:** Standard card arrangement.
- **Horizontal:** Align text, images, and buttons side by side.

- **Stacked:** Stack content vertically in the card.



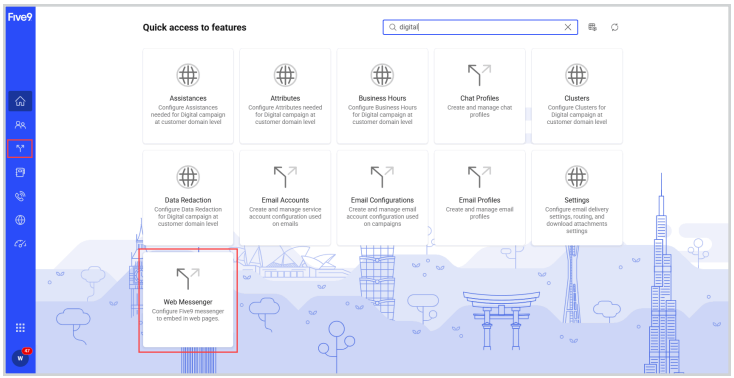
> **Note**
>
> Use the **Preview** section to verify how the chat widget will appear to users. From the **Preview** drop-down list, select **Chat Widget**, then select **Refresh** to update the preview.

Importing a Web Messenger Configuration

You can import a Web Messenger Configuration using a JSON file. This allows you to quickly set up or restore a configuration with predefined settings.

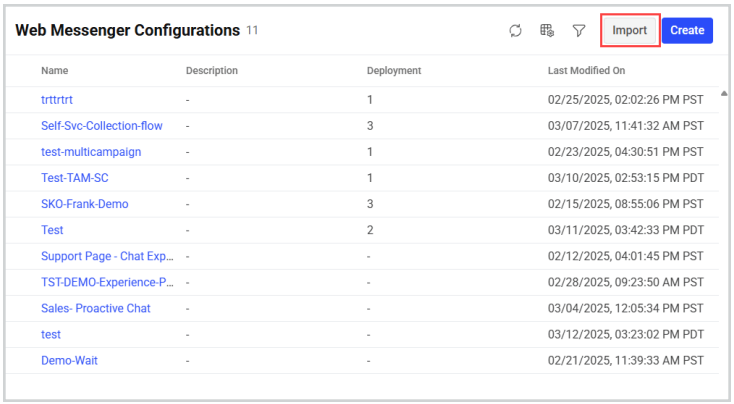
After logging in successfully, the **Admin Console** home page appears.

1 Select the **Web Messenger** card, or choose the **Manage Campaigns** icon from the sidebar navigation.

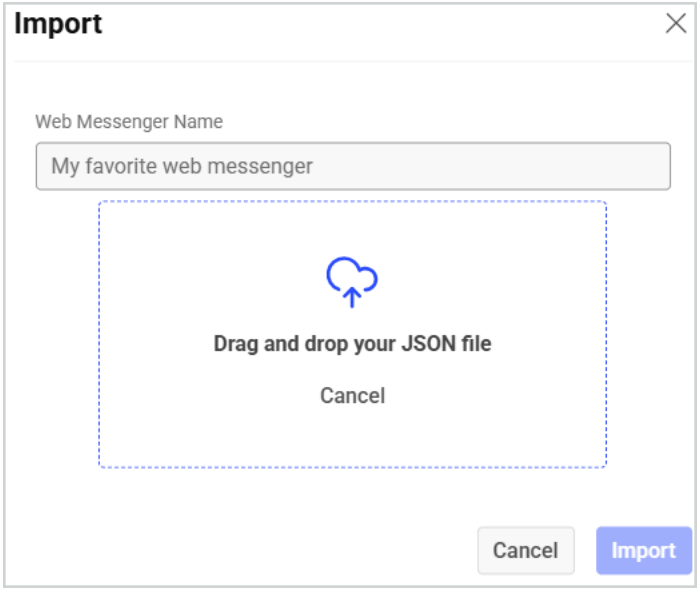


The **Web Messenger Configurations** page displays.

2 Select the **Import** button.



3 In the **Import** window, enter a name for the Web Messenger configuration in the **Web Messenger Name** field.



4 Drag and drop your JSON file into the designated area or select the upload option to browse for the file.

5 Select **Import** to upload the configuration.

6 Once the import is successful, the **Web Messenger General Details** page appears, allowing you to review and modify the configuration as needed.

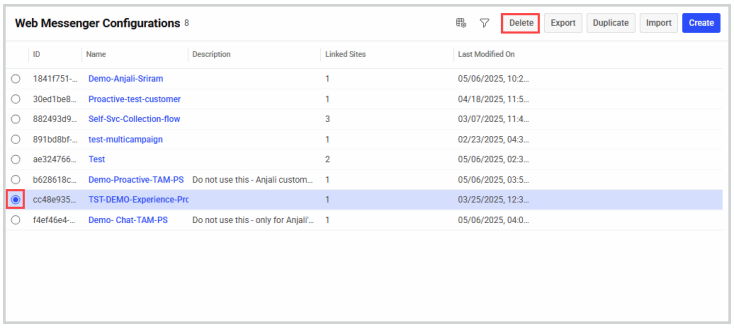
If you do not want to proceed, select **Cancel** to close the import window without making any changes.

By importing a configuration, you can quickly apply pre-configured settings and streamline the Web Messenger setup process.

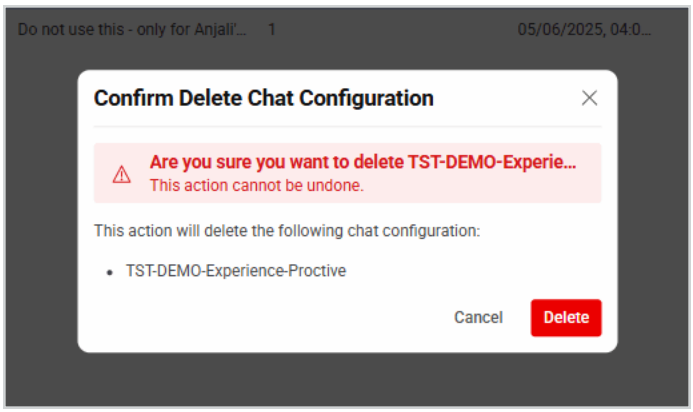
Deleting a Web Messenger Configuration

You can permanently delete a Web Messenger configuration from the configuration list. Deletion is irreversible and removes all associated settings.

1. From the **Web Messenger Configurations** page, locate the configuration you want to delete.
2. Select the radio button next to the configuration name.
3. Select **Delete** in the toolbar.



4. In the confirmation dialog box, review the configuration name.
5. Select **Delete** to confirm.



Warning

This action cannot be undone. The configuration and its settings will be permanently deleted.

Markdown

Five9's chat platform supports Markdown for formatting messages. When sending messages, use the following Markdown syntax to enhance text formatting.

Format	Syntax Example	Result
Heading 1	#Heading 1#	**Heading 1 text**
Bold	`**bold text**`	**bold text**
Italics	`*italic text*`	*italic text*
Underline	`<u>underlined text</u>`	underlined text
Monospace	`'monospace'`	`monospace text`

Ordered List	`1.First item`
	`2.First item`
	`3.First item`
		1. First item
		2. Second item
		3. Third item
		Note: When rendered, the text starts three characters in from the left (see Example below).

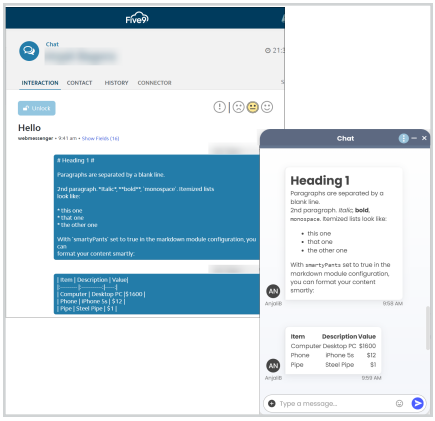
Unordered List	`*First item`
	`*Second item`
	`*Third item`
		• First item
		• Second item
		• Third item
		Note: When rendered, the text starts three characters in from the left (see Example below).

Link	`[link text]` `(http://example.com)`	link text

Format	Syntax Example	Result

Table	`| Item | Description | Value |`
	`|---|:---|---:|`
	`| Computer | Desktop PC | $1600 |`
	`| Phone | iPhone 5s | $12 |`
	`| Pipe | Steel Pipe | $1 |`
		Item / **Description** / **Value**
		Computer / Desktop PC / $1600
		Phone / iPhone 5s / $12
		Pipe / Steel Pipe / $1

Example



Supported Attachment File Types in Web Messenger

The most widely supported attachment types are jpeg, png, and gif images. Five9 accepts attachment content types (detected server-side) shown in the list below. File size must not exceed 5 MB.

- Five9 only supports file names with lowercase and uppercase ASCII letters, decimal digits, "!", "*", "+", "-", "/", "=", and "_".

- An agent can only send an attachment if they have the **Agent can send messaging attachment** permission.

Extension	File Type
.7z	application/x-7z-compressed
.bz2	application/x-bzip2
.csv	application/csv
.doc, .docx	application/msword, vnd.openxmlformats-officedocument.wordprocessingml.document
.gz	application/gzip, x-gzip
.js	applicaiton/javascript
.json	application/json
.mdk, .mdf, .mdb, .mdp	application/octet-stream
.numbers	application/apple.numbers
.odt	application/oasis.opendocument.text
.ogv, .oga, .ogx, .ogg,	application/ogg
.pages	application/vnd.apple.pages
.pdf	application/pdf
.ppsx	application/vnd.openxmlformats-office-document.presentationml.slideshow
.ppt, .pptx, .pptm,	application/vnd.ms-powerpoint, vnd.openxmlformats-officedocument.presentationml.presentation
.rtf	application/rtf
.smil	application/smil
.tar	application/x-tar
x-yaml	applicaiton/x-yaml
.xls, .xlsb, .xlsm, .xlsx	application/vnd.ms-excel, vnd.openxmlformats-officedocument.spreadsheetml.sheet
.xml	application/xml
.zip	application/zip
.3gp	audio/3gpp
.3gpp2	audio/3gpp2

Extension	File Type
.aac	audio/aac
.ac3	audio/ac3
.adts	audio/x-hx-aac-adts
.amr, .3ga	audio/amr
.flac	audio/flac
.m4a, .m4p, .m4b, .m4r, .x-m4a,	audio/mp4
.mp1, .mp2, .mp3, .m1a, .m2a, .mpa. .	audio/mpeg
.oga	audio/ogg
.wav	audio/wav
.webm	audio/webm
.x-wav	audio/x-wav
.bmp, .dib, .x-ms-bmp	image/bmp
.gif	image/gif
.heic	image/heic
.ico	image/x-icon
.jpg, .jpeg	image/jpeg
.pjpeg	image/pjpeg
.png	image/png
.svg	image/svg+xml
.tiff, .tif	image/tiff
.webp	image/webp
.eml	message/rfc822
.css	text/css
.csv	text/csv
.html	text/html
.ics	text/calendar
.js	text/javascript
.txt	text/plain

Extension	File Type
.vcf, .vcard	text/vcard
.wap, .wml	text/wap.wml
.xml	text/xml
.yml, .yaml	text/x-yaml
.3gp	video/3gpp
.3gpp2	video/3gpp2
.avi	video/avi, x-msvideo
.flv	video/x-flv
.mov.qt	video/quicktime
.mp4, .x-m4v	video/mp4
.mpg, .mpeg, .m1v, .mpv	video/mpeg
.ogv, .ogx, .ogg, .spx, .ogm	video/ogg
.webm	video/webm
.wmv	video/x-ms-wmv
.wma, .wmv	video/x-ms-asf

Note

There are only a few file types that Five9 does not support as attachments. If a file type is not listed above, it is not yet supported.

Configuring Digital Engagement Channels

Configuring the VCC Administrator Application
Configuring the Digital Engagement Console in SCC
Monitoring Digital Engagement Interactions and Activity in SCC

Configuring the VCC Administrator Application

Your VCC campaign must be created in the VCC Administrator application. When you save the VCC configuration, the campaign is synchronized with the profile in the Digital Engagement Administrator console.

> **Important**
> Digital engagement channel interactions that result in a **Closed by IVR** disposition will have no transcript attached to associated reports.

Setting the Media Types for Digital Engagement Channels
Adding an Email Contact Field

Setting the Media Types for Digital Engagement Channels

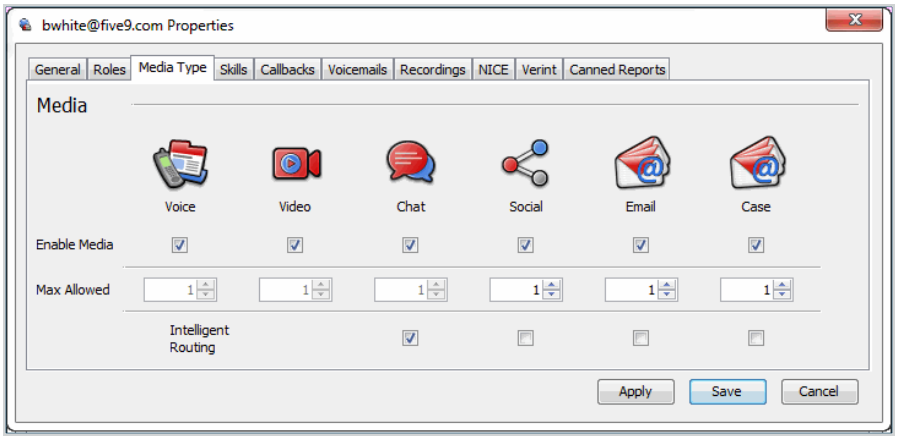
For each user, you can define the allowed types of interactions. Depending on their assigned skills, agents can interact with your customers through voice and any combination of digital engagement channels. Agents respond to incoming requests coming from email, chat, or social tools, such as Facebook and Twitter. Digital engagement channels are available only in inbound campaigns. Voice interactions can be configured in inbound and outbound campaigns.

If your contact center uses digital engagement channels in addition to voice, specify which channels each agent can use and the maximum number (Max Allowed) of each

type of interaction that the agent can have at any time. In this example, the agent is allowed to engage in all media channels.

Important

Agents assigned a video channel may be allowed a maximum of one chat because video sessions use chat to route customer video requests.



If Intelligent Routing is enabled for the digital engagement channels, incoming interactions are automatically presented to the agent to accept or reject until the specified maximum number is reached. If Intelligent Routing is not checked, the agent can select interactions manually (or *cherry pick*) from the queue. In this example, Social is enabled so the agent may select a new social request from the queue if the agent has not reached the specified limit. For more information about media settings using Five9 Engagement Workflow, see **Five9 Engagement Workflow**.

Five9 recommends that you do not mix in the same queue or profile agents who use intelligent routing and choose interactions manually.

Example

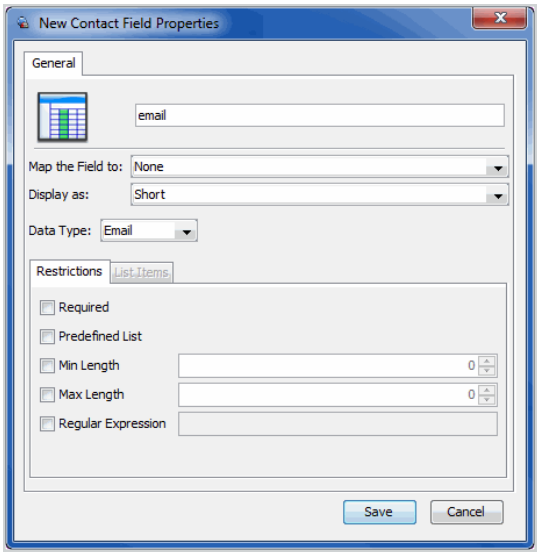
If agents are assigned to ACME Support skill, all agents should use the same mode to receive interactions. A mixture of AID and manual assignment may result in conflicts when one agent attempts to manually select an interaction that is delivered to another agent in AID.

Adding an Email Contact Field

To identify your digital engagement channel interactions, create a contact field named `email` if one does not already exist.

> **Important**
>
> If your domain already has a field of type email but with a different name, such as E-mail or Email, contact your Five9 support representative to request that your email field name in Digital Engagement Channels Tenant be mapped to your custom email field name. It is important that you create only one field with the email field type for digital engagement use.

1. In the VCC Administrator application, navigate to **Contacts > Fields**.
2. Create a field labeled `email` and of **Data Type: Email**, and click **Save**.



Configuring the Digital Engagement Console in SCC

Although you can log into the console with Firefox, Five9 recommends Google Chrome.

Important

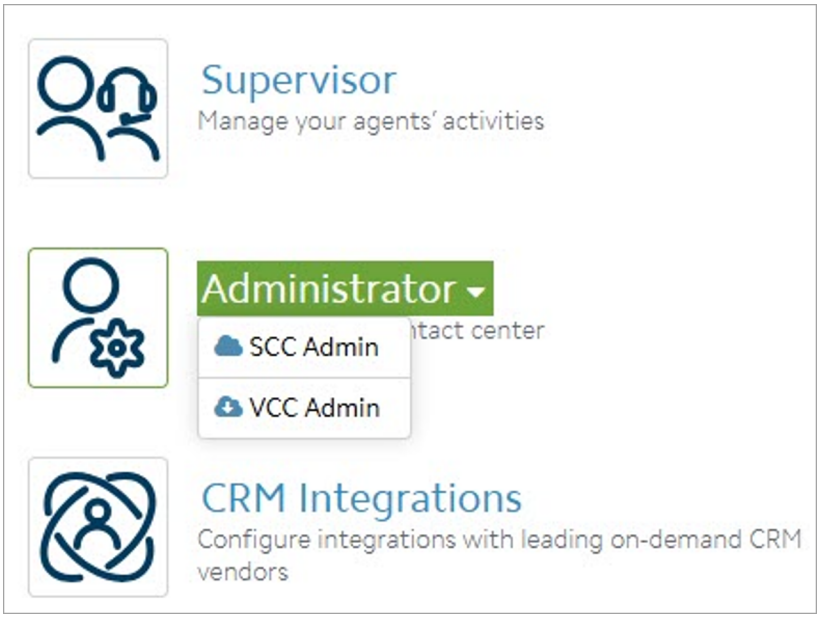
Only run one instance of the SCC Admin Console per browser window.

Logging in to the Digital Engagement Administrator Console
Troubleshooting Access to the Digital Engagement Administrator Console
Enabling Global Settings
Displaying the Distribution of a User's Interaction Methods
Displaying Agent Interaction Capacity
Creating Profiles
Defining Your Chat Welcome and Goodbye Messages
Verifying a User's Group Association
Configuring Data Redaction Rules
Configuring the Number of Chat Offers for Each Session
Configuring the Chat Display Name

Logging in to the Digital Engagement Administrator Console

Before configuring the console, request that Customer Support enables your domain and provides a domain administrator account for the Digital Engagement Console.

1. To log into the console, log into your Five9 account.
2. Click Administrator, and select SCC Admin.



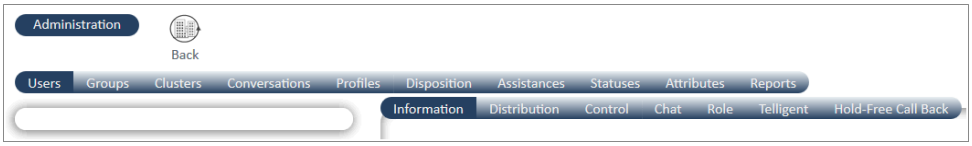
3 Enter your SCC credentials. Use the format [domain name/VCC user ID], like *Five9/MyVCCUserID*.

> **Note**
> The domain name and the VCC user ID are case-sensitive.



> **Note**
> SCC Administrators must have VCC Administrator role to access the Digital Engagement Administrator Console.

You may now navigate the Digital Engagement Administrator Console.



Troubleshooting Access to the Digital Engagement Administrator Console

To troubleshoot and correct access problems that you may encounter when logging in to the Digital Engagement Administrator Console, follow these steps.

1. Confirm the URL and credential format that you are using to gain access.
2. Ensure the URL is provided through the Five9 login page, not a direct address bar entry.

   Access to the Digital Engagement Administrator application login page is granted using the VCC domain credentials.
3. Verify that your credentials are in the format [domain name/VCC user ID], like *Five9/MyVCCUserID*.

> **Note**
>
> The domain name and the VCC user ID are case-sensitive.

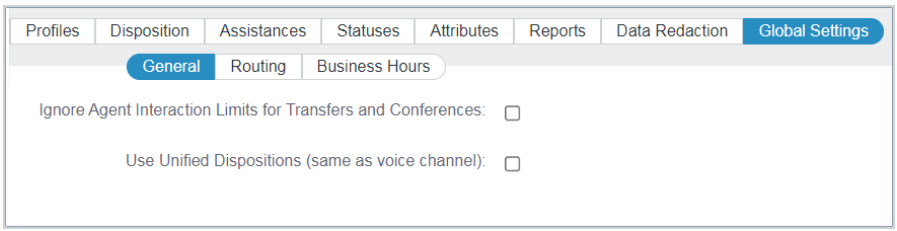
To verify that the user account you are using is associated with a user profile, follow these steps.

1. Log in to the **VCC Administrator** application.
2. Open the **User Profiles** folder.
3. Double-click the user profile name where the user with SCC permission was added.
4. Remove the user and click **Save**.
5. Add the user back to the same user profile and click **Save**.
6. Log in to Digital Engagement Administrator by using the correct format.

Enabling Global Settings

In this tab, you can enable interaction limits and unified dispositions for all your agents.

Configuring General Interaction Settings



Although you set the number of concurrent digital engagement interactions for agents in the VCC Administrator application, you can override this number to allow additional email messages, chat conferences, and social interactions to be transferred to agents who receive interactions automatically. To do so, enable **Ignore Agent Interaction Limits for Transfers**.

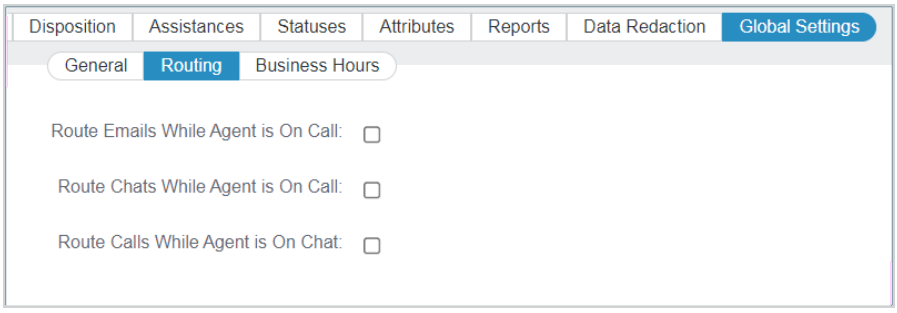
Example

An agent who is allowed five concurrent email interactions is currently assigned five interactions. If you enable this feature, an email (sixth interaction) can be transferred to the agent.

The **Use Unified Dispositions (same as voice channel)** option in the Global Settings turns on unified dispositions for all profiles in the domain. This feature allows you to use the VCC disposition that you also apply to calls. **Once you enable this option, you cannot revert.**

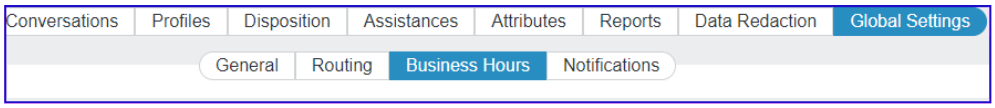
Configuring Global Routing Settings

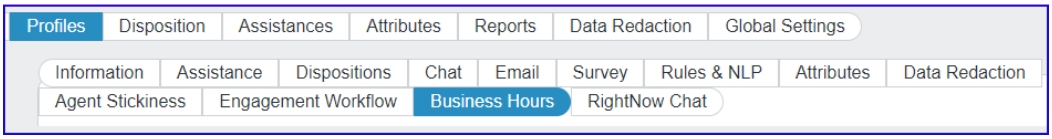
You can specify the interaction types to be distributed in the **Global Settings > Routing** tab.



Configuring Business Hours

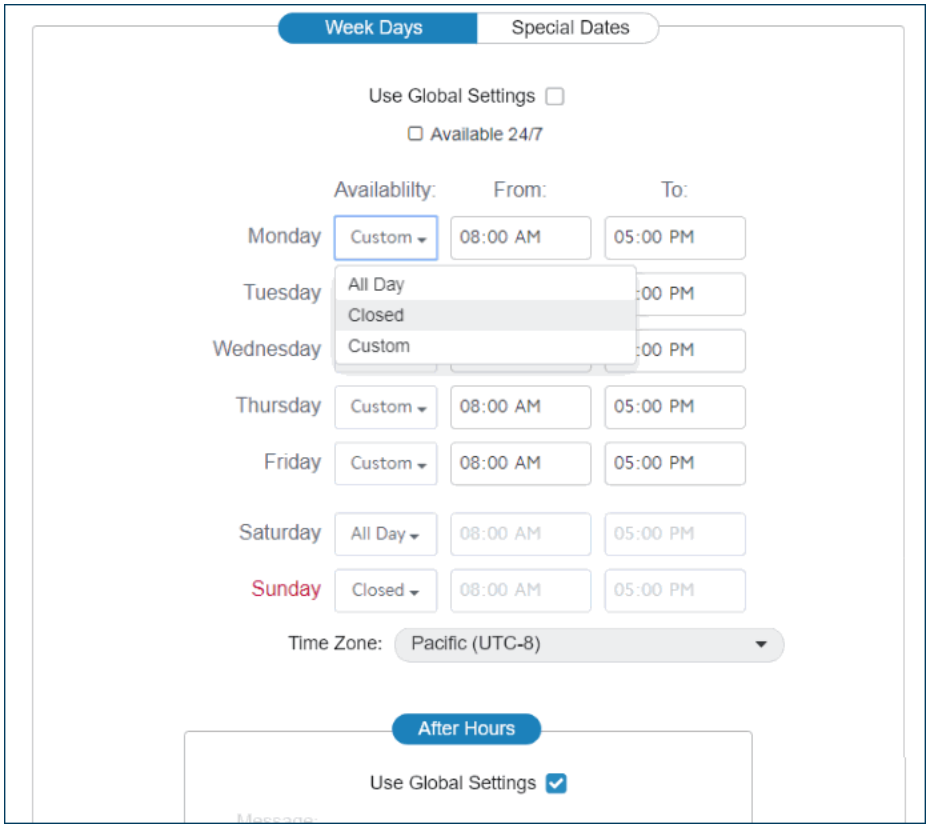
You can configure business hours of operation globally for your domain and uniquely for any specific profile, such as chat or email. To configure global business hours, navigate to **Global Settings > Business Hours**. To configure profile business hours, navigate to **Profiles > Business Hours**.





You can define your messaging hours of operation to include an after-hours message (see Configuring the No Service After-Hours Message) and waiting message (see **Wait Message**) when agents are unavailable. Also, you can enable web chat customers to submit an email outside of business hours by adding an email button (see Adding an Email Button) to your chat console. Email option does not apply to SMS messaging

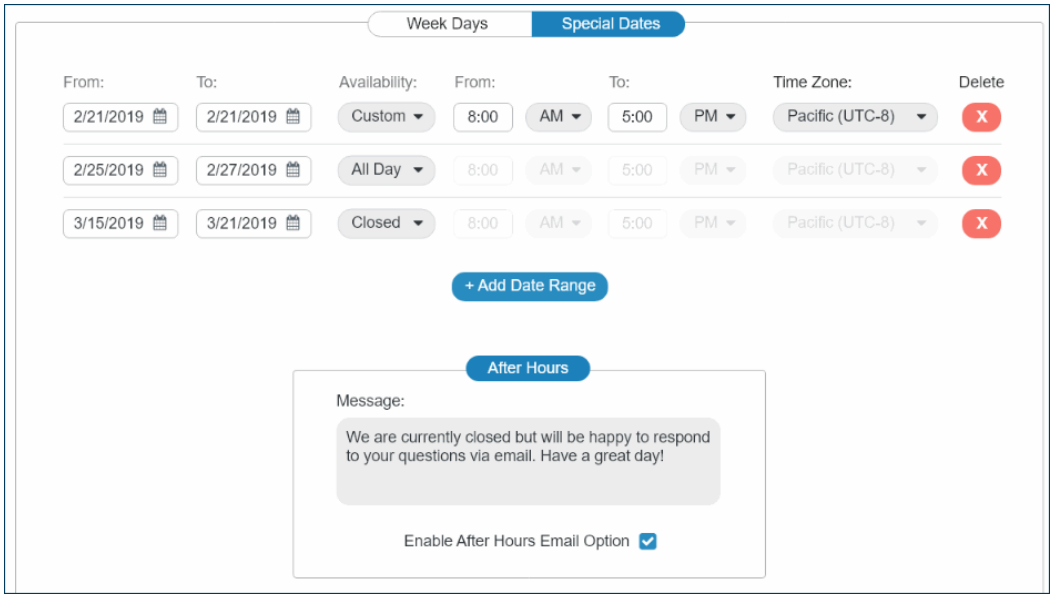
To override any profile setting with global settings, click **Use Global Settings**. By default, the global settings hours are configured to fully open, or all day every day. If no custom message is defined in the Global Settings tab, the After Hours message in the Business Hours tab is shown.



To define special dates, such as holidays, click **Special Dates**. You can add multiple special date ranges and delete these individually.

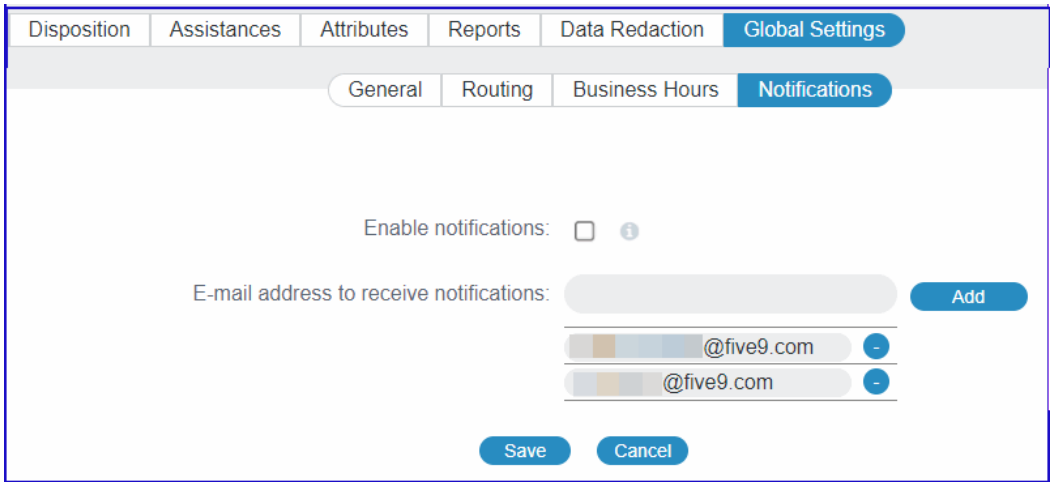
You can configure unique after-hours messages for Weekdays, Special Dates, and Global Settings. Special Dates always supersede pre-defined business hours for weekdays that share the same schedule. Similarly, special messages supersede standard messages when the special dates/hours are defined for the same period.

Standard business days and/or hours can be created in a single time zone, such as your domain time zone, for all seven days. You can define special days, such as holidays, using a specific time zone for each special day definition.



Configuring Email Error Notifications

You can enable notifications for email account errors, such as an expired token, expired password, or failed authentication, in the **Global Settings > Notifications** tab.



You can configure notifications for up to 20 email addresses. Notification is sent on the first, third, fifth, and seventh days after error detection and is specific to the error. Email accounts that have the same settings for inbound and outbound email are disabled when the configuration error remains after the seventh day.

To enable email notification, follow these steps:

1. Click to set **Enable notifications**.
2. Provide a valid email address to receive notifications.
3. Click **Add**.
4. Repeat steps 2 and 3 to add up to 20 email accounts.
5. Click **Save**.

Displaying the Distribution of a User's Interaction Methods

Digital engagement interactions are distributed from queues to agents by one of these methods: Automatic Interaction Distributor (AID) or manual selection by the agent (*cherry pick*). You can use only one method for each agent at any time.

> **Note**
> You cannot use manual selection with preview chat, which is a type of proactive chat. For more information about chat types and configuration, see **Understanding Chat Types**.

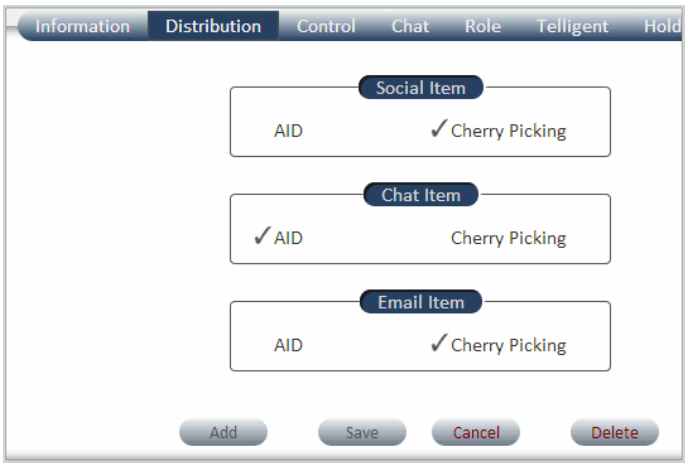
Automatic Distribution

Automatic Distribution is similar to the Automated Call Distributor used for voice interactions. It pushes items to an agent when agents become available if they have the skill. digital engagement interactions are routed to agents in a round-robin fashion based on the longest agent waiting time. Currently, preview chat is supported in AID mode only. When an agent receives a chat preview, they are able to select the contact details and journey as a part of this preview for review before making a decision to engage with the contact.

Manual Distribution

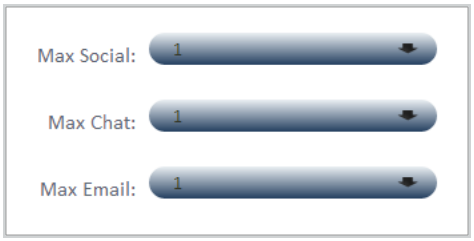
Agents are allowed to view the Media Stream queue and select items one at a time. Agents can use their Settings menu to change the sort order of items in the Queue Media Stream or the Assigned Media Stream. Agents can change this setting in the Text Filters menu.

In the selector panel in **Users** > **Distribution**, you can display the distribution method defined for digital engagement interactions, but you can change these settings only in the VCC.



Displaying Agent Interaction Capacity

In the **Users** > **Control** panel, you can see the maximum number of digital engagement interactions an agent may handle at any one time. Change these settings only in VCC Administrator. See Setting the Media Types for Digital Engagement Channels for instructions.



Creating Profiles

This section describes basic features of a profile in the **Information** tab. Profiles in the Digital Engagement Administrator console are equivalent to and synchronized with the campaigns defined in the VCC. Do not change campaigns in the Digital Engagement Administrator console except to associate a group to a profile.



Associating a Group to a Profile

You must manually associate a group to a profile. Select a group from the menu.



Accepting Interactions Automatically

The **Auto Accept** option automatically accepts interactions on behalf of agents. When this option is selected, the timer is disabled. Agents automatically receive interactions in their assigned queues. Agents cannot reject the interactions.

In addition, if manual selection is enabled, interactions are added to their list of assigned interactions and open in their application when agents click the browser notification of a new digital engagement interaction. To prevent agents from automatically accepting new interactions when they click browser notifications, select one of these options:

- Disable browser notifications (see **Managing Browser Notifications for Agents** and Agent Desktop Plus User's Guide).
- Disable **Auto Accept** for one or more channels.

Setting the Time to Accept Interactions

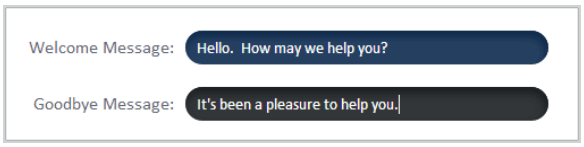
Agents must accept interactions within a specified number of seconds. The **Time to Accept** setting applies to the AID mode, which can be set for each interaction type. The default setting is 30 seconds. You can increase the time up to 60 seconds.

Setting the Priority of Digital Engagement Interactions

When routing interactions by priority, the default value for email and social interactions is 300 seconds. For chat interactions, the recommended value for existing profiles is 300 seconds. New profiles are automatically set to 300 seconds.

Defining Your Chat Welcome and Goodbye Messages

If you want to use chat messages different from those defined in the profile, enter the text for your chat Welcome and Goodbye messages.

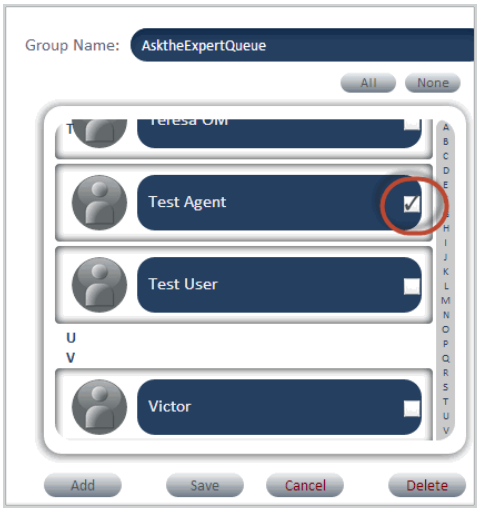


Verifying a User's Group Association

A group in the Digital Engagement console is equivalent to a queue (skill) in the VCC. The agent must already be assigned to the equivalent queue in the VCC administrator application.

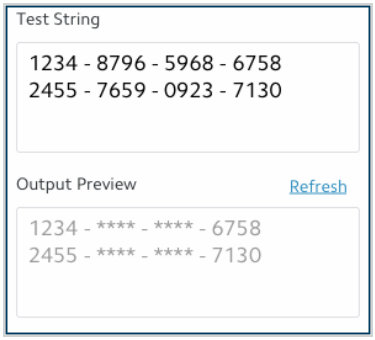
When the VCC settings are synchronized to the Digital Engagement Administrator console, user definitions are associated with a group. You may want to associate users with a certain group, which is helpful to distribute agents to assist with the workload of a different group. To distribute agents, you must do so in the VCC Administrator or Supervisor application where you can also add and remove skills.

Select the Group from the list on the left. You should see the boxes checked for each user you want to see in that group.



Configuring Data Redaction Rules

Five9 data redaction removes sensitive information from digital engagement channel interactions. You can define data redaction rules and associate them with your SCC profile. The example below shows sensitive data replaced with asterisks.

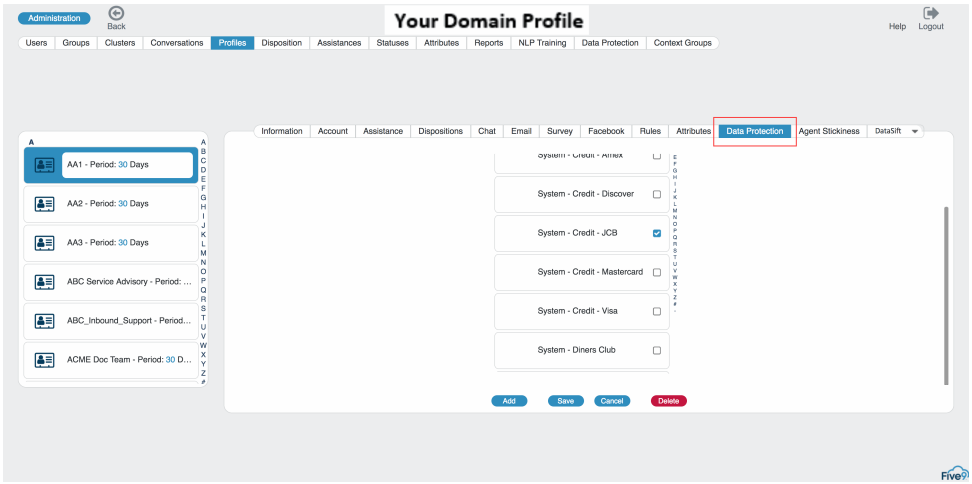


System data redaction rules are present in the SCC Administrator application and are read-only, you may not edit or delete system rules. You can select, deselect, and create rules in the **Data Redaction** tab of your SCC Administrator interface.

Adding System Redaction Rules to a Profile

To assign system redaction rules to your profile, follow these steps.

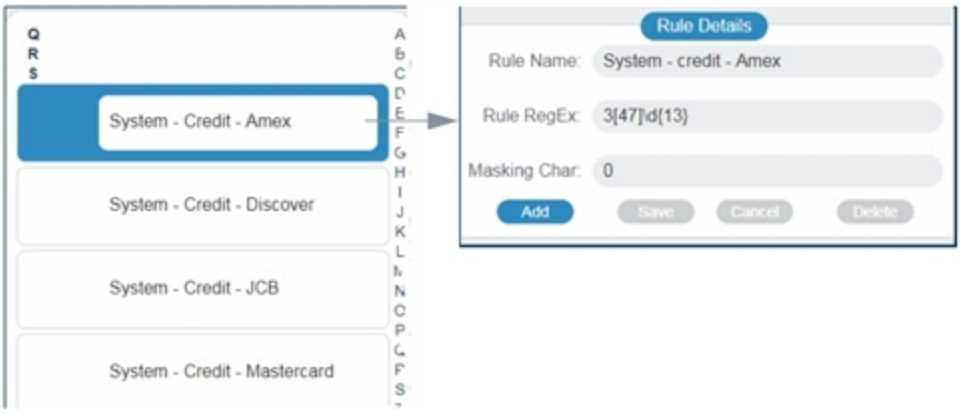
1 In the SCC Administrator application, choose your profile and click the **Data Protection** tab.



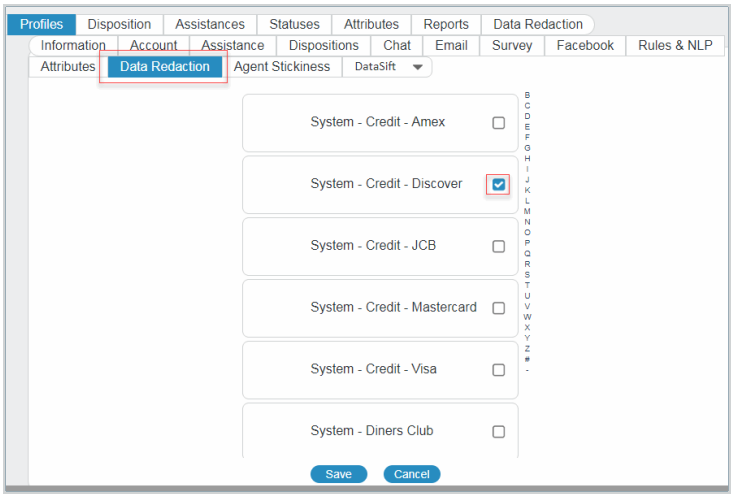
Predefined rules for the following providers and formats:

- American Express
- Diners Club
- Discover
- JCB
- MasterCard
- Visa
- Social security number

2 To see the details for any rule, click the name of the rule.



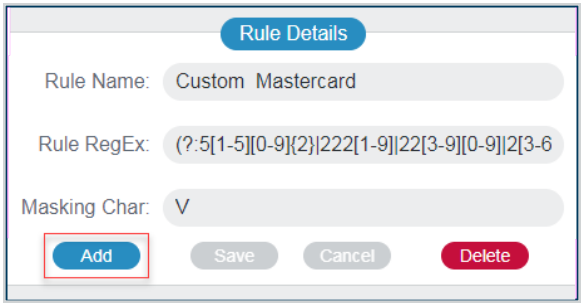
3 To apply a predefined rule format to your Five9 SCC profile, enable that rule.



4 Click **Save**.

Creating Custom Data Redaction Rules

You can create data redaction rules mask any standardized information that you choose using a RegEx expression to define the sequence.



To create a new data redaction rule, follow these steps:

1 Assign a unique rule name.

Five9 recommends using **Custom** as a preface to your rule name to simplify locating your custom rules.

2 Enter a regular expression.

> **Note**
>
> You must verify your expression before committing to the SCC Administrator console. Five9 does not provide any RegEx validation.

3 Assign a masking character.

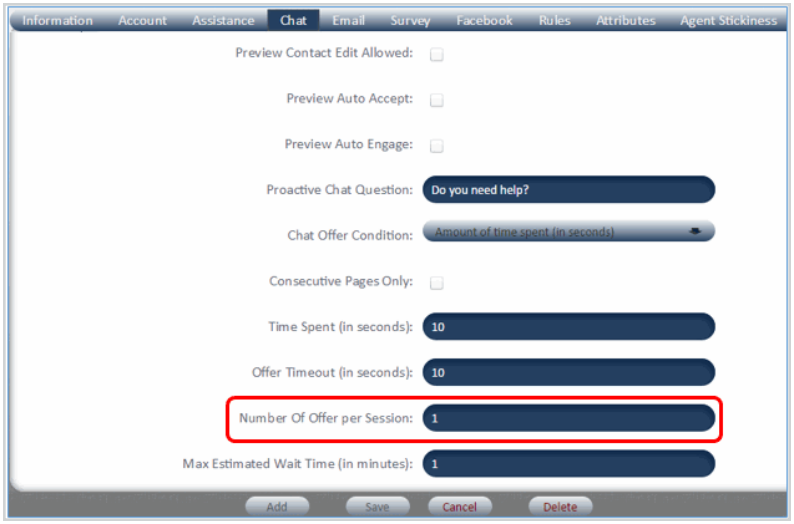
The masking character is the character used to replace the redacted data. You may select any alphanumeric character, or hash (#), or asterisk (*), as the masking character.

4 When your rule definition is complete, click **Add**.

You can edit or delete custom rules at any time.

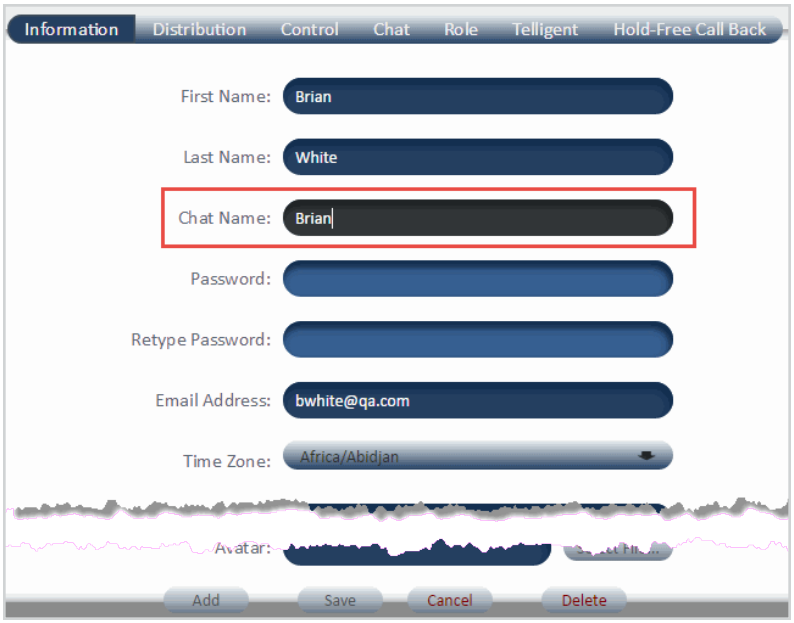
Configuring the Number of Chat Offers for Each Session

To set the number of proactive chat offers, enter a number in the chat properties of a profile as shown below.



Configuring the Chat Display Name

You can assign a custom chat display name for your agents.



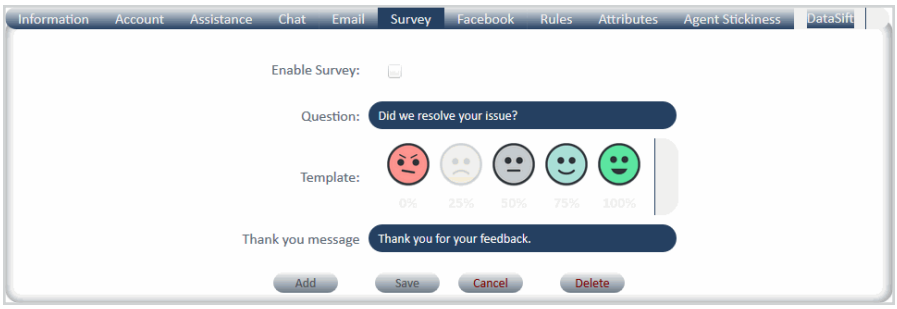
Monitoring Digital Engagement Interactions and Activity in SCC

This section describes how to monitor and track your digital engagement interactions and activities.

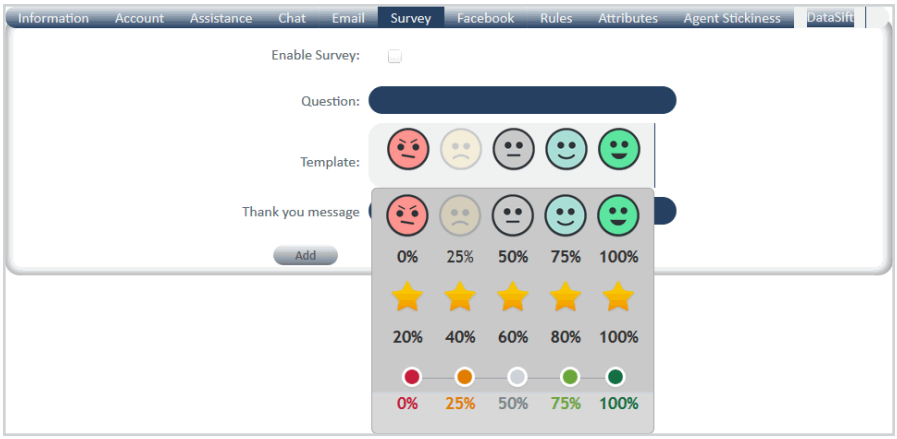
[Customizing a Survey to Collect Feedback]
[Gathering Interaction Metrics with Profile Attributes]
[Defining Agent Stickiness for Distributing Interactions]
[Configuring Dispositions in Admin Console]
[Configuring Dispositions in SCC]
[Defining Assistance Responses]
[Creating Statuses]
[Defining Attributes for Agents to Tag Text Items]
[Reporting Metrics about Digital Engagement Media Activity]

Customizing a Survey to Collect Feedback

After each digital engagement interaction, you can ask the customer to complete a survey. You can customize the survey question for each profile. You can see the survey results in the Social Reports of the Dashboards and Reports Application.

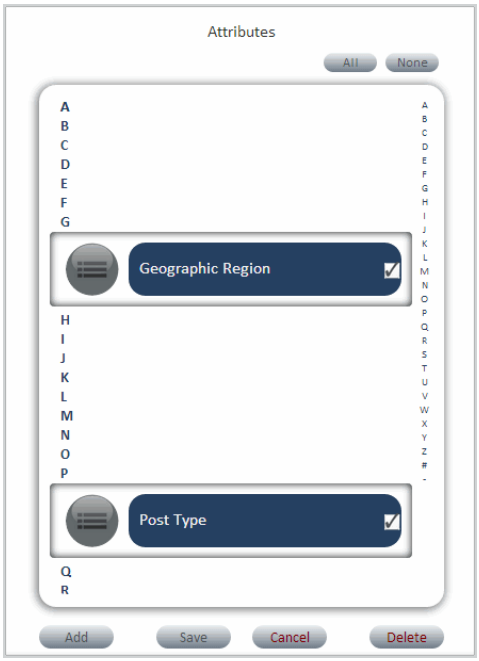


You can also select a template for your rating scale in the survey. Click the down arrow in the Template field:



Gathering Interaction Metrics with Profile Attributes

You can assign predefined attributes to a profile. The attributes help you gather metrics about the authors of text posts and processed by the agents assigned to the profile. In the **Profiles** > **Attributes** tab, select the profile from the profile list on the left, and check the attribute definitions you want to assign to the selected profile.



To create attribute definitions, see Defining Attributes for Agents to Tag Text Items.

Defining Agent Stickiness for Distributing Interactions

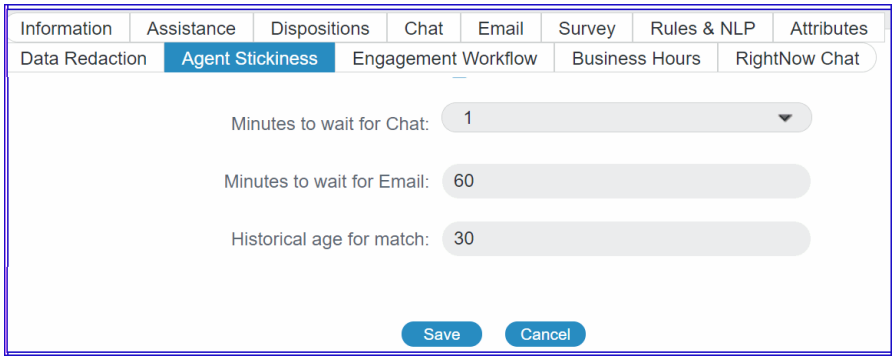
For each profile, you can define how the system assigns digital engagement interactions for returning contacts. For new contacts, the system ignores these settings and routes the item to the next available agent.

This feature enables the system to manage the distribution of digital engagement interactions instead of the ACD. Before an item is distributed, the system determines which agent assigned to that profile handled the previous interaction with the returning contact, within the time range of the configured **Historical age for match**. If that agent becomes available within the configured **Minutes to wait** (for chat or email), the interaction is offered to that same agent.

Once the **Minutes to wait** (for chat or email) timer has expired, or if the assigned agent rejects or ignores the interaction, it is returned to the queue for distribution. If an agent logs out while there is an offered sticky interaction, the interaction will be returned to the queue after **Minutes to wait** (for chat or email) timer has expired.

> **Note**
>
> An agent logged in with cherry-pick mode can lock an interaction while it is being offered to another agent due to stickiness. Agent stickiness settings do not consider business hours.

Go to **Profiles > Agent Stickiness**.



Enable	Enables Agent Stickiness.
Minutes to wait for Chat	Maximum time to wait for the previous agent to become available and receive the chat interaction.
Minutes to wait for Email	Maximum time to wait for the previous agent to become available and receive the email interaction.
Historical age for match	Number of days to search the contact's history to locate the last agent who handled the previous interaction with the contact. If the interaction is older than the setting, Agent Stickiness is not applied. This setting is a sliding 24-hour window and refers to calendar days. This setting does not consider business hours or holidays.

Configuring Dispositions in Admin Console

This topic describes how to configure dispositions in Admin Console.

> **Note**
>
> If your domain existed before R12 and you have not enabled unified dispositions, see **Configuring Dispositions in SCC** .
>
> Early releases support configuring dispositions in both SCC and VCC. Release 13 and later support configuring dispositions in VCC or Admin Console. Refer to Adding Custom Definitions in VCC in Basic Configuration for steps in creating a new custom disposition in VCC. New domains should have unified dispositions only.

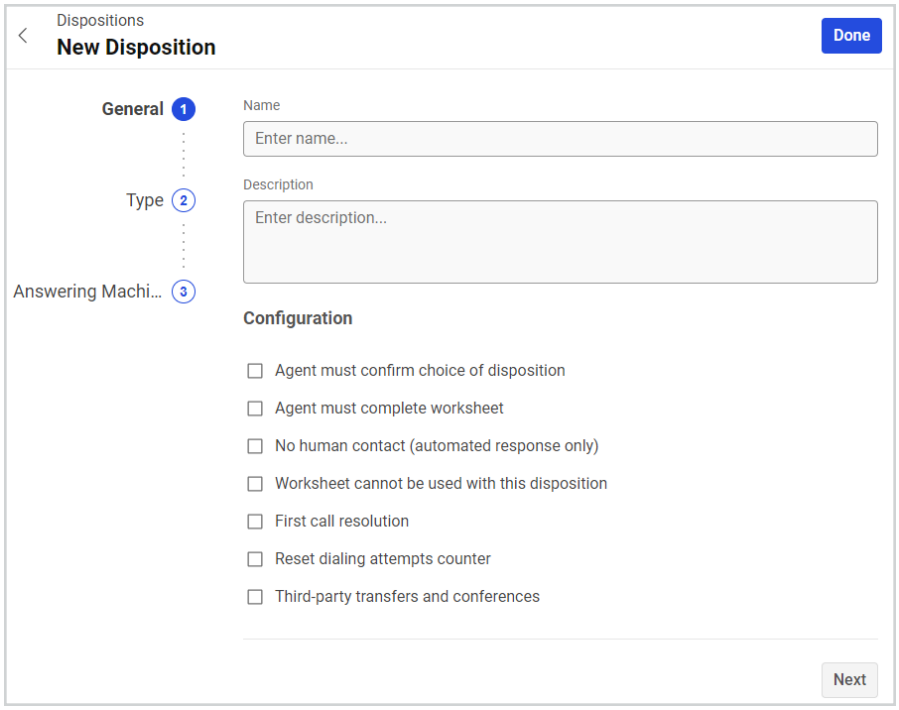
This topic includes steps for completing the following disposition configuration sections:

- **General Information**
- **Type**
- **Answering Machine**

To configure a custom disposition in Admin Console, go to **Manage Campaigns** > **Dispositions** and click **Create**:

General Information

In **General**, complete **Name**, **Description** and select the **Configuration** options.



1 Enter a unique name and description for the disposition.

2 Select the options to enable:

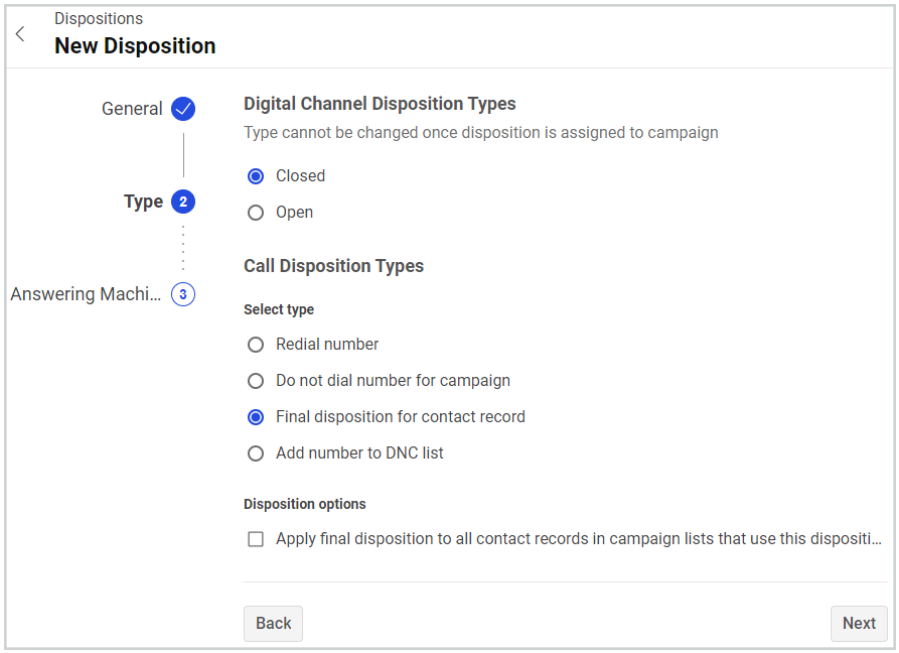
Option	Description
Agent must confirm choice of disposition	Requires that agents confirm the choice of disposition.
Agent must complete worksheet	Requires that agents complete a worksheet before this disposition can be selected.
No human contact (automated response only)	Increases the dropped call percentage and Dialer Drop Call % rates (abandoned call rates) for reasons other than not connecting to live parties.
Worksheet cannot be used with this disposition	Ensures that agents cannot use this disposition if they have completed a worksheet for the current call.
First call resolution	Includes the call in your first call resolution statistics for supervisors or

Option	Description
	reports.
Reset dialing attempts counter	Dispositions reset the dial attempts counter back to zero.
Third-party transfers and conferences	Optionally allows transfer or conference to a specific number before assigning the disposition.

3 Click **Next** to configure the disposition type.

Type

In **Type**, complete digital and call disposition types:



Digital Channel Disposition Types

Digital engagement channel dispositions apply to email, chat, and social interactions. Unlike voice dispositions, digital engagement dispositions can represent the in-progress or the final status.

1 Select **Closed** or **Open**.

- **Closed**: Ends the work for the item. Closed items are removed from the agent's view. In reports, the item is Closed.
- **Open**: Enables agents to mark items in progress. The items remain open and visible to agents but are not reported.

Example

Your agent received an email. The agent replied to the customer and is now waiting for the customer to respond. In this case, the agent would select a disposition such as *Open – Awaiting customer feedback*. When the customer contacts the agent again, the agent closes the interaction with one of the Close dispositions that you created. At that time, reports are updated with the final disposition.

Important

Campaigns must always include at least one closed disposition type to complete all interactions and prevent system errors.

2 Select the call disposition type and related options.

- **Redial number**

  You can specify the redial time by selecting **Use redial timer** and entering the time to wait before trying the number again. This option also allows you to enable Allow agents to change reactivation time. The dialer attempts to dial the number as soon as possible, after that time, stopping somewhere in the call list to place the call, and then starting where it left off. You can also specify the maximum number if agents consecutively select this disposition multiple times.

  - **Redial number after duration**: Specify the days, hours, and minutes to redial this number. The dialer redials the number as soon as possible after the specified time.
  - **Number of redial attempts**: If agents consecutively set this disposition multiple times, this is the maximum number of redials the dialer attempts.
  - **Allow agents to change redial time**: In the Five9 Agent application, the disposition displays an additional menu to select a redial time. The time configured in the redial timer setting is also shown to agents as the default option for this disposition. When an agent specifies a redial time,

the phone number is redialed by the campaign at the designated time and the call is delivered to any available agent that is qualified for the campaign.

This feature is useful for outbound customers whose agents work in shifts, such as when agents in the morning shift need to schedule campaign-related callbacks for agents in the evening shift.

Profile and disposition counters apply to individual numbers in a record, not to the entire record. The profile and disposition counters restrict dialing to individual numbers within a record, rather than to the entire record.

When using redial dispositions, consider these points:

- Numbers without a redial timer are considered for dialing by a campaign on next cycle through the list.
- Numbers with a redial timer is dialed again after the time specified.
- The dialer does not dial numbers with redial timers set when going through the list again. It only calls the number at the set time.
- If a number receives the same redial disposition consecutively, the dialer stops attempts when the number of attempts is reached.
- If a redial timer is set, the dialer does not call alternate phone numbers on the contact record until redialing the first number.
- If no redial timer is set, the dialer begins calling the contact record's alternate phone numbers on its first pass of the list.
- If **Allow agents to change redial time** is selected, the redial timer set by agents works in the same way and follows the same rules as the redial timer set by administrators.

Example

Redial without redial timer: the campaign starts at 10:00AM; records are dialed consecutively.

1. At 10:10AM, the campaign dials a number that is assigned to a Redial Number disposition without a redial timer set.

2 By 2:00PM, the campaign has called all records in the list. This cycle of dialing took four hours.

3 By 2:30PM, the campaign reaches the number again that was assigned a disposition with a Redial Number disposition: the campaign attempts to dial the number again four hours 20 minutes after the first attempt.



1 Dial list (first pass)
2 Dial list (second pass)

Example

Redial with redial timer: the campaign starts at 10:00AM; records are dialed consecutively.

1 At 10:10AM, the campaign dials a number that was assigned a disposition as Busy (the Busy system disposition is a Redial Number disposition with the Redial After = 5 minutes and the Number of Attempts = 5).

2 By 10:15AM, the campaign tries the number again (5 minutes after receiving the original Busy disposition). It receives Busy again.

3 Four more attempts are made at 10:20AM, 10:25AM, 10:30AM, and 10:35AM. The number continues to be busy. The dialer stops dialing the number because the maximum number of attempts (5)

was reached with this disposition.



- **Do not dial for campaign**

  When you select this type, the number is not dialed by the campaign, but other numbers from the contact record are dialed unless the **Apply to all numbers in this contact record** option is enabled. If the number exists in other contact records in the list, it can be dialed without restrictions. This type of disposition has two options:

  - **Apply to all numbers in this contact record**: The dialer does not dial any number in the contact record, not just the dispositioned number.
  - **Use timer to reactivate number**: The dialer does not dial the number in the current campaign. Set the days, hours, and minutes to allow the dialer to call the number after that time. It dials the number the next time it passes through the list after the set time. If you select this option, you can also enable the **Allow agents to change reactivation time**: This option is available once the **Use timer to reactivate number** option is selected. Allows agents to set the number reactivation time. The time configured in the **Activate number after duration** setting is also shown to agents as the default option for this disposition. When an agent specifies a reactivation time, the campaign reactivates that number at the designated time and the dialer delivers the call to any available agent qualified for the campaign.

> **Example:** Without an activation timer: A record contains three numbers. The first number is assigned a do not dial disposition. Because every contact record can have up to three numbers to dial, the other two numbers are still dialed. However, if **Apply to All Numbers in This Contact Record** is enabled, no contact record numbers are dialed.

> **Example:** With an activation timer: A called party asks not to be called again for at least two hours. The dialer skips the number on the next pass in one and 1/2 hours as it is before the timer setting. The dialer calls the number in its next pass three hours after the set timer.
>
> If the dialer is in vertical dialing mode, it does not wait until the three-hour mark to call the number. It calls the number when the timer expires.

- **Final disposition for contact record**

  When you select this type of disposition, the contact record, including alternate phone numbers, is not dialed again by the campaign. A final decision has been made, such as *Application taken* or *Not interested*. This type of disposition has one option:

  - **Apply final disposition to all contact records in the campaign lists that use this disposition.** When you select this option, the contact record is not dialed in any campaign that contains this disposition. A final disposition can be applied to multiple campaigns when the other campaigns are using this same disposition.

    Note

    If a contact record was in a campaign with this option enabled in a final disposition, its numbers may still be called if it is assigned to a new campaign.

- **Add number to DNC list**

  When using the **Add Number to DNC List** option, the customer's individual number or entire contact record is placed in the local Do Not Call list for the

domain. Choosing this option enables the disposition options described in the example below.

You can assign this option to one number in a contact record, for example, if a customer only wants one number placed on the DNC list, but is available at the other numbers.

Example

A called party asked for one or all phone numbers to not be called again. There are the following options:

- **Add the dialed number**: Adds only the current number (the number dialed) to the DNC list.
- **Add the dialed number and finalize the contact record for this campaign**: Adds the current number and makes the record final for the campaign. This option stops dialing this record for this campaign but does not add the contact's other phone numbers to the DNC list. The alternate numbers in the contact record are still available for other campaigns.
- **Add all numbers and finalize the contact record for this campaign**: Adds all phone numbers for the contact record to the DNC list. The alternate numbers are not available for any campaign.

3 Click **Next** to configure answering machine settings.

Answering Machine

You set custom dispositions and the system Answering Machine disposition on the Answering Machine tab. Agents can set the Answering Machine disposition as soon as they connect to an answering machine and are ready for other tasks.

1 Click the drop-down list for **Action on disposition selection** and select an option. The options are:

- **Do not leave message**: No further action.
- **Play prompt**: Switches the call to a message prompt line to allow the agent to disconnect from the call. The message plays after detecting two seconds of silence or when set by the **Max answering machine greeting time (sec)** option. You can only configure one message prompt per

disposition. The prompt is played either after a two second silence is detected (for example, after the tone, please leave a message... beep) or after the configured **Max answering machine greeting time (sec)**. One prompt can be configured per disposition. You must select the prompt from the drop-down list.

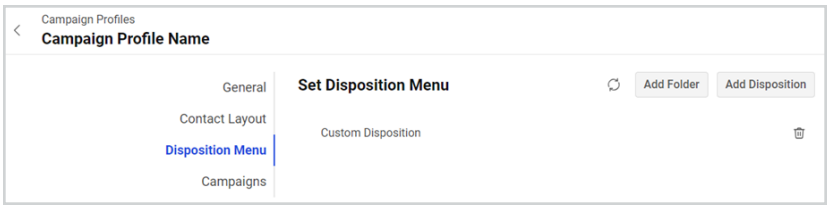
- **Play IVR script (advanced)**: Agents who are connected to an answering machine or voicemail box can disconnect from a call but leave a message playing for an answering machine. The IVR script plays after a two-second silence is detected (for example, after the tone, please leave a message... beep) or after the configured **Max answering machine greeting time (sec)**. You must select an IVR script from the drop-down list.

The default **Max answering machine greeting time (sec)** is 5. If an outbound campaign that uses these answering machine prompt/IVR dispositions dials many cell phone numbers, Five9 recommends setting a longer greeting time, such as 40 seconds, due to the often longer voicemail greeting messages.

You can use branching logic or dynamic Text-to-Speech when leaving a message. For example, to configure an IVR script that plays a personalized message from the agent assigned to the call, you can configure a Case module, with the Agent.user_name variable and connect the branches to one Play module for each agent. Another example would be to leave a message with dynamic Text-to-Speech, which can play information such as an account balance to a client.

2. Click **Done** to save the new disposition.

3. Assign the disposition to a campaign profile. Go to **Campaign Profile** > **Disposition Menu**, and add the disposition:



4. Click **Done**.

Configuring Dispositions in SCC

Note

This topic applies if your domain existed before R12 and you have not enabled unified dispositions.

Early releases support configuring dispositions in both SCC and VCC. Release 13 and later support configuring dispositions in VCC or Admin Console. Refer to Adding Custom Definitions in VCC in Basic Configuration for steps in creating a new custom disposition in VCC. New domains should have unified dispositions only. For information on configuring dispositions in Admin console, see **Configuring Dispositions in Admin Console**.

Digital engagement channel dispositions apply to email, chat, and social interactions. Unlike voice dispositions, digital engagement dispositions can represent the in-progress or the final status:

- Open: Enables agents to mark items in progress. The items remain open and visible to agents but are not reported.
- Close: Ends the work for the item. Closed items are removed from the agent's view. In reports, the item is Closed.
- Transfer: Enables agents to mark items in progress. The items remain open and visible to agents but are not reported.

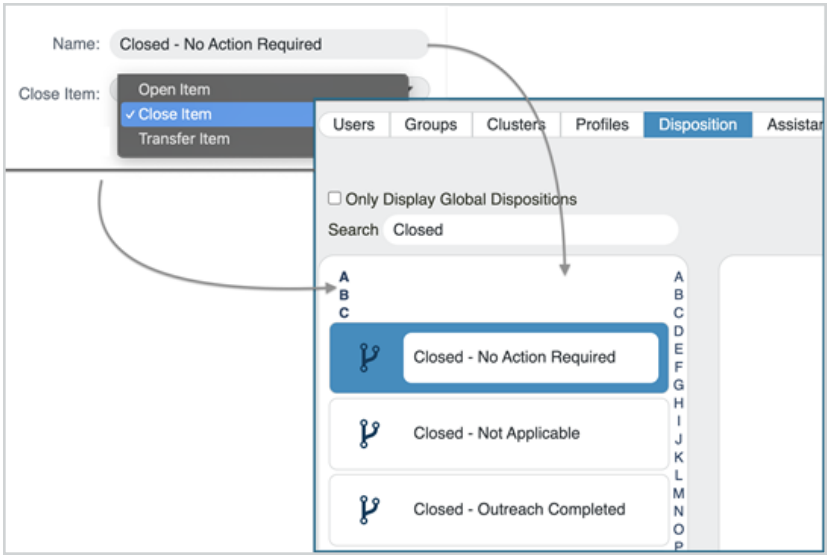
Example

Your agent received an email. The agent replied to the customer and is now waiting for the customer to respond. In this case, the agent would select a disposition such as *Open – Awaiting customer feedback*. When the customer contacts the agent again, the agent closes the interaction with one of the Close dispositions that you created. At that time, reports are updated with the final disposition.

Important

Campaigns must always include at least one closed disposition type to complete all interactions and prevent system errors. For more information on types of disposiitions, see Disposition Types in Basic Configuration.

Related digital engagement interactions are not linked. Therefore when customers reply to an email, this email becomes a new email interaction instead of being linked to the original interaction. The agent sets a disposition for both related interactions with a Close disposition. Reports show the closed dispositions.

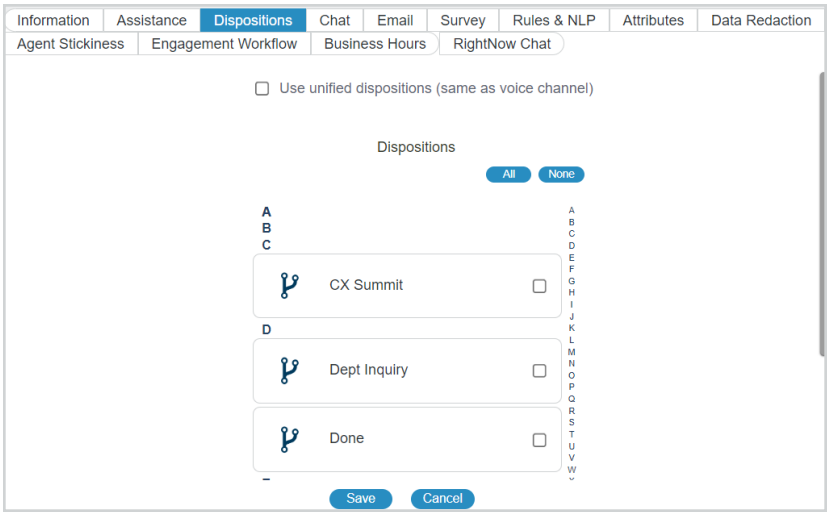


You may define multiple dispositions in each category. Agents see only the name of the disposition. Therefore, be sure to enter a descriptive name. When done, select the type of disposition. Your dispositions are listed alphabetically in the navigation pane.

1. Go to **Disposition** and click **Add**.
2. Assign a unique name and select a category.
3. Select **Global Disposition** to make the disposition available to all SCC profiles by default.
4. Click **Save**.

Optionally, you can configure dispositions as unified on a profile. **If you enable unified dispositions on a profile, you cannot revert the option.**

1. To use the same dispositions for voice and digital engagement interactions for a specific profile, enable **Use Unified Dispositions**.



Important

You can also assign unified dispositions to a domain, but you cannot revert that option once you enable it. See **Enabling Global Settings**.

2 Click **Save**.

3 Select the checkbox of the SCC disposition to add to the profile.

Defining Assistance Responses

Assistances are predefined responses that agents can use during chat, email, or social posts to respond to the customer's question by sending a predefined answer. These predefined responses for assistance are designed to answer typical questions or to provide directions for a common situation.

Note

Assistance responses do not pass inline images for all email providers.

Creating Simple Assistances

Simple assistances are common responses to routine interactions designed to save the agent time and effort while increasing consistency. For example, an assistance might provide instructions to reset a password or send a link to instructions.

1 Click **Add**.

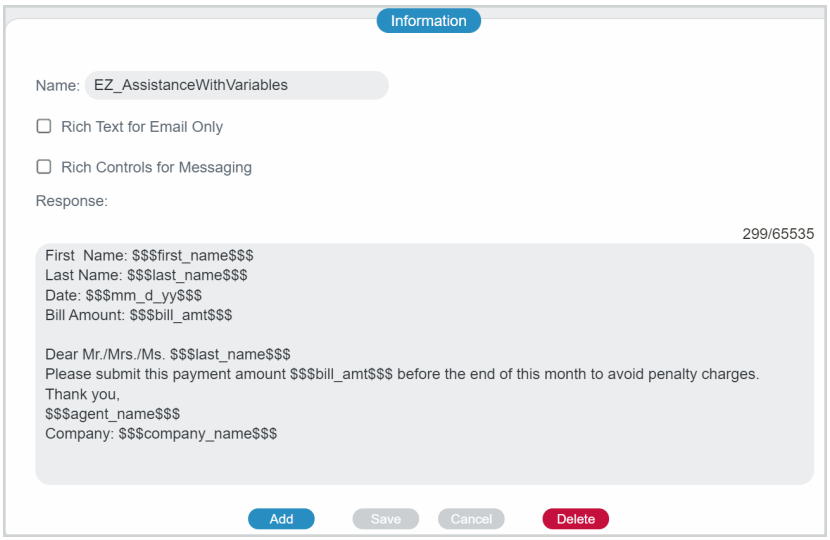
2 Optionally, enable the rich text for email or rich controls for messaging options to display the available text-formatting options.

Although the option specifies email only, the feature can be used with chat and social if it is set in the profile.

3 Enter the name and the text of the assistance, including links to text or images in a URL.

You can not paste an image in the assistance.

> **Note**
>
> The numbers above and to the right of the formatting toolbar indicate the number of characters used so far and the maximum number of available characters (65535).



4 Click **Save**.

Creating Dynamic Assistances

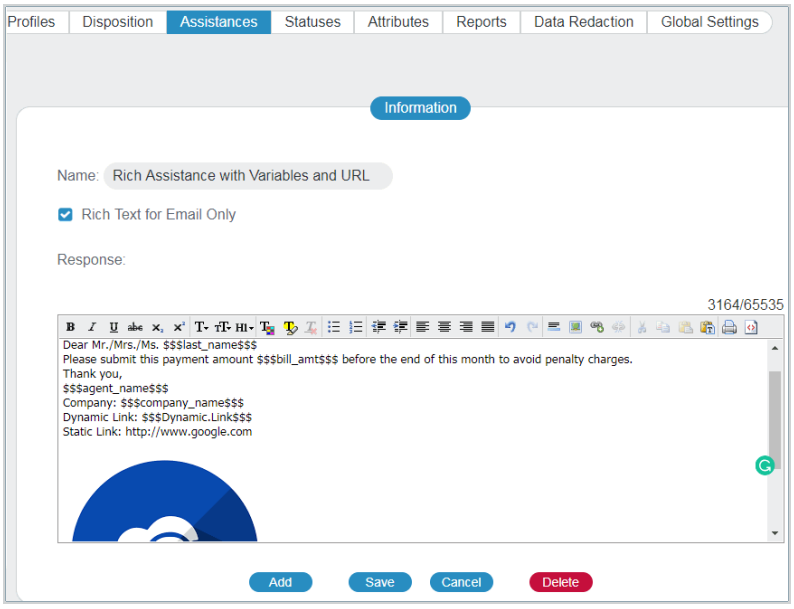
You can also create dynamic assistances by using your existing variables in this balanced format: **$$$company.name$$$**. You can set variables in the body of the assistance form. Agents can specify the HTML variable values to populate the body of the email or interaction when the assistance is updated. Predefined assistances are listed in alphabetical order.

Be sure that your variables follow these rules:

- Use only these characters: `a-z`, `A-Z`, `0-9`, and special characters `-:_.`.
- Do not use spaces.

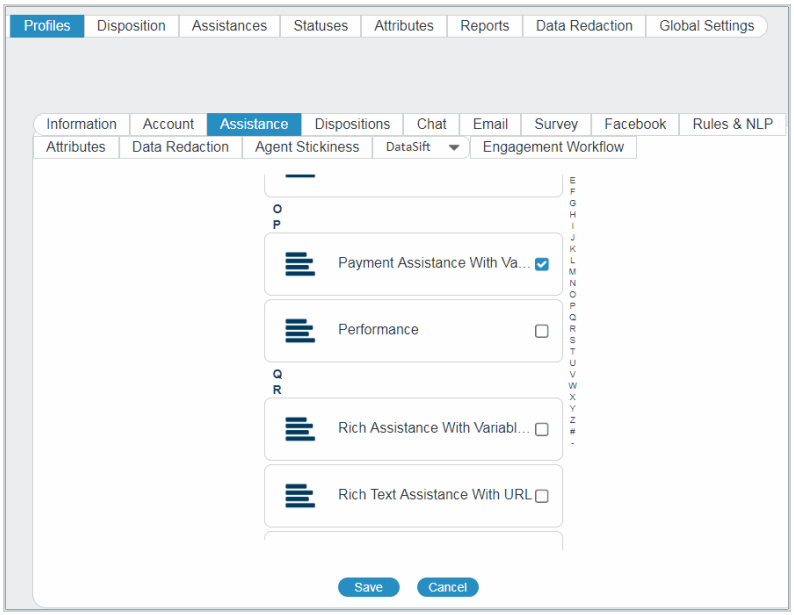
Very long strings display ellipses in the form label.

> **Note**
>
> The numbers above and to the right of the formatting toolbar indicate the number of characters used so far and the maximum number of available characters (65535).



Associating an Assistance with a Profile

To associate an assistance with a profile, select a profile from the list, enable the assistance, and click **Save**.

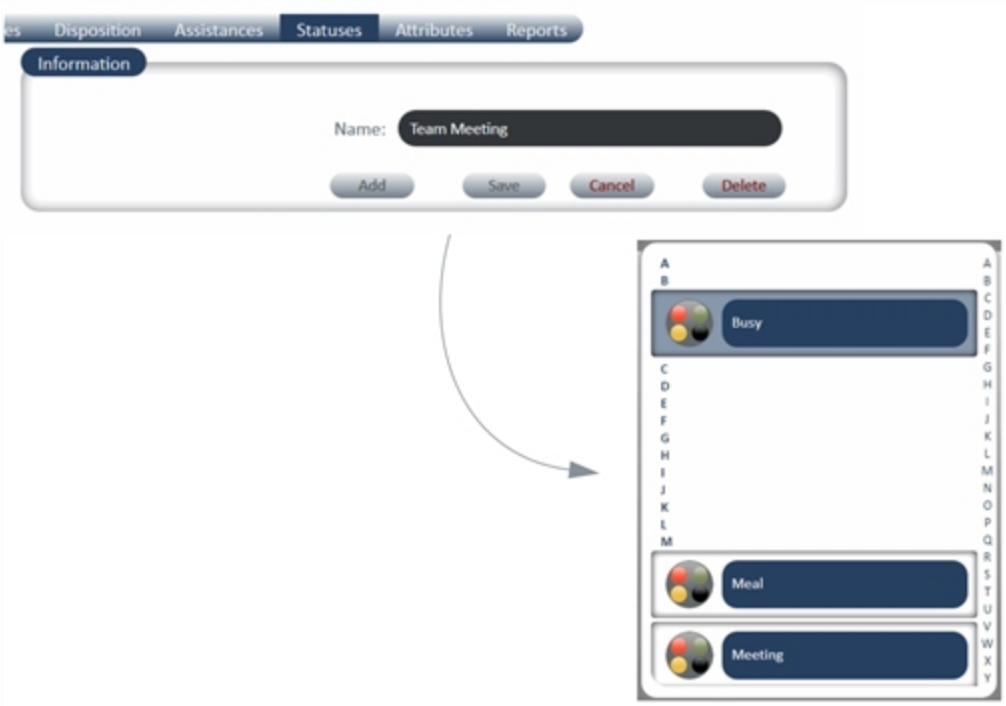


Creating Statuses

In the Statuses tab, define the ready states that your agents need to indicate their work state. To add a status, follow these steps:

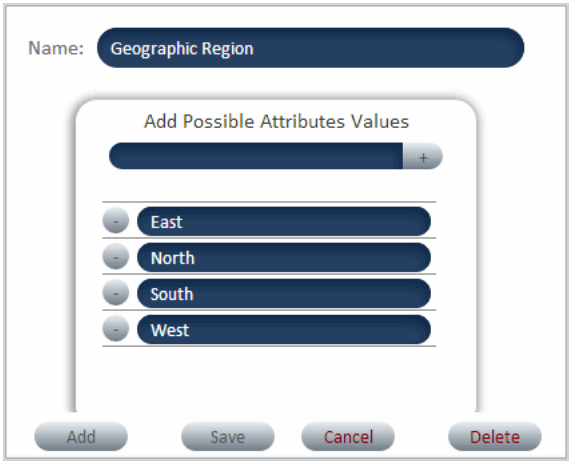
1. Click **Add.**
2. Enter a unique name, and click **Save**.

The new status appears in your list of statuses. For example, **On Social** can be used by agents working on a social interaction. Be as specific or general as needed for your business.



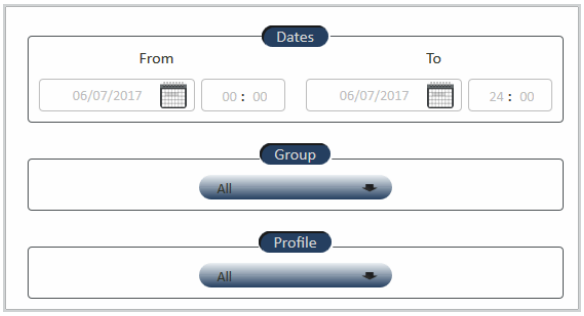
Defining Attributes for Agents to Tag Text Items

Agents can tag interactions with predefined attributes to help to filter interactions for reporting. Agents can assign multiple attributes to a single interaction. In the Attributes tab, name and enter values in the **Add Possible Attribute Values** field. Click the plus sign (+). This example contains four selections that agents can use to indicate a general geographic region that the contact represents.



Reporting Metrics about Digital Engagement Media Activity

Use the **Reports** tab to run the same reports that are available from the Five9 Dashboards and Reports Application. You create digital engagement reports by applying filters to the data. The filters differ based on the characteristics of the data.



This table describes the possible filters:

Dates	Social reports. Depending on the data, specify a start and end date for a date range, or a time span for reporting.
Time Interval	Some reports. Specify intervals from 15 minutes to one month.
Menu Selector	Some reports. Select a specific profile, clusters, skills, or other criteria.
Attribute Selector	Some reports. Add attributes, such as geographic region or type of post.

Five9 Engagement Workflow

Five9 Engagement Workflow enables you to provide more guidance and detail to your digital engagement channel routing solutions. Much of Five9 Engagement Workflow resides within IVR functionality. For additional information on routing solutions and Engagement Workflow IVR script templates, refer to the Interactive Voice Response (IVR) Administrator's Guide.

By default, such things as sending customer email replies to the agent profile associated with the skill in the original interaction, are automatic and require no additional configuration.

You can further augment your Engagement Workflow using a customized Drools file for use with your Five9RulesEngine IVR module. This rules and Drools creation and use is described here and installed into your Digital Engagement Administrator console.

Configuring Your Five9 Rules
Configuring Your VCC to Route Salesforce Objects
Example IVR Scripts for Engagement Workflow

Configuring Your Five9 Rules

Your Five9 Rules Engine definition file is a Drools file (.drl), which is written in Java. It enables you to apply logic to the data found in your email interactions.

Important

To configure a Drools file, you must have a working knowledge of Java.

Five9 Rules Engine Objects
Assembling Your Drools File
Building Your Drools File

Five9 Rules Engine Objects

In the Five9 Rules Engine, the Drools file references two objects: WorkItem and Dynamic Attributes.

Work Item

The WorkItem attribute contains the interaction ID of the email interaction. When the interaction ID is passed to the Five9 Rules Engine, the WorkItem object makes all parts of the email available for manipulation. If the interaction ID is not passed, data manipulation is limited to the content of DynamicAttributes.

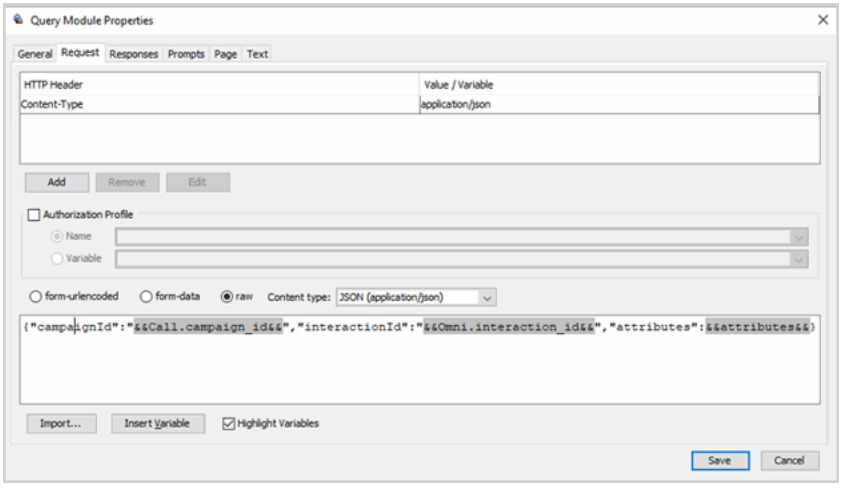
Dynamic Attributes

DynamicAttributes objects are key-value (KV) pairs, both string values, that serve as input and output for the Five9 Rules Engine. These attributes are unique to your domain. The Five9 Rules Engine accesses, modifies, then returns your KV list to the IVR with enhanced routing options or recommended actions for the agent.

To pass attributes to your Five9 rules engine, follow these steps:

1. Request the parameters and attributes.

   You can create dynamic attributes to be passed to the Five9 rules engine by using an IVR Query module. In the example below you send a raw JSON request to dynamically extract attributes specific to campaign and interaction.



   Query JSON request:

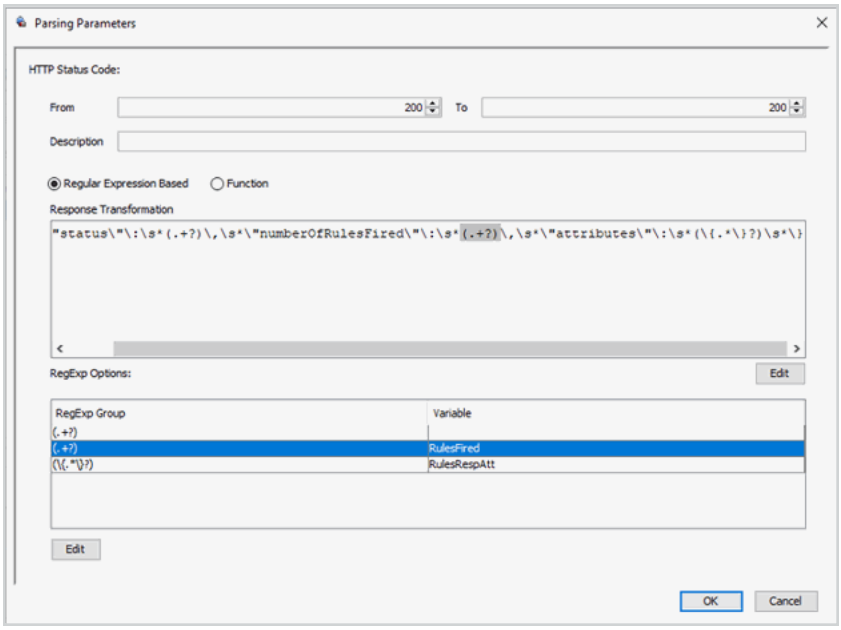
```
{"CampaignID": "&&Call.campaign.id&&","interaction.id":
"&&Omni.interaction_id&&","attributes: "&&attributes&&"}
```

The value of attributes is also a simple JSON request, such as:

```
{"body": "","number1": "555-123-4567","cookie monster": "Cookies
Yum!"}
```

2 Capture the query response.

You can configure the Query module response tab to create a JSON response object, such as this regular expression (RegEx) example:



For this response:

```
{"status": 1, "numberOfRulesFired": 1,"attributes": {"body":
"","number1": "555-123-4567", "cookieMonster": "Cookies Yum!:}}
```

The RegEx detail is:

```
\{\s*\"status\"\:\s(.+?)\,\s*\"numberOfRulesFired\"\:\s*
(.+?)\,\s*\"attributes\"\:\s*(\{[\s\w\d-":,!]*\}?)\s*\}
```

In this example, you are creating three capture groups for the following objects:

- `status`
- `numberOrRulesFired`
- `attributes`

The `status` and `numberOfRulesFired` objects are useful for error handling.

For more information about configuring the IVR Query Module, see the Interactive Voice Response (IVR) Administrator's Guide.

Error Handling

This sample JSON response shows that a rule failed:

```
{"status": 0, "numberOfRulesFired": -1,"attributes": {"body":
"","number1": "555-123-4567", "cookieMonster": "Cookies Yum!:}}
```

Notice `status = 0` and `numberOfRulesFired = -1`.

Use these conditions to implement fallback routing options if your rules engine fails.

Assembling Your Drools File

The following methods are available for building your Drools file to access and manipulate data. An example key-value pair used in the sample Drools file below is Customer Value (key), with possible values being gold, silver, or platinum. You can configure you IVR Query Module to pass dynamic attributes, as shown below:

Workitem Write Methods

Workitem write methods use attribute names and values defined by the Digital Engagement Administrator, such as Customer Value.

```
public void addNextBestAction(String actionName,String description)
public void tagItem(String tagName, String priority)
public void setAttribute(String attributeName, String
atttributeValueName, boolean overwrite)
```

Workitem Read Method

This method retrieves the email body, up to 20k characters.

```
public String getBody()
```

DynamicAttributes Write Methods

```
public void set(String keyName, String|Integer|Boolean|Long|Double
keyValue)
```

Example

```
when
    attributes : DynamicAttributes (true)
then
    attributes.set("discount","30") // String, String
    attributes.set("age",30) // String, Int
    attributes.set("HighValue",false) // String, Boolean
    attributes.set("price",1L) // String, Long
    attributes.set("rate",2.3) // String, Double
end
```

DynamicAttributes Read Methods

```
public String getString(String keyName)
public Integer getInt(String keyName)
public Boolean getBoolean(String keyName)
public Long getLong(String keyName)
public Double getDouble(String keyName)
```

Example

```
when
    attributes : DynamicAttributes (true)
then
    attributes.get("discount","30") // String, String
    attributes.get("age",30) // String, Int
    attributes.get("HighValue",false) // String, Boolean
    attributes.get("price",1L) // String, Long
    attributes.get("rate",2.3) // String, Double
end
```

Building Your Drools File

In this example, the first rule is evaluated to determine customer value. The Five9 Rules Engine recommends that the agent calls the customer if that customer's value is gold or platinum, a call provide better customer service than an email response.

```
// Your Drools file may contain multiple rules, as shown here.

import com.five9.ruleengine.model.DynamicAttributes;
import com.five9.ruleengine.model.Workitem;
```

```
rule "If gold and platinum customer, set next best action to call
customer."

when
   attributes : DynamicAttributes (
      getString("Customer Value").toLowerCase().contains("gold") ||
      getString("Customer Value").toLowerCase().contains("platinum")
      )
   workitem : Workitem ( true )

then
   workitem.addNextBestAction(
      "First Action", "Call customer at this number: " +
      attributes.getString("Phone Number") +"!");
   workitem.setAttribute(
       "Customer Value", attributes.getString("Customer Value"), true);
   workitem.tagItem("Call Customer", "1");
end

The second rule recommends offering a 10% discount when that customer's
value is platinum.

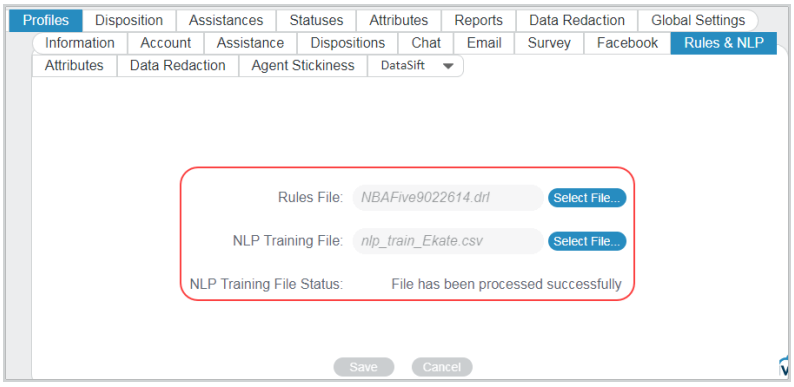
rule "If platinum customer, set next best action to offer a 10%
discount."

when
   attributes : DynamicAttributes(
      getString("Customer Value").toLowerCase().contains("platinum") )
   workitem : Workitem ( true )

then
   workitem.addNextBestAction(
      "Second Action", "Offer a 10% discount on the account balance.");
   workitem.tagItem("Offer Refund", "2");

end
```

Once complete, you must load both your <Rules>.drl file and your <NLP Training>.csv file using the Digital Engagement Administrator application, **Rules & NLP** tab.



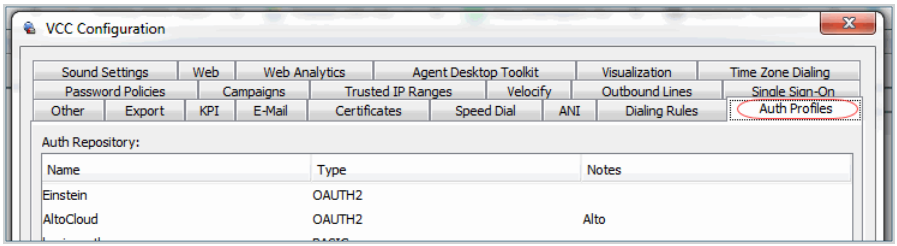
For more information about using the Five9 Rules Engine, see the Interactive Voice Response (IVR) Administrator's Guide.

Configuring Your VCC to Route Salesforce Objects

This section applies to Five9 domains enabled for external routing. To verify your domain configuration, contact your Five9 representative. The Plus Adapter for Salesforce Administrator's Guide and Interactive Voice Response (IVR) Administrator's Guide provide detailed configuration instructions to enable the routing of Salesforce chat and case objects.

Configuring Authentication

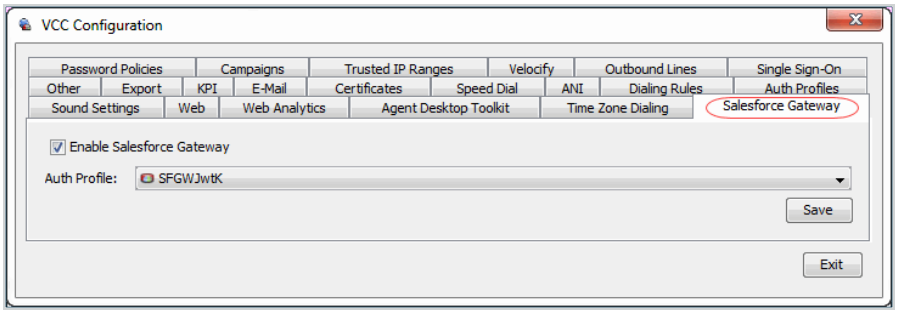
Enable your authorization profile to access the Salesforce API.



For more information on configuring authorization profiles, see the Global Settings chapter in the Basic Configuration Administrator's Guide.

Enabling Salesforce

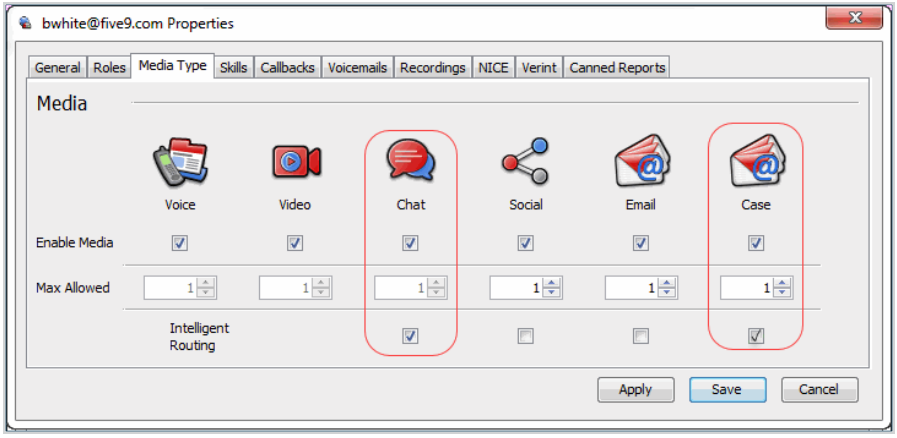
Enable Salesforce in the Salesforce gateway tab.



For more information on enabling the Salesforce gateway, see the Global Settings chapter in the Basic Configuration Administrator's Guide.

Enabling Chat and Case Media Types

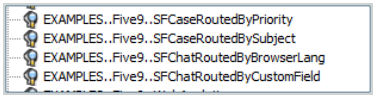
Select Chat and Case as media types for agents that will be receiving Salesforce interactions.



For more information on enabling media types, see the User Accounts chapter in the Basic Configuration Administrator's Guide.

Creating IVR Routing Scripts

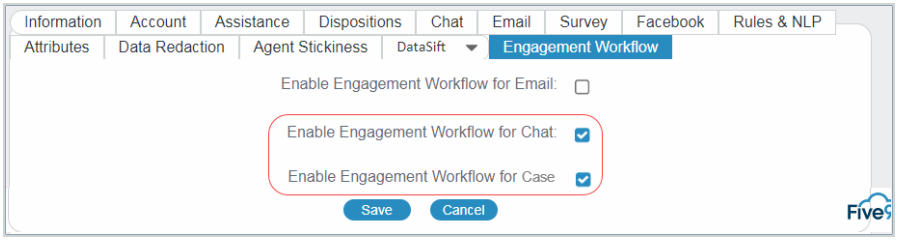
Create IVR scripts to route your Salesforce objects. Five9 has created example IVR scripts to simplify your scripting efforts.



For more information, see **Example IVR Scripts for Engagement Workflow**.

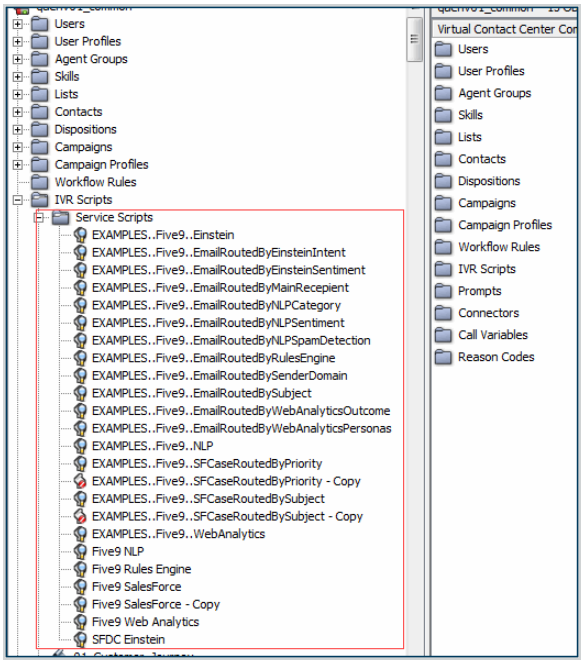
Enabling Engagement Workflow or Intelligent Routing

To route Salesforce objects by using Five9 IVR scripts, enable Five9 Engagement Workflow in the Digital Engagement Administrator application, **Engagement Workflow** tab.



Example IVR Scripts for Engagement Workflow

To see a working examples before you create your own script, you can open any of the example files listed under the **IVR > Service Scripts** subfolder. Example IVR scripts are to be used for text (chat and email) interactions only.



The service scripts available and their function are listed below.

> **Note**
>
> The values listed as **Input Parameters** can be specified in **Campaign Properties > Schedule > IVR Script Parameters**.

Examples..Five9..Einstein: Calls the SFDC Einstein system script. Input parameters:

auth-profile: Authorization profile for access to the Einstein engine model.

modelID: Used to determining customer's purpose (configured in Einstein).

sample_location: URL of an image to be classified by SFDC Einstein engine.

document1: Test string sent to Einstein for intent evaluation.

document2: Test string sent to Einstein for the sentiment evaluation.

Examples..Five9..EmailRoutedByEinsteinIntent: Routes an email based on the purpose, as produced by Einstein engine variables. Input Parameters:

positive_skill: Name of a queue used for routing email interactions with positive sentiment.

negative_skill: Name of a queue used for routing email interactions with negative sentiment.

general_skill: Name of a queue used for routing email interactions with neutral or undefined sentiment.

auth-profile: Name of the authorization profile that is configured for contacting the Einstein engine.

Examples..Five9..EmailRoutedByEinsteinSentiment: Routes an email based on sentiment produced by Einstein engine variables. Input Parameters:

positive_skill: Name of a queue used for routing email interactions with positive sentiment.

negative_skill: Name of a queue used for routing email interactions with negative sentiment.

general_skill: Name of a queue used for routing email interactions with neutral or undefined sentiment.

auth-profile: Name of the authorization profile that is configured for contacting the Einstein engine.

Examples..Five9..EmailRoutedByMainRecipient: Routes an email based on the **To**: field. Input parameters:

sales_email: Email address of the Sales queue.

sales_skill: Name of the queue to which sales agents belong.

support_email: Email address of the support queue.

support_skill: Name of a queue to which support agents belong.

general_skill: Default queue used if no matches were found.

Examples..Five9..EmailRoutedByNLPCategory: Routes an email based on Five9 NLP categorization. Input parameters:

category: Name of the NLP category. This value may be omitted for the main category.

Skill2CategoryMapping: Key-value list {"`valueX":"skillX`, ..."}, where `valueX` are the possible values of the category and `skillX` are the names of corresponding queues for routing.

general_skill: Name of queue for uncategorized emails.

Examples..Five9..EmailRoutedByNLPSentiment: Routes an email based on Five9 NLP sentiment. Input parameters:

positive_skill: Name of a queue used for routing email interactions with positive sentiment.

negative_skill: Name of a queue used for routing email interactions with negative sentiment.

general_skill: Name of a queue used for routing email interactions with neutral or undefined sentiment.

Examples..Five9..EmailRoutedByNLPSpamDetection: Filters out spam based on Five9 NLP categorization. Input parameters:

general_skill: Name of the queue that will receive non-spam emails.

Examples..Five9..EmailRoutedByRulesEngine: Routes an email using the Five9 Rules Engine module. Input parameters:

billing_skill: Name of the queue that will receive billing email interactions.

sales_skill: Name of the queue that will receive sales email interactions.

support_skill: Name of the queue that will receive support email interactions.

general_skill: Name of queue for uncategorized emails.

Examples..Five9..EmailRoutedBySenderDomain: Routes an email based on the **To**: field. In this example, email addressed to **acme.com** are routed to the queue assigned to handle acme's email interactions. Emails addressed to **pizza.com** are routed to the queue assigned to handle pizza's email interactions. Input parameters:

pizza_skill: Name of queue assigned to handle pizza.com email interactions.

acme_skill: Name of queue assigned to handle acme.com email interactions.

general_skill: Default skill used if no matches were found.

Examples..Five9..EmailRoutedBySubject: Routes an email based on the subject field. For the example script, the script is searching the email subject for the keywords *problem* or *buy* and route the email to support or sales accordingly. Input parameters:

sales_skill: Name of the queue that will receive sales email interactions.

support_skill: Name of the queue that will receive support email interactions.

general_skill: Name of queue for uncategorized emails.

Examples..Five9..NLP: Routes of the Five9 Natural Language Processing (NLP) engine in real time mode. Input parameters:

question: A question to be analyzed by the NLP engine.

Examples..Five9..SFCaseRoutedByPriority: Routes SalesForce cases based on the priority field of the case. For this example, the script is searching for the words "problem" or "buy" and routes interactions to support or sales correspondingly. Input parameters:

AuthProfile: Name of the authorization profile that is configured for SalesForce access.

SF_URL: Salesforce URL for access.

Goldskill: Name of the queue that will receive high-priority interactions.

Silverskill: Name of the queue that will receive medium-priority interactions.

general_skill: Name of queue for default interactions.

Examples..Five9..SFCaseRoutedBySubject: Routes SalesForce cases based on the subject field of the case. For this example, the script is searching for the words

"problem" or "buy" and routes interactions to support or sales correspondingly. Input parameters:

AuthProfile: Name of the authorization profile that is configured for SalesForce access.

SF_URL: Salesforce URL for access.

sales_skill: Name of the queue that will receive sales interactions.

support_skill: Name of the queue that will receive support interactions.

general_skill: Name of queue for interactions if no matches were found.

SalesPattern: RegEx for sales-related cases.

SupportPattern: RegEx for support-related cases.

Examples..Five9..SFCaseRoutedByBrowserLang: Routes SalesForce cases based on the client browser's language setting. For this example, the pre-defined languages are: English, Spanish, and Russian. Input parameters:

AuthProfile: Name of the authorization profile that is configured for SalesForce access.

EnglishSkill: Name of the queue that will receive English language interactions.

SpanishSkill: Name of the queue that will receive Spanish language interactions.

RussianSkill: Name of the queue that will receive Russian language interactions.

SF_URL: Salesforce URL for access.

Examples..Five9..SFCaseRoutedByCustomField: Routes SalesForce cases based on a field specified in the Salesforce LiveChatTranscript object. Input parameters:

Auth-profile: Name of the authorization profile that is configured for SalesForce access.

FieldName: Name of the field in the LiveChatTranscript object.

FieldValToSkillMap: Mapping to identify and distribute field values to skills.

DefaultSkill: Name of queue for interactions if no matches were found.

Configuring Five9 Video Engagement

Five9 Video Engagement enables visual support collaboration with your customers. This chapter describes the user properties and workstation configuration necessary to support Five9 Video Engagement.

Creating Use Cases
Creating Video Engagement Agents
Preparing the Agent's Workstation

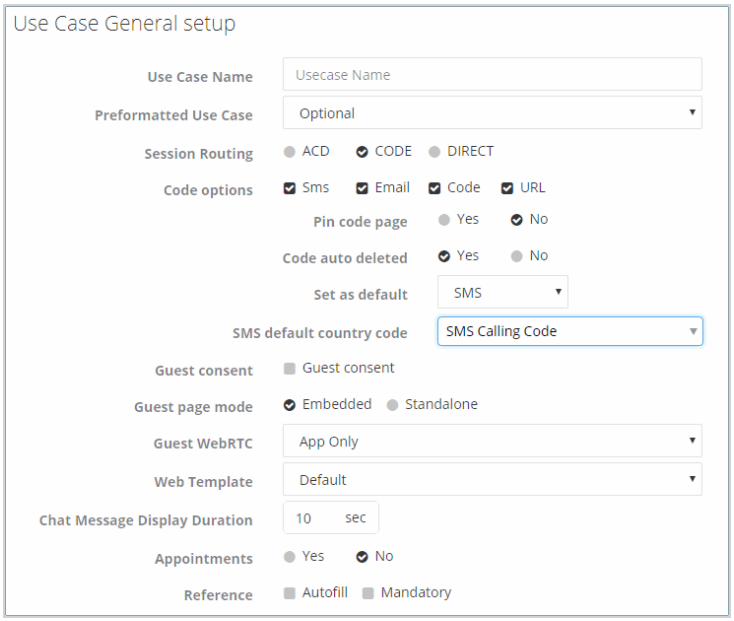
Creating Use Cases

Five9 agents are granted access to video engagement interaction types based on each use case that you define. The use cases and users are independent and may be created in any order.

Creating Uses Cases
Configuring Console Options
Configuring Guest User Startup Options
Configure Console Controls
Configuring Guest Controls
Creating Additional Use Cases
Assigning User to Use Cases

Creating Uses Cases

1. Log into SightCall Administration Portal.
2. Select **Use cases** from the Console menu.
3. Click **+Add Use Case** button.
4. Select the following general setup options:



- **Use Case Name** (manually type to enter):
  - Voice only
  - Video only
  - Voice and Video

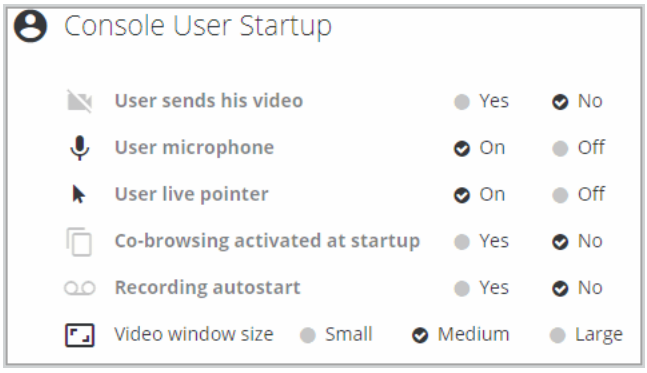
    Naming must match exactly: *case sensitive, space sensitive*
- **Session Routing**: The default setting, CODE, must remain selected.
- **Code Options**. Select one or more of the following options:
  - SMS: Use SMS to send video link.
  - Email: Use Email to send video link.
  - Code: Generates a 6-digit code the customer can use to begin the video session.
  - URL: Provides the agent with URL required to start video session. Copy and paste to customer via any communication channel.
- **PIN Code Page**: No
- **Code auto deleted**: Yes
- **Set as Default**: SMS

- **SMS Default Country Code**
- **Guest page mode**: Standalone **Standalone** is required for video display.
- Remaining fields: Accept defaults.

5 Click **Continue**.

Configuring Console Options

Console user setup defines the options for your agent when a Five9 Video Engagement session starts. The graphic below represents common configuration.

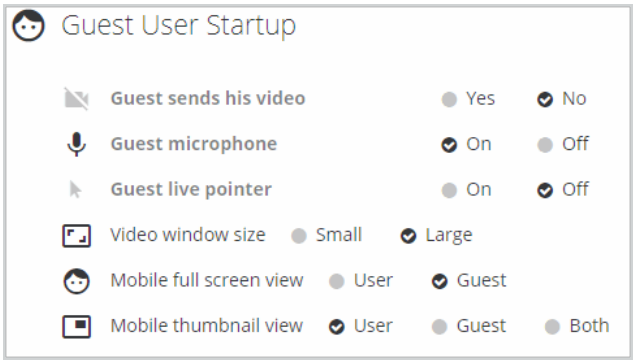


Feature	Description
User sends video	Yes: Agent station video camera begins sending video when session begins. No: Session begins and agent must enable video manually.
User microphone	On: Agent audio is enabled. Off: Agent audio is enabled.
User live pointer	On: Agent can use live pointer on video. Off: Agent cannot use live pointer on video.
Co-browsing activated at startup	Yes: Allows application sharing (not desktop sharing). No: Application sharing is disabled.
Recording autostart	Yes: Recording begins automatically. No: Recording does not begin automatically.
Video window size	Small, Medium, or Large; size varies by display hardware.

Configuring Guest User Startup Options

Guest user startup options define the interaction experience for your customer or contact.

1 Define the contact experience settings shown below.



- **Guest sends his video**
  - Yes: Contact video begins when session begins.
  - No: Contact must initiate video.
- **Guest microphone**
  - On: Contact has audio through SightCall.
  - Off: Contact does not have audio through SightCall.
- **Guest live pointer**
  - On: Contact can use live pointer on video.
  - Off: Contact cannot use live pointer on video.
- **Video window size**
  - Small: Small video window display for guest.
  - Large: Large video window display for guest.
- **Mobile full screen view**

- User: Not used for desktop agents.
- Guest: Guest video occupies full screen.

- **Mobile thumbnail view**
  - Thumbnail view provided for User, Guest, or Both.

2 Click **Continue.**

Configure Console Controls

The agent is the local console user. The contact is the remote console user.

1 In the **Local Console Controls** section, click the selection box beside the desired feature.

> **Note**
> The features appear on the control bar in the order they are selected.

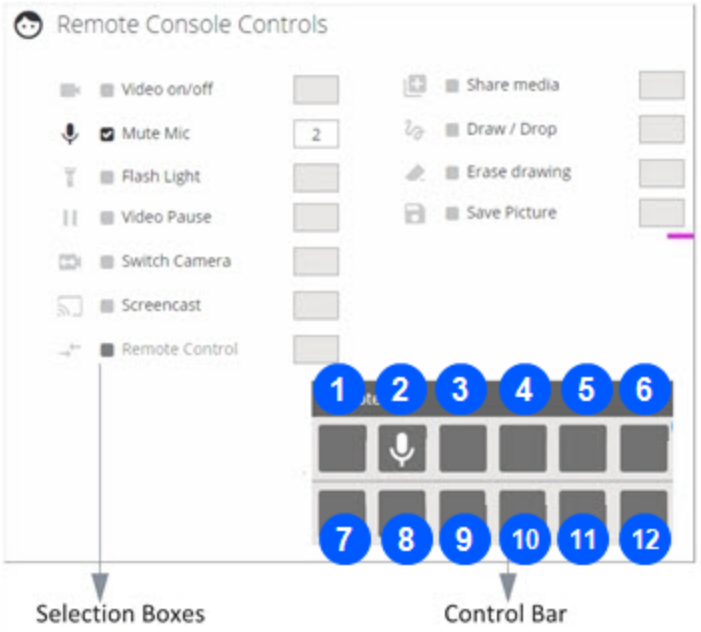


1 **Video On/Off**: Toggles video camera on or off.
2 **Mute Mic**: Toggles agent microphone mute.
3 **SD/HD Video Profile**: Toggles SD or HD video profile.
4 **Share Screen/App**: Shares the agent view with the contact.
5 **Hangup**: Disconnects video engagement session.

To configure controls, click the selection box beside the feature in the **Remote Console Controls** section.

> **Note**
>
> The features appear on the control bar in the order they are selected.

The Remote Control section determines the controls for the contacts device available to the agent.



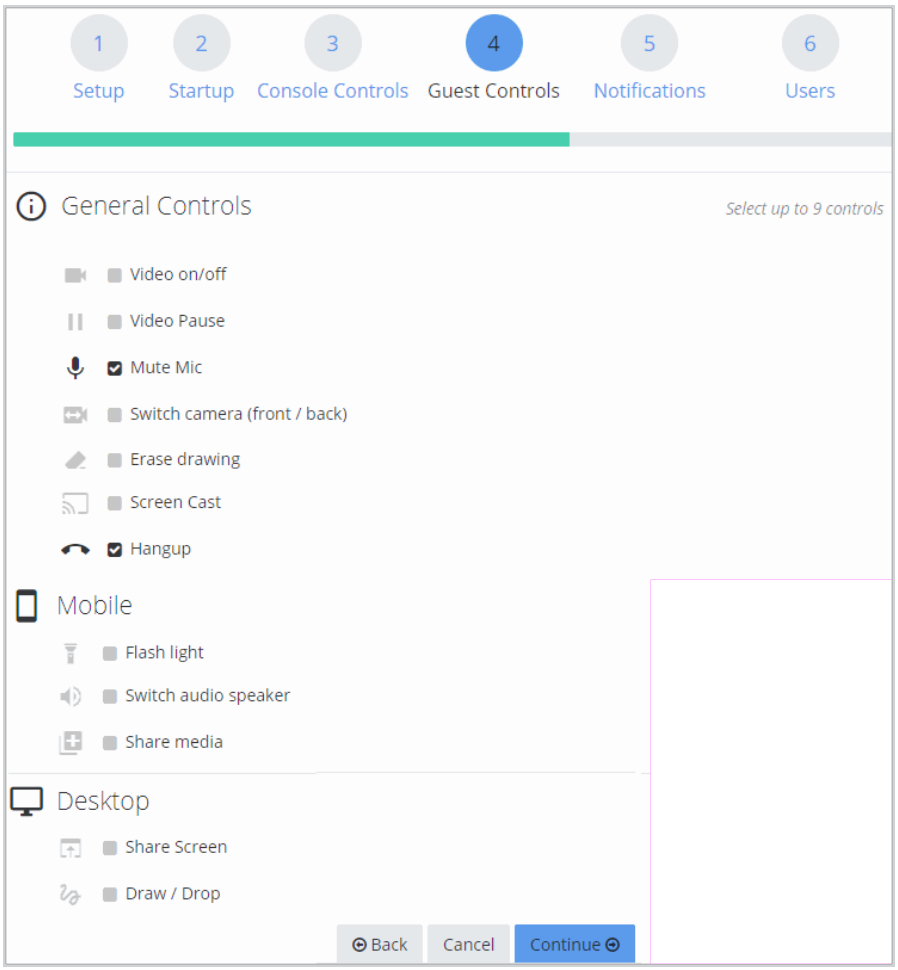
1. **Video On/Off**: Toggles contact device video display on or off. This send a request to the contact that must be accepted.
2. **Mute Mic**: Toggles microphone mute on contact's device.
3. **Flash Light**: Toggles light on contact's device.
4. **Video Pause**: Pauses video on contact device.
5. **Switch Camera**: Toggles video between screen-facing to rear-facing cameras, if applicable.
6. **Screencast**: Transmits the video to a screencast-enabled device.
7. **Remote Control**: Gives agent remote control of contact's device.
8. **Share Media**: Adds additional users to video stream.
9. **Draw/Drop**: Enables drawing on displayed video.
10. **Erase Drawing**: Removes drawing from displayed video.
11. **Save Picture**: Captures and saves video image.

> **Note**
>
> Five9 recommends using Verint or Calabrio WFM/WFO options to simplify recording and storage. Using a WFM/WFO solution eliminates the need to assemble disparate recording segments captured outside of Five9.

2 Click **Continue**.

Configuring Guest Controls

Guest controls are the controls available for the contact side of Five9 Video Engagement.



1 Enable the selection box beside the control.

> **Note**
>
> The combination of controls General, Mobile, and Desktop controls, may

contain a maximum of 9 controls.

2 Click **Continue** twice to skip SMS notification.

Creating Additional Use Cases

To create additional use cases, you can follow the procedure above or simply click **Duplicate** beside any existing use case, modifying the name or parameters as desired.

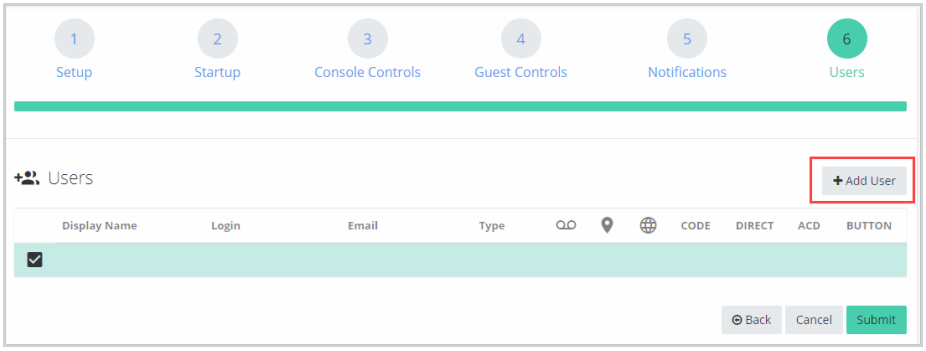
Important

Five9 supports three distinct use cases: Voice only, Video only, and Voice and Video. The naming is case and space sensitive.

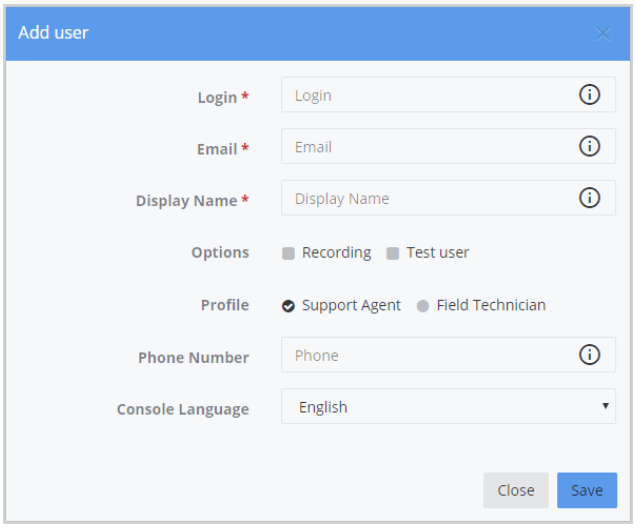
Assigning User to Use Cases

To associate use cases with the agents, follow these steps:

1 Click **+Add User**.



2 See Creating a User.



Creating Video Engagement Agents

Before creating Video Engagement agents in SightCall, you must have an agent ID and a domain ID. The agent ID is available in the Agent Information report. If you are uncertain of your domain ID, contact your Five9 representative.

Important

Each SightCall user is a unique combination of agent ID and domain ID in this format: **domainID_agentID**.

Creating a User
Coding Use Cases

Creating a User

To create a user, follow these steps:

1 Log in to SightCall Admin at https://admin.sightcall.com.

2 Select **Users** from the Console menu.

3 Click **+Add User**.

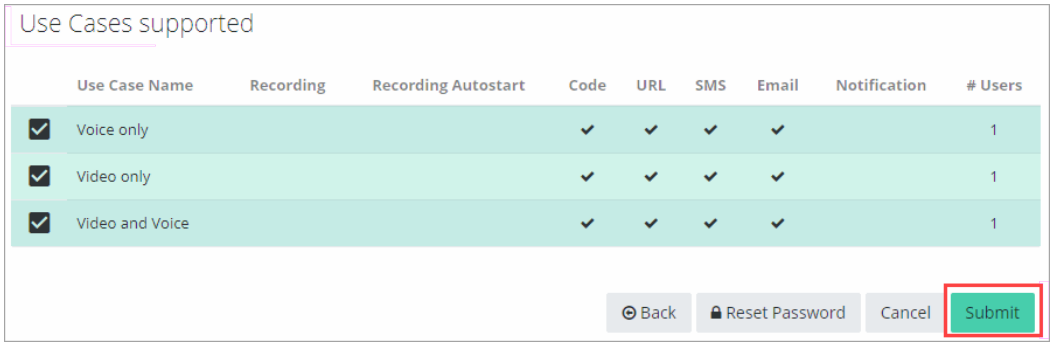
4 Populate user properties.

- Profile: Support Agent
- Login: domainID_agentID
- Email: Valid Five9 agent email
- Phone Number:
- Display Name:
- Options: Recording or Test User
  Use the Test User when you do not want the calls of this user to be counted in the statistics.
- Console Language:
  - English
  - French
  - German
  - Dutch
  - Brazilian Portuguese
- TCP Port: Default
- Personal Folders: No. Accept default.

5 Click **Continue**.

Coding Use Cases

Select the use cases for this agent and click **Submit**.



Preparing the Agent's Workstation

The SightCall system installer is required in the agent workstation.

Comparing Standard Installer and Admin Installer
Using the SightCall Standard Installer
Using the SightCall Admin System Installer

Comparing Standard Installer and Admin Installer

SightCall recommends using the standard installer when possible. The file extensions are MSI for Windows and PKG for Mac operation systems.

Warning

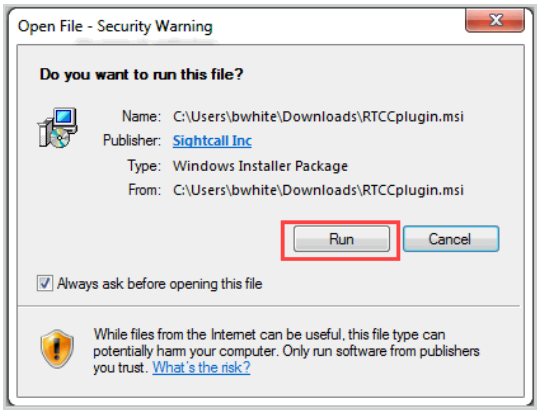
Do not use both installers in the same computer.

	Standard Installer	Admin Installer
Access to all SightCall features	Yes	Yes
Deployment without Admin rights	Yes	No
Automatic upgrades	Yes	No
Users have limited rights	No	Yes

Using the SightCall Standard Installer

The benefit to using the standard installer is the SightCall automatic upgrade system. Deploying any new version overwrites the previous version. While the standard system installer can be used for bulk installation, SightCall recommends browser installation for each user.

1. Download the SightCall plug-in.
2. Install the plug-in.



Using the SightCall Admin System Installer

The Admin plugin is an alternative when the standard plug-in cannot be installed or used properly, for example:

- Users do not have write access to personal folders.
- Personal folders are remote with limited resources.
- Corporate policy prohibits installing programs in personal folders.
- Workstations are shared by several users.

SightCall recommends that you completely remove your SightCall installation when switching between a standard and admin installer. Removal must be performed by a system administrator using the command lines shown below.

```
wmic product where name="npRTCCplugin" call uninstall

rd /S /Q "%APPDATA%\npRTCCplugin"

rd /S /Q "%LOCALAPPDATA%\Microsoft\Windows\Temporary Internet
Files\Virtualized\C\Users"

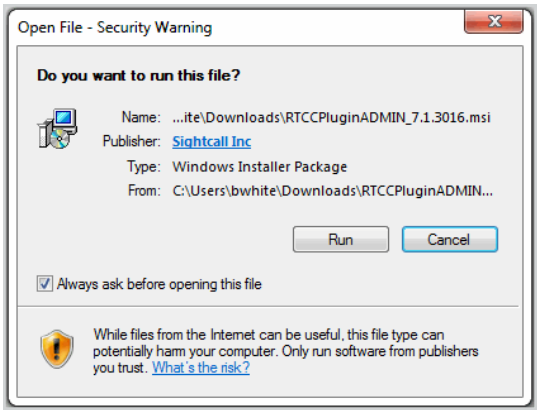
rd /S /Q "%LOCALAPPDATA%\VirtualStore\Program Files
(x86)\Google\Chrome\Application"

rd /S /Q "%LOCALAPPDATA%\VirtualStore\Program
Files\Google\Google\Chrome\Application"
```

To use the SightCall admin system installer:

1 Download the system installer.

2 Install the plug-in.



Chat Interactions in SCC

Chat interactions enable you to close a sale, prevent the abandonment of shopping carts, anticipate a customer's support request, and handle the request with chat instead of voice, which has a higher cost.

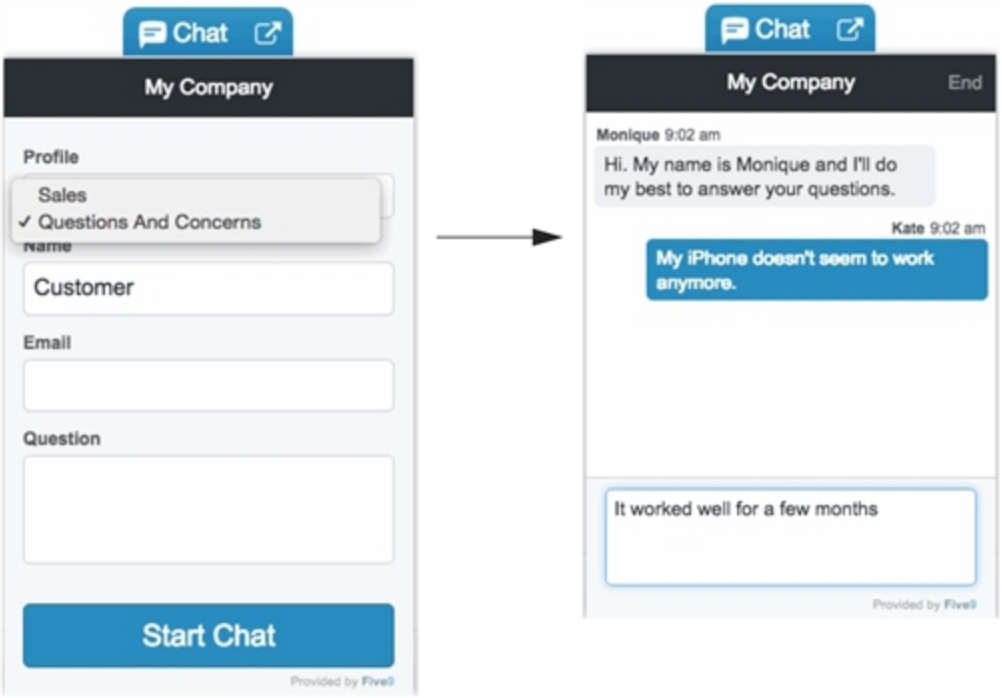
Important

Five9 does not recommend sending shared attachments with personally identifiable information (PII) data. Any attachment with PII should be attached directly to only one contact. If you choose to send an attachment with PII data to multiple users, the compliance responsibility for the California Consumer Privacy Act (CaCPA) and the General Data Protection Regulation (GDPR) is your responsibility to address. Five9 will only purge attachments that are related to a single user. If you use an attachment to send to multiple users when we purge for one of the users then that shared attachment will also be purged.

Overview of Chat
Configuring Chat
Configuring Proactive Chat
Customizing the Chat Console
Configuring SMS Interactions
Using the Script Generator

Overview of Chat

The chat console enables your agents to communicate with your customers in real time. This example shows a customer requesting help with a recent purchase.



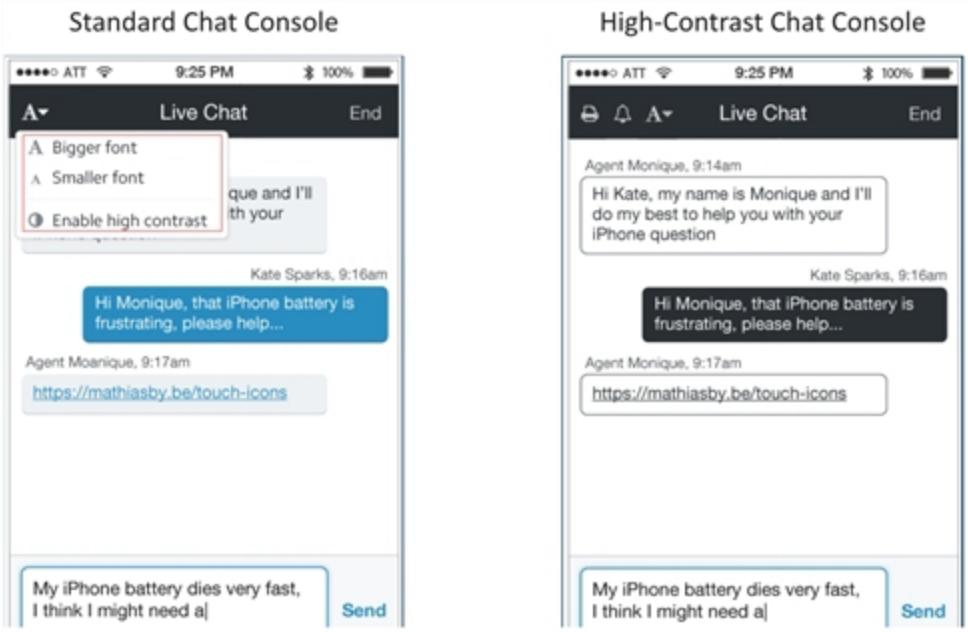
You can customize many features shown above, such as the email field, the chat tab, and the style. For more information, see **Adding Fields and Customizing Labels**.

Important

Ensure that you are using the correct chat console version for your agent interface: Java-based chat console for Java-based agents and web-based chat console for web-based agents. For the URLs of the digital engagement administrator interface for Plus applications and Java client, see the Technical Requirements guide. If you have questions about your agent interface, contact your Five9 representative.

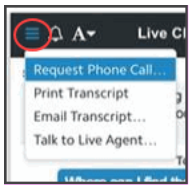
High Contrast Chat Console

Five9 Chat web form contains type size and high contrast view options that meet the requirements for ADA (Americans with Disabilities Act). The user can select font sizing or high contrast by clicking the **fonts** icon, located at the top, left position in their chat console.



Chat Console Menu Options

The chat console menu options enable the end-user to request a phone call, live agent, or transcript of the chat interaction.



Audience

This chapter is intended for web developers who understand these technologies:

- REST API architecture
- HTTP, HTTPS, and WebSocket protocols
- JavaScript, JSON, and jQuery
- HTML5 and CSS

Adding an Email Button

You may add an email option for your customers to use when no agents are logged in to chat with them. You may show or hide this option as needed. This setting applies also to the email option in the proactive chat form. To hide the **Send Email** button, set the `showEmailButton` parameter to `false` in the JavaScript function or directly into the URL query string.

```
Five9SocialWidget.addWidget({
    type: 'chat',
    rootUrl: '../',
    tenant: 'tenant',
    profiles: 'profiles',
    title: 'title',
    showEmailBut
```

Survey Console Integration

Five9 also provides a Survey Console to collect customer feedback before they leave your website. This helps measure satisfaction and identify areas for improvement.

Configuring Chat

The SCC Administrator application enables configuration of Chat options.

Configuring Chat Routing and Abandon Options
- Configuring Routing of Web Chats
- Configuring Routing of Asynchronous Messages

Configuring Chat Inactivity Options
- Enabling Automated Reminder (Comfort) Messages
- Configuring the Reminder Message
- Closing the Chat Window Automatically

Configuring Chat Routing and Abandon Options

In **Profiles > Chat**, you can define the behavior of web chat and asynchronous messages when they are received after business hours and when no agents are logged into the

system. Enabling each routing setting below allows you to define the system message that is displayed to the corresponding setting.

Configuring Routing of Web Chats

If you select the **Enable routing of web chat after business hours:** option, web chats received outside of business hours are routed as usual. If you enable this setting, you may also define the **After hours message for web chat**.

If you select the **Enable routing of web chat when no agents are logged in:** option and routing after business hours is not enabled, web chats are routed as usual even if no agents are logged in and active. If you enable this setting, you may also define the **Web chat wait message when no agents are logged in**.

Set the **Time to abandon web chats:** in **Days**, **Hours** and **Minutes** that you want Five9 to abandon a still-open web chat that is unassigned. By default, web chats are abandoned after 1 day (24 hours), but you can keep them up to 7 days (168 hours). The system displays a warning message if you set a time less than 30 minutes or more than 7 days.

Five9 also abandons native chats automatically if the end-user chat client disconnects and the end-user does not re-connect within approximately three minutes.

Configuring Routing of Asynchronous Messages

If you select the **Enable routing of non-SMS asynchronous messages after business hours:** option, non-SMS asynchronous messages received outside of business hours are routed as usual. If you enable this setting, you may also define the .**After hours message for non-SMS asynchronous messages**.

If you select the **Enable routing of non-SMS asynchronous messages when no agents are logged in:** option and routing after business hours is not enabled, non-SMS asynchronous messages are routed as usual even if no agents are logged in and active. If you enable this setting, you may also define the **Non-SMS asynchronous wait message when no agents are logged in**.

Set the **Time to abandon asynchronous messages:** in **Days**, **Hours** and **Minutes** that you want Five9 to abandon a still-open chat that is unassigned. By default, non-SMS asynchronous messages are abandoned after 7 days, but you can set the time to keep them less than 7 days. The system displays a warning message if you set a time less than 30 minutes or more than 7 days.

Asynchronous messages are created by the Five9 messaging API. **Time to abandon asynchronous messages:** applies to messages created with any sub-media type except "GENERIC". If the message sub-media type is "GENERIC", then the **Time to abandon web chats:** configuration applies.

Note

If an inbound web chat or asynchronous message is transferred to another campaign, the time to abandon and business hour settings of the originating campaign persist.

Configuring Chat Inactivity Options

Enabling Automated Reminder (Comfort) Messages

In **Profiles > Chat**, you can define the automated comfort messages displayed to a contact if the agent is taking too long to reply. The timer begins when the customer responds and restarts when the agent sends a message. Similarly, inactivity by the contact can start an option to automatically close the chat window.

Note

The customer-idle time restarts when a chat interaction is transferred to another agent.

Important

If you use the agent-idle timer and the automatic close option you can potentially send confusing messages to your customers. You must carefully plan the timing of your agent-idle timer messages and the close inactive interaction timer to avoid these situations.

Example

In this scenario, the agent idle timer is configured for 30 seconds and an automatic close timer configured for 180 seconds. If agents are unresponsive, you can produce a confusing interaction for your customers, as outlined below:

- The agent is busy. A comfort message is sent at 30th, 60th, and 90th second saying `I am still researching your ...`
- At the same time, at the 90th second, a warning is displayed to the customer: `I have not heard from you for a while...`

- Now the customer is confused. The customer has nothing to say because the agent is still researching. So the customer waits.
- At 120th and 150th second intervals, additional comfort messages are displayed to the customer: `I am still researching your…` because the agent is still busy or unresponsive.
- At the 180th second the chat is automatically closed due to inactivity.

No timer setting is generic for all because every contact center is different. You must carefully balance the timing of your messages with the responsiveness and task load of your agents. If your agents typically respond to chat interactions within 30 seconds, the scenario described above presents no problem or confusion to your customers. They would never receive the agent-idle comfort messages. Once an agent initially responds to the chat, the agent-idle timer is turned off and the customer no longer receives agent-idle comfort messages.

Configuring the Reminder Message

The reminder message is disabled by default. To configure the reminder message, follow these steps.

1. To enable this feature, select the **Enable Comfort Message** option.
2. Configure the agent-idle time interval.

   You can configure a time interval from 30 to 600 seconds (default is 120 seconds). Any text entry in the chat by the agent resets this timer. With no agent activity this message is sent at the defined interval.
3. Enable the **Comfort message** option and define a message containing up to 2,000 characters.

   The default comfort message is `I am still researching. Thanks for the patience`. If you enable this option, you must define a comfort message.

Closing the Chat Window Automatically

The chat automatic close feature is disabled by default. To configure automatic close for inactive chat sessions, follow these steps.

1. Select the **Enable Auto-Close** option.
2. Set an inactivity time limit.

You can configure any time from 30 to 600 seconds. The default time to automatically close an inactive interaction is 180 seconds.

3 Configure the auto-close warning message.

The default message is `I haven't heard from you in a while. Are you still there?` You can define any message containing up to 2,000 characters.

The automatic close warnings displays when one half of your customer idle timer has passed. The idle timer restarts with any new text entry from the customer.

4 Configure your automatic close message.

The default message is `Chat auto-closed due to customer inactivity`. You can define any message up to 2,000 characters. If you enable this option, you must define automatic close warning and automatic close timer settings.

No timer setting is generic for all because every contact center is different. You must carefully balance the timing of your messages with the responsiveness and task load of your agents. If your agents typically respond to chat interactions within 30 seconds, the scenario described above presents no problems or confusion to your customers, they would never receive the agent-idle comfort messages.

5 Configure your chatbot automatic close message.

The default message is `The session with the virtual agent has timed out. To continue the conversation, start another session`. You can define any message up to 2,000 characters. If you enable this option, you must define automatic close warning and automatic close timer settings.

Configuring Proactive Chat

Proactive chat differs from a standard link to chat in that it offers chat invitations to your customers in the form of a pop-up window that opens as customers navigate through your web site. Your agents see chat messages as soon as they log in even if they are not set to Ready.

Use proactive chat to display a chat offer to your visitors. You define the parameters based on the visitor's navigation pattern across the web site or within specific pages of a web site. A prompt such as this example enables the visitor to start a chat session. The visitor has an opportunity to either accept or reject the offer.

Your web designer can implement proactive chat and design the prompt and the chat form with JavaScript and CSS. Five9 proactive chat is triggered by time on page, number of pages visited, or hover time on a control.

Before configuring the consoles, your web server must be configured and running.

Configuring the Digital Engagement Administration Console

You can configure proactive chat in the Profiles section of the Console. Each profile or campaign has a Chat configuration tab. Proactive chat is disabled by default. To enable it, click **Enable Proactive Chat**.

The options that you need depend on the question shown to the customer and the customer's action:

Parameter	Description
Chat Offer Condition	Visitor action that triggers a chat offer: • Amount of Time Spent in Web Pages • Mouse Hover Time • Number of Visited Web Pages
Proactive Chat Question	Question to present to the customer when a chat is offered.

Integrating Proactive Chat in Your Web Site

This section describes how to configure Proactive Chat by adding components and scripts in your web pages. It also describes how you can customize your Proactive Chat implementation.

Adding the Proactive Chat Components
Adding the Proactive Chat Scripts
Customizing Your Implementation
Combining Proactive Chat and Standard Chat

Adding the Proactive Chat Scripts

Add these scripts at the bottom of the `<body>` tag of each HTML page where you want to use Proactive Chat:

- **Five9ProactiveChat.init()**: This function below is identical in each page.
- **Five9ProactiveChat.startNewPage**: This function below contains page-specific parameters.

Five9ProactiveChat.init()

This script contains the required and optional parameters to use Proactive Chat:

```
var options = {
    restAPI: 'https://app.five9.com',
    chatConsole: 'https://app.five9.com/consoles/ChatConsole/
       index.html',
    tenant: 'MyTenantName',
    notificationType: 'notification'
};
Five9ProactiveChat.init(options);
```

This table describes the parameters.

Name	Data Type	Description
`chatConsole`	`string`	Required. Root URL of the Five9 Chat Console.
`chatOptions`	`string`	Optional. Whether to enable any of these options (true or false) for your customer: `showPrintButton`: Displays a button to print the chat transcript. The button opens the print dialog for the browser. The ability to print depends on the user's browser and computer. `playSoundOnMessage`: Plays a sound when a new message arrives if `allowCustomerToControlSoundPlay = true`. `allowCustomerToControlSoundPlay`: Enables the user to control the sound (on or off). `allowUsabilityMenu`: Displays options to modify the type size and the level of contrast. For more information, see in the consoles chapter. `theme`: Optional. Use a predefined or custom theme. The default is `default-theme.css`.

Name	Data Type	Description
		See **Choosing Your Console Theme** for more details.
`customChatFields`	`object`	Optional. Passes the object to the chat console as the `fields` option. You can pass custom fields, data, and show or hide the email and name fields. For usage information, see **fields** in the console script section. For example, to hide the email field in the chat console, use this syntax: `{email:{value:"",show:false}}`
`notificationType`	`string`	Required. Method used to invite customers to chat: `callback`: JavaScript callback `modal`: Full-screen pop-up window displayed to customers. `notification`: Default. Chat offer displayed in the lower right corner of the page. For more details, see Notification Types below.
`restAPI`	`string`	Required. URL of the Five9 REST API: `https://app.five9.com`
`showProfiles`	`boolean`	Optional. Whether customers may choose a campaign. `true`: Default. `false`: The profile menu is hidden.
`tenant`	`string`	Required. VCC domain name.
`theme`	`string`	Optional. The default is `default-theme.css`. For more information, see **Choosing Your Console Theme**.
`title`	`string`	Optional. Title to display in the console title bar, such as the name of your company.

Notification Types

Additional parameters to further define the chat interaction noitification.

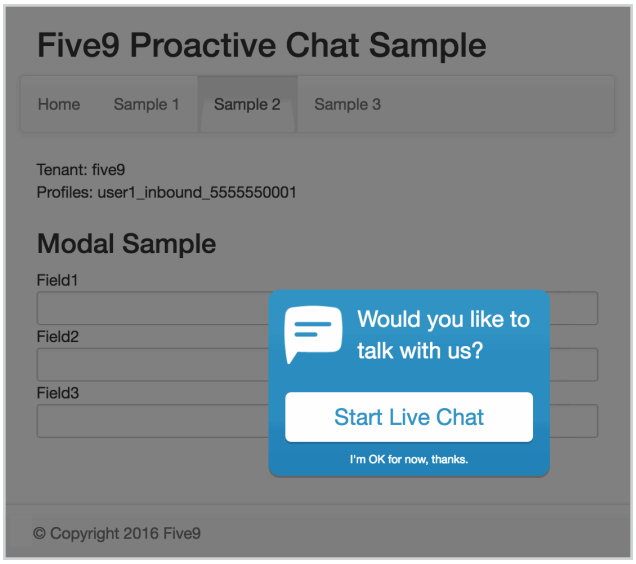
- `callback`: JavaScript callback called when a chat offer is shown. Within this callback, developers can perform any needed functionality, including accepting or declining the chat invitation:

```
function(question, timeout) {
// owner site can perform any needed functionality
}
```

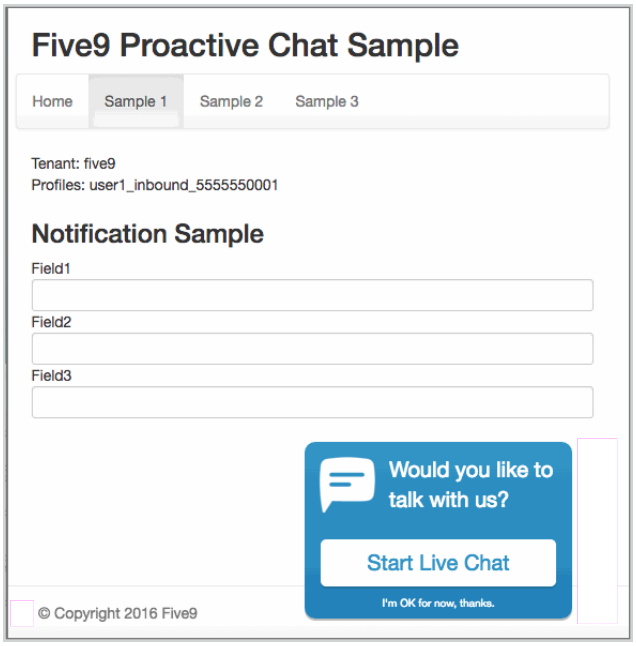
You can find these parameters in the Digital Engagement Administration Console. For more information, see the `ProactiveChat` example in the archive that you downloaded.

- question (string): Question to ask the customer. Located in the **Proactive Chat Question** field.
- timeout (integer): Number of seconds to wait before hiding the offer after it has been shown. Located in the **Offer Timeout** field.

- `modal`: Customers must accept or decline the chat offer before being allowed to continue to use your site.



- `notification`: The chat offer appears in the lower right corner of the page. The customer can continue to use the site without interruption. The notification disappears after the set time or if the customer declines the notification by clicking **no thanks**.



Five9ProactiveChat.startNewPage

Each page in your site should contain this function, which contains page-specific parameters.

```
var parameters = {
    pageId: 'sample-1',
    profiles: ['Sales'],
    fields: ['page1-f1','page1-f2','page1-f3']
};
Five9ProactiveChat.startNewPage(parameters);
```

This table describes the parameters

Name	Data Type	Description
`fields`	`string[]`	Required. Unique IDs of the page fields. Identifies fields when Chat Offer Condition is set to Mouse Hover.
`pageId`	`string`	Required. Unique ID of the page.
`profiles`	`string[]`	Required: at least one profile. Profiles route chat sessions and email messages to agents who have the appropriate skills.

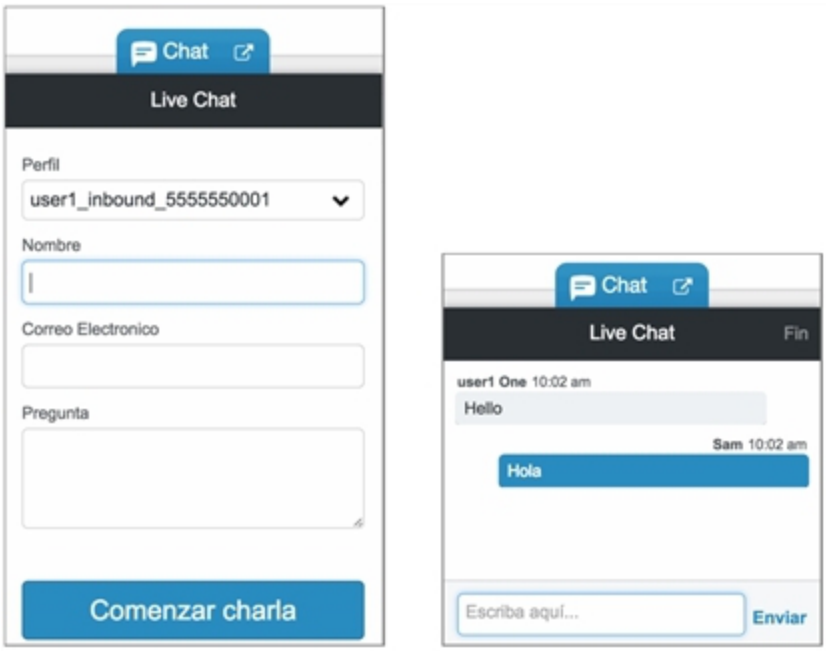
Name	Data Type	Description
		Profiles are loaded once at the beginning of each session and persist in the browser. Each new tab starts a new session, which resets and reloads the chat profiles.

Customizing the Chat Console

The Five9 Chat Console enables you to offer chat conversations to your customers.

Adding a Custom Language File to the Chat Console

This feature does not apply to proactive chat. You can customize the language of the text in the chat console window by adding the `lang` option to the chat widget script. To add a custom language file for your chat console implementation, add the URL of a custom language file that you are hosting. The graphic below shows a Spanish language custom language file.



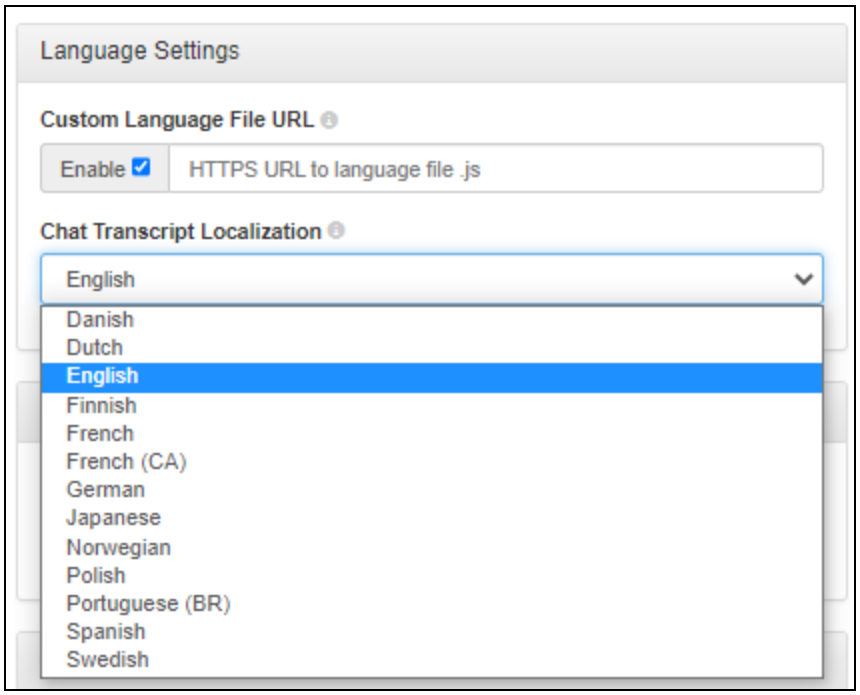
Example

Custom language files:

- English custom language file
- Spanish custom language file

Chat Transcript Localization

While the classic chat console can be localized in any language by uploading a language file, the transcript for the conversation is supported only in the languages that Five9 supports. You can add `UserLocale CAV` under `fields` that allows you to change the language of the transcript sent to the recipient. The script generator also allows you to select the languages currently supported for the transcript. The chat conversation included in the transcript is in the language used during the chat.




```
"fields": {
      "UserLocale": {
         "value": "en",
         "show": false
}
}
```

Adding Fields and Customizing Labels

To make your custom fields required, add the required: true attribute shown below. You can add fields and customize the labels that appear in the chat console, for example:

```
var fields = {
name: {
    // Set the label for a system field.
    label: 'Custom Name'
},
    // custom fields
    NewField1: {label: 'New Field 1', required: true},
    NewField2: {label: 'New Field 2'}
};
Five9SocialWidget.addWidget({
    type: 'chat',
    fields: fields,
...
};
```

Adding a Survey Comments Field

You can require or show survey comments by adding `surveyOptions` to the function, for example:

```
Five9SocialWidget.addWidget({
    type: 'chat',
    /* [... other options], */
    surveyOptions: {
        showComment: false, // Default true
        requireComment: true // Default false
    }
});
```

Creating a Chat Link Elsewhere on the Page

To create a link anywhere else on the page to open Five9 chat, use this function:

```
<a class="nav-link launchChat" href="#">Chat with Sales</a>
<script type="text/javascript">
    $(function() {
        $('.launchChat').click(function(event) {
```

```
            $('#five9-maximize-button').trigger('click');
            event.preventDefault();
        });
});
</script>
```

Customizing the Chat Tab

To customize the chat tab that your customers click to request a chat session with an agent, modify the CSS. The `!important` declaration enables you to modify the look and feel of the chat window and tab while ensuring that the style is not overwritten with any subsequent style sheet loading.

The example below shows the chat button modified to display a larger font size and the words `Chat Now`. Place `!important` at the end of the declaration that you want to customize, just before the semicolon.

```
<style type='text/css'>
.five9-chat-button {
font-size: 24px !important;
}
.five9-chat-button:after {
content: 'Chat Now' !important;
}
#five9-popout-button {
float: right;
}
</style>
```

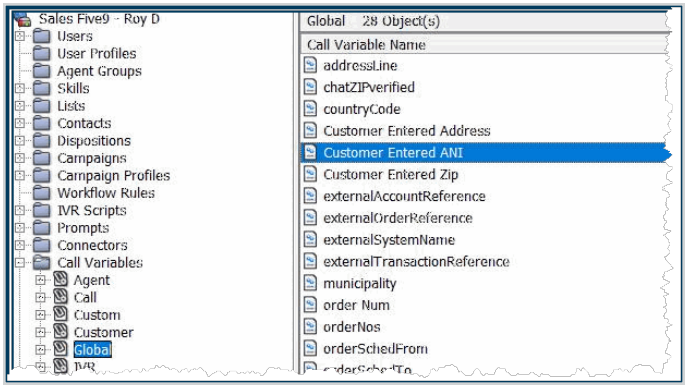
Customizing Fields in the Chat Console

Customizing Variables and Labels

You can create and use custom variables, defined within your JavaScript, using **<Call Variable Group>.<Call Variable Name>** format. An example defining **Global.Customer Entered ANI** is shown below.

```
"fields": {
   "Global.Customer Entered ANI": {
```

```
            "value": "",
            "show": true,
            "label": "Phone Number"
        }
},
```



Hiding the Chat Button in the Footer

To hide the chat button in the footer, use this CSS:

```
. five9-frame-minimized {
display: none !important;
}
```

Hiding the Five9 Information

You can hide the Five9 information (*Provided by Five9*) at the bottom of the chat console with a custom style element:

```
/* Hide provider link */
.provider, .provider:hover, .provider:focus, .provider-text {
    cursor: default !important;
    display: none !important;
}
```

This snippet is included in the CSS example in the archive that you downloaded (Five9 Consoles Examples\Chat\CSS).

You may also hide the information by deleting the `S_PROVIDER` string in your custom language file.

Hiding System Fields

The system fields for the chat is as follows:

Chat Console
email
name
profiles
question

System fields are required. Only `profile` and `email` can be hidden. If `profile` is hidden, the first profile in the list is used. To hide a custom field, use the `show` property with the value `true` or `false`. If the `email` field is hidden, a generic email value is generated and is sent to the system. This example shows the `email` field hidden:

```
var fields = {
    email: {
        // Hide the email field.
        show:false
    }
};
Five9SocialWidget.addWidget({
    type: 'chat',
    fields: fields,
    ...
};
```

Using Business Hours Settings

You may configure your chat availability to follow your defined business hours. This enables you to offer chat options during a defined schedule. If agents become unavailable during your defined business hours the chats will queue for availability. To enable using business hours, set the `useBusinessHours` parameter to `true` in the JavaScript function or directly into the URL query string.

```
Five9SocialWidget.addWidget({
```

```
    type: 'chat',
    rootUrl: '../',
    tenant: 'tenant',
    profiles: 'profiles',
    title: 'title',
    useBusinessHours: true,
});
```

Using Variables in the Chat Console

You can use variables to enhance the interaction or capture additional information.

Example

When a customer submits a chat request with an account number, you can pass the account number in a connector to a third-party system to present the customer's account information to the agent.

1. Create a custom chat console field named **contact_id** as described in the previous section.
2. To store the new custom field, use the call variable named **Omni.contact_id**.

   For digital engagement interactions, you must use the call variable group named **Omni**.
3. Configure a connector to pass the value.

For more information about variables, see the Basic Configuration Administrator's Guide.

Configuring SMS Interactions

Five9 SMS messaging is configured as a chat interaction and uses the Five9 chat console interface to distribute these messages to your agents. To use SMS messaging for your contact center, you must have the following features enabled:

- Five9 Chat
- Five9 Messaging
- SMS DNIS available for campaigns

For any questions about these features for your contact center, contact your Five9 representative.

SMS interactions arrive with the contact phone number and SMS question identified and are ready for interaction routing.

> **Note:** Five9 creates a contact record for SMS interactions that are received by Five9 without an existing contact record. In this instance, the name and email fields are populated with <PhoneNumber>@anonymous.com. **Example**:9255551212@anonymous.com.

Alphanumeric & Shortcodes

Shortcodes, typically five to six digits long, allow for direct customer engagement through SMS or MMS, enabling significantly higher messaging volumes in shorter durations compared to standard long codes or Toll-Free Numbers (TFNs). At Five9, Shortcodes are currently limited to the US.

Shortcodes are designed for high-throughput messaging, such as programmatic or broadcast communications, with default capacities reaching up to 100 messages per second. They are tailored for specific use cases and can serve as an effective alternative to long codes when facing carrier-imposed restrictions on message delivery.

Common use cases for Shortcodes include system or account alert notifications, promotional or marketing alerts, two-factor authentication (2FA) or one-time passwords, and reminders for upcoming payments or appointments.

Shortcodes are designated for messaging within the specific countries they're provisioned for. Therefore, a US Shortcode wouldn't be suitable if your audience isn't in the US. Additionally, Shortcodes require explicit user consent for SMS messaging; usage without consent is prohibited.

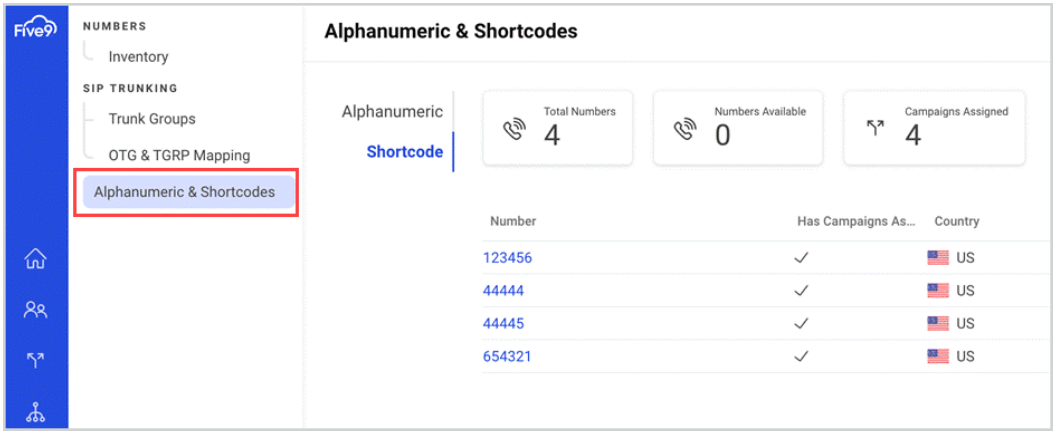
There are restrictions on the type of content and campaigns allowed via Shortcodes, as determined by Five9 and carriers. Prohibited uses include campaigns without verifiable user consent, adult content, lead generation-only services, and messaging for multiple financial entities. It's essential for a single entity to manage any campaign to maintain control over message content and frequency.

While certain use cases like age-restricted content and direct lender services are permitted, they're subject to additional carrier requirements and may encounter delays in provisioning.

Certain campaigns are not supported by Five9 and/or carriers, such as those unable to obtain explicit end-user consent, containing sexual/adult content, solely aimed at lead generation or data collection, or representing multiple financial institutions. Additionally, Shortcode messaging campaigns must be managed by a single entity to ensure consistency in message content and delivery frequency.

Allowed use cases include age-restricted content (Tobacco, Alcohol, etc.), sweepstakes or contests, and loan-related use cases for direct lenders. However, they may undergo additional scrutiny and take longer than usual to provision.

Shortcodes are provisioned through the Admin Console and anchored to numbering definitions. The Five9 provisioning team handles Shortcode provisioning after the registration process is completed. Please refer to the registration requirement section to understand what's necessary to register for a Shortcode number. Once the numbers are provisioned, corresponding permissions must be enabled for them to be accessible in the Admin Console.

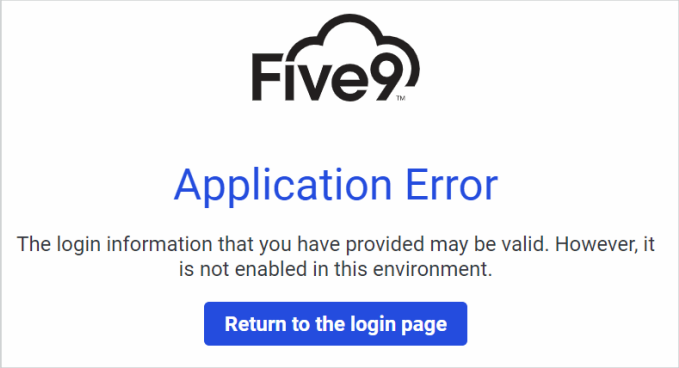


Logging In

You use the Five9 Administrator Console to log into your Five9 account and access Agent Assist Studio.

1. Enter the URL that applies to your location.
    - US domains: https://admin.us.five9.net/
    - Canadian domains: https://admin.ca.five9.net/
    - UK domains: https://admin.uk.five9.net/
    - European domains: https://admin.eu.five9.net/
2. Enter your credentials (username and password).

This message indicates that you may have valid credentials to access Admin Console, but may not be enabled for the selected region. Ensure that the region you select represents your contact center locale.



> **Note:** If you don't see the Shortcodes card on the Admin Console home page, contact your administrator and ask them to assign the required permissions (see Permissions and Permission Sets).

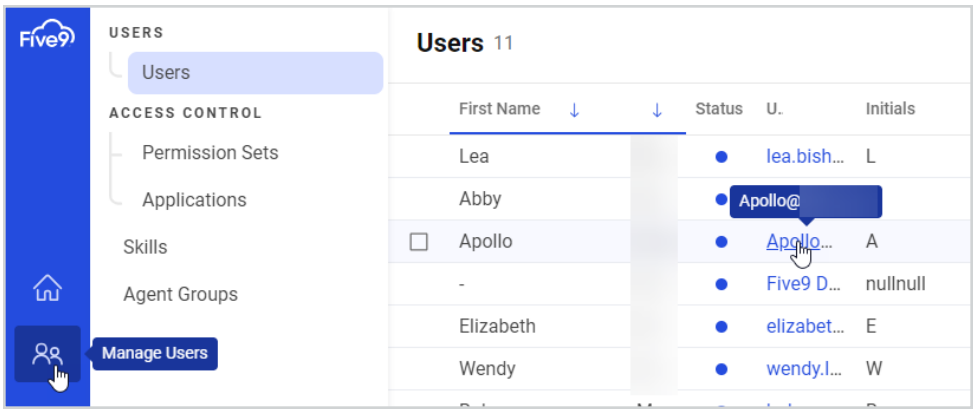
Permissions and Permission Sets

Permissions and permission sets in the Five9 Administrator Console control the features or functions users can perform. This section discusses how to assign the user permissions required to view and edit the Alphanumeric & Shortcodes card in Admin Console.

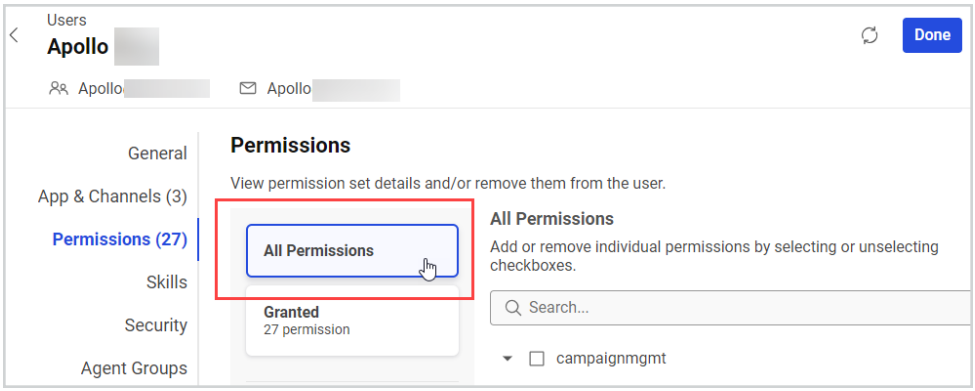
> **Note:** Only admins with permission to create and edit users can assign permissions on the Manage Users page. Contact your administrator to obtain these permissions.

Assigning Permission Sets

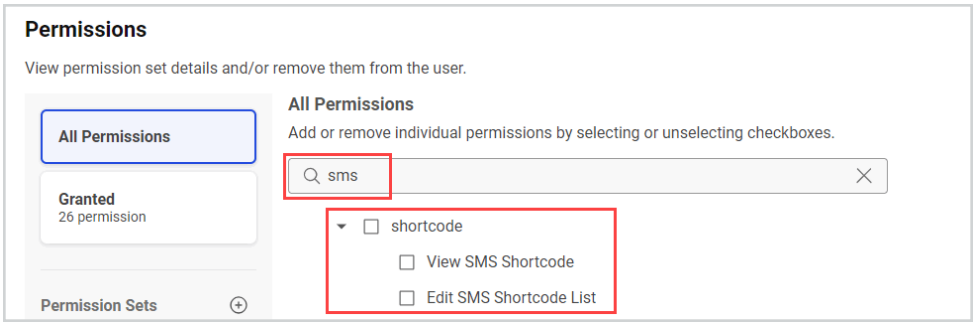
1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select **All Permissions**.



3 Type the permission group name from the table in **Alphanumeric & Shortcodes Permissions** into the search field or scroll the list to the permission group, and select the desired permissions or group.

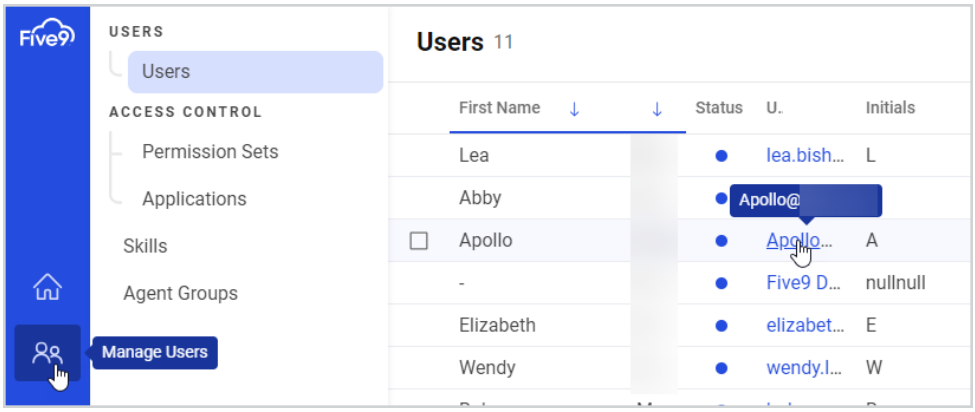


4 Select **Done**.

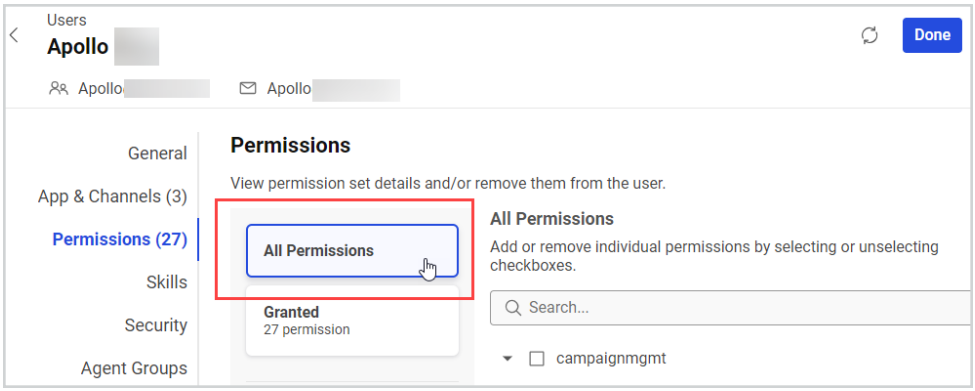
To assign the same permissions to multiple users, create a permission set (see *Permissions and Permission Sets* in the Five9 Admin Console documentation).

Assigning User Permissions

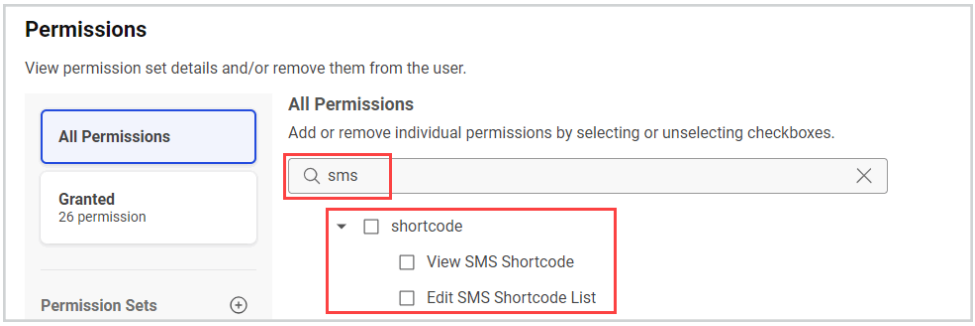
1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select All Permissions.



3 Type the permission group name from the table in [Alphanumeric & Shortcodes Permissions](#) into the search field or scroll the list to the permission group, and select the desired permissions or group.



4 Select **Done**.

For more information on assigning permissions, see *Permissions and Permission Sets* in the Five9 Admin Console documentation.

Alphanumeric & Shortcodes Permissions

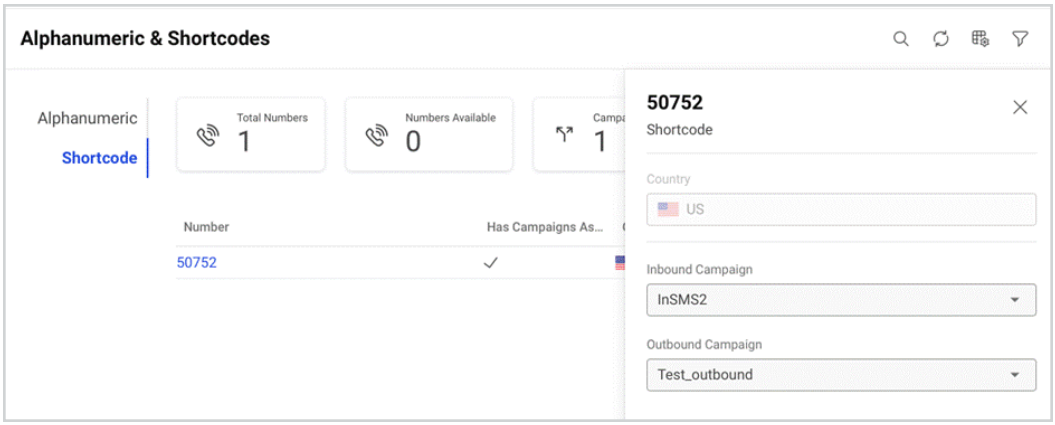
This section presents the individual user permissions required to view the Alphanumeric & Shortcodes card on the Admin Console home page and access the described features. The Alphanumeric & Shortcodes permissions are:

Group	Subset	Permission	Description
sms	shortcode	View SMS Shortcode.	To view the existing Shortcode list, users must have the appropriate permission. Without this permission, they cannot access the Shortcode page in the Admin Console.

Group	Subset	Permission	Description
		Edit SMS Shortcode list.	Users with the edit permission for the Shortcode list can update the status and import data into the page.

Update Campaigns

Users with edit permissions can update the campaigns associated with Shortcodes by clicking on the corresponding enabled number. Once the campaigns have been associated, users can see a validation mark against the Shortcode number if the campaign is assigned to the number.



Application Requirements

Application requirements to enable Shortcodes:

- The short code registration process begins with updating an application. Organizations must provide the following crucial information to proceed with the application:
    - Example messages of the actual messages that will be sent through the Shortcode.
    - The SMS program brand's website must be live before carriers will review the Shortcode application.
- A visual representation of the end-user consent process showcasing the call to action for users to sign up and receive messages via the Shortcode. This mockup must adhere to specific criteria detailing what information must be presented to

users before obtaining their consent for message receipt from a Shortcode. Failure to incorporate these mandatory elements will result in carriers rejecting the consent flow.

- A letter of authorization from the brand appearing in your messaging.
- A compliant screenshot, link, or mockup of the SMS Terms of Service is required. While these terms do not need to be actively published on your website during the application process, a draft must be submitted for carrier approval of the Shortcode program. Ensure that the SMS Terms URL is activated before the launch of the Shortcode program.

Once the application is submitted, Five9's internal review of the submitted materials will take a week. It will then be sent to carriers for approval through our integrator. Major carriers take about six to ten weeks to approve. Please note, approvals are subject to carrier discretion, and approval may take longer based on the use case and industry.

Upon approval, it is essential to configure your Shortcode to acknowledge and respond to the mandatory compliance keywords HELP and STOP. Additionally, you must incorporate an effective blacklist mechanism to handle STOP requests appropriately.

Regulations Applicable

Regulations applicable for Shortcodes:

- Five9 will not approve Shortcode applications that do not comply with our Acceptable Use Policy (AUP).
- Customers are required to adhere to the regulations set forth by the Telephone Consumer Protection Act (TCPA).
- Before forwarding applications to carriers for review, Five9's providers conduct their compliance assessments. These providers may enforce their policies, which, while generally in agreement with carrier standards, dictate what they will accept or decline for submission.
- The CTIA, a carrier trade association, mandates specific guidelines for Shortcode campaigns as outlined in the CTIA Shortcode Compliance Handbook.
- It's important to note that carriers reserve the right to approve or reject any use case on their network, regardless of whether all stipulated requirements have been satisfied.

SMS Options

Opt-in/Opt-out Regulation

U.S. regulatory and telecommunication industry rules governing businesses and organizations' use of SMS to communicate with Consumers ensure that they only receive SMS communications they want to receive from businesses or organizations.

SMS consumers should have a transparent opt-in/opt-out mechanism. Consumers must consent to all recurring messages; entering a mobile phone number does not necessarily constitute a compliant opt-in. For these reasons, Organizations sending SMS to consumers need to provide an option for Consumers to opt-in. It then needs to follow up by sending a confirmation message to the user. For recurring message programs, confirmation messages must include clear opt-out instructions. Messages should also remind consumers from time to time that they are still enrolled – This is a recommended process to sign-up Consumers for regulatory Opt-in/Opt-out SMS features.

Blocking Objectionable Content

You may have set up a method to report spam and objectionable content. Five9 does not filter the media for unwanted or disallowed content, such as SHAFT. SHAFT is an acronym for sex, hate, alcohol, firearms, and tobacco. SHAFT guidelines should be taken seriously by any businesses communicating with their customers to ensure that they comply with Cellular Telecommunications and Internet Association (CTIA) guidelines. Any messages that contain prohibited content are likely to be blocked by carriers. For more information, see CTIA.

Note

For more information about CTIA Messaging Principles and Best Practices concerning SMS, see Section 5.1 Consumer Content in Non-Consumer (A2P) Best Practices

SMS Attachments

Users can submit attachments to their SMS. However, for the SMS attachments file name, Five9 only supports lowercase and uppercase ASCII letters, decimal digits, "!", "*", "+", "-", "/", "=", and "_".

Important

An agent can only send an attachment if they have the *User can send messaging attachments* permission selected on the Roles: Permission dialog.

Each major carrier in the US has an MMS message file size limit:

- AT&T: 1 MB
- Verizon: 1.2 MB
- Sprint: 2 MB
- T-Mobile: 1 MB

Note

The file sizes above will generally be passed along to the wireless carriers. However, due to the differences in handsets, file types, and transcoding, Five9 recommends you send attachments no larger than 500KB to ensure the best chance of delivery. Also, unlike other media types, the maximum .txt file size supported is 64KB per attachment.

Supported SMS Attachment File Types

The most widely supported attachment types are jpeg, png, and gif images. Five9 accepts all SMS content types on the list below, but delivery is not guaranteed since downstream carriers and handsets may have limitations on what types of files they accept.

Extension	File Type
.json	application/json
.ogv, .oga, .ogx, .ogg,	application/ogg
.pdf	application/pdf
.rtf	application/rtf
.zip	application/zip
.tar	application/x-tar
.xml	application/xml

Extension	File Type
.gz	application/gzip
.bz2	application/x-bzip2
.gz	application/x-gzip
.smil	application/smil
.js	application/javascript
.m4a, .m4p, .m4b, .m4r	audio/mp4
.mp1, .mp2, .mp3, .m1a, .m2a, .mpa	audio/mpeg
.oga	audio/ogg
.flac	audio/flac
.webm	audio/webm
.wav	audio/wav
.amr, .3ga	audio/amr
.3gp	audio/3gpp
.bmp, .dib	image/bmp
.gif	image/gif
.jpg, .jpeg	image/jpeg
.pjpeg	image/pjpeg
.png	image/png
.svg	image/svg+xml
.tiff, .tif	image/tiff
.webp	image/webp
.ico	image/x-icon
.css	text/css
.csv	text/csv
.ics	text/calendar
.txt	text/plain
.js	text/javascript
.vcf, .vcard	text/vcard
.wap	text/vnd.wap.wml

Extension	File Type
.xml	text/xml
.avi	video/avi
.mp4, .m4v	video/mp4
.mpg, .mpeg, .m1v, .mpv	video/mpeg
.ogv, .ogx, .ogg, .spx, .ogm	video/ogg
.mov.qt	video/quicktime
.webm	video/webm
.wmv	video/x-ms-wmv
.flv	video/x-flv

Note

There are only a few file types that Five9 does not support as attachments. If a file type is not listed above, it is not yet supported.

Toll-free (TFN) SMS Attachments Support

Images, videos, audio, and text file attachments are supported across all major U.S. wireless carriers and tested with iOS and Android devices/operating systems. While both the destination mobile operator and device ultimately determine compatibility, most mobile operators and handsets render the SMS file types specified here:

Extension	Content Type	Notes
.wav	audio/wav audio/x-wav	AT&T Note: For iOS, AT&T will transcode .wav files to .3gp audio files before delivering to handsets.
.ac3	audio/ac3	
.amr	audio/amr	
.png	image/png	
.jpeg	image/jpeg	
.gif	image/gif	
.bmp	image/bmp	

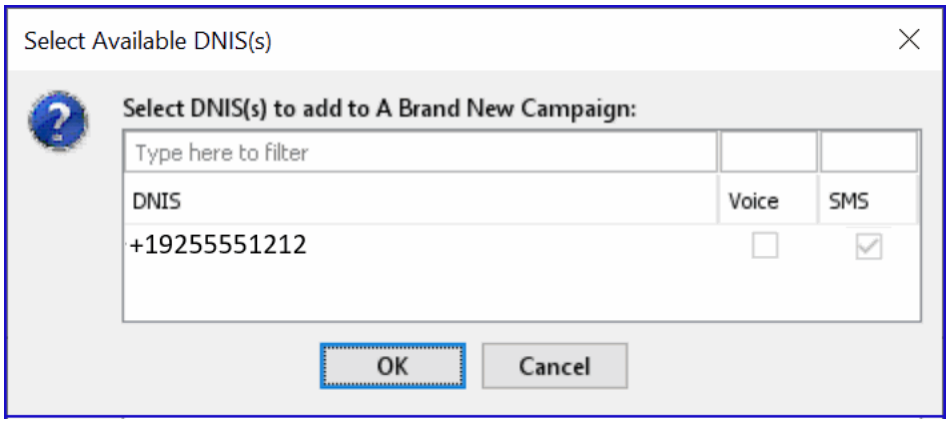
.mp4	video/mp4	
.avi	video/x-msvideo	iOS and Android don’t support AVI natively. Although the file will be sent, it typically won't play on these device without third-party apps installed.
.txt	text/plain	Unlike other media types, the maximum .txt file size supported is 64KB per attachment.

The maximum size you can send outbound, including all attachments per SMS message, is 525KB. If the total size of SMS message media/attachments exceeds 525KB, the interaction will receive a call-back error.

The maximum number of attachments supported is 10If you attempt to send more than 10 attachments, the message will fail to be accepted and return a 400 Bad Request Error: "media must contain at most 10 media attachments." The total size of 10 attachments must still be 525KB or less.

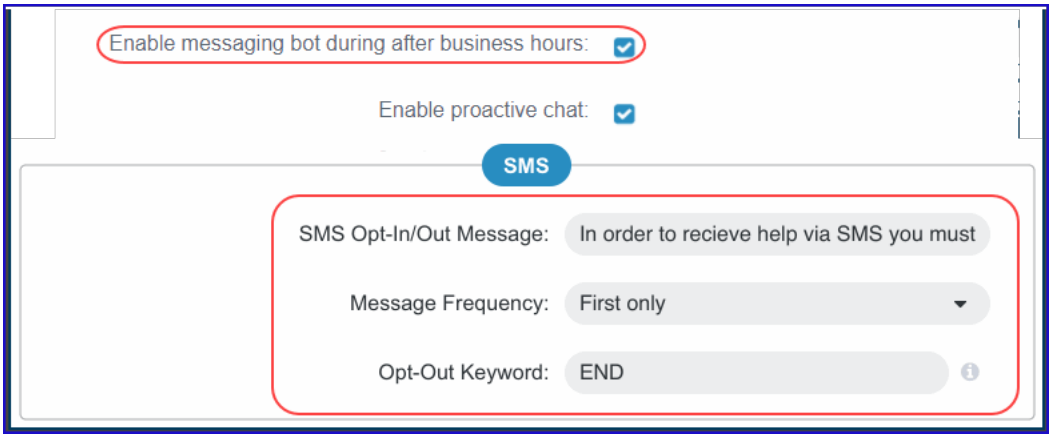
Enabling Basic SMS Messaging

To enable Five9 messaging for your contact center, assign an SMS DNIS number to an inbound campaign. For more information, see Five9 Campaign Administrator’s Guide, ***Assigning DNIS to an Inbound Campaign***.



Enabling Automated SMS Messaging

To enable after-hours SMS messaging, select **Enable messaging bot during after business hours**.



Five9 Engagement Workflow offers enhanced functionality to distribute or respond to your SMS interactions. The Five9 Interactive Virtual Assistant (IVA) enables you to further augment your SMS interaction capabilities and pass interaction control to a chatbot, or virtual assistant. For more information, see Five9 IVR Administrator's Guide, ***Five9 Engagement Workflow*** and ***IVA Transfer Module***.

Routing Interactions Using SMS Number

You can send your SMS messages directly to an IVR Agent Transfer or Skill Transfer module by creating a custom variable. This custom variable may also be used for your VCC call reports.

Creating the Custom Variable

You must create a custom variable in the Custom variable group named **campaign_sms_number**. This name is case sensitive.

Example: `Custom.campaign_sms_number`

For more information about creating custom variables, see Five9 Basic Administrator's Guide, ***Creating Call Variables***.

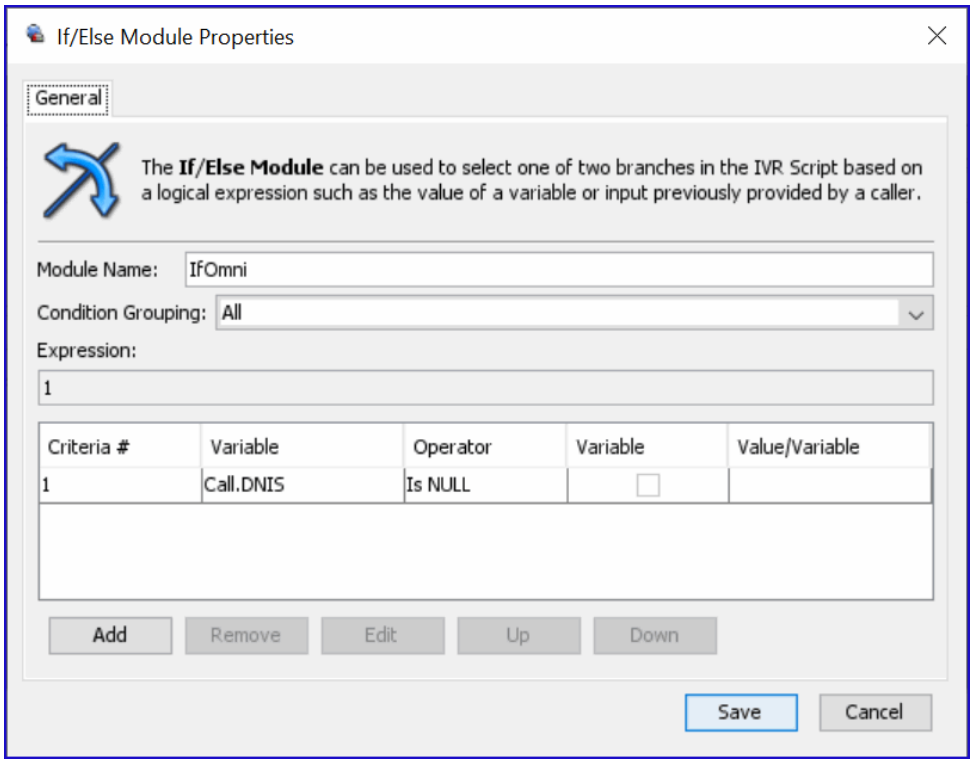
Building Your Routing Strategy

This example shows a basic IVR script that uses a custom variable to route SMS messages to a specific agent. You can also route SMS interactions to a specific skill. You can modify this example or design your own script to best accommodate your business needs. See Five9 IVR Administrator's Guide for more information about creating IVR Scripts or using the Five9 IVR Builder application.

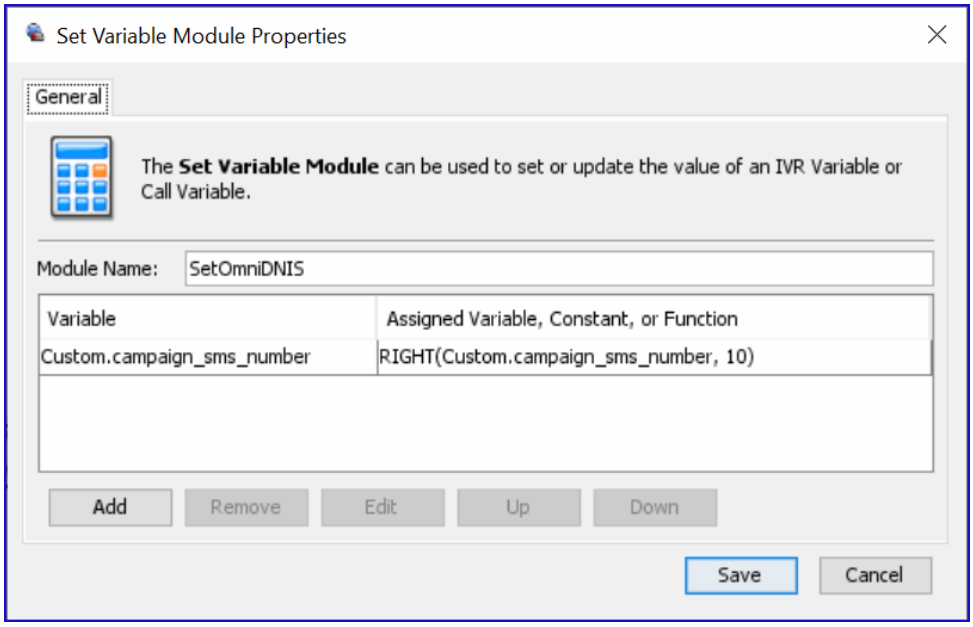
> **Note**
>
> Unassigned SMS messages are closed automatically after one week or seven calendar days.

To segment SMS messages and route them to a specific agent, follow these steps.

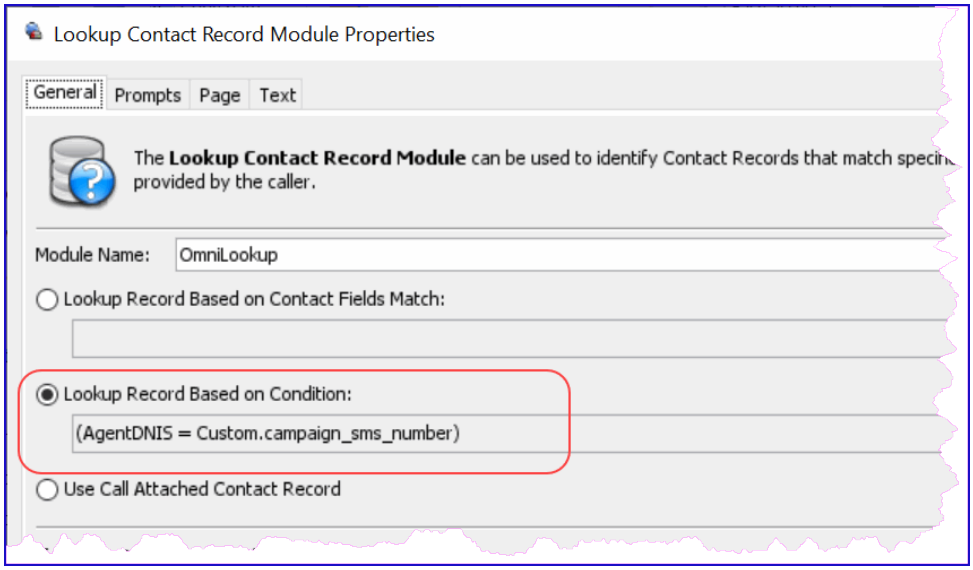
1. Configure an IVR **If/Else** module to separate inbound SMS from inbound voice, such as identifying a null DNIS.



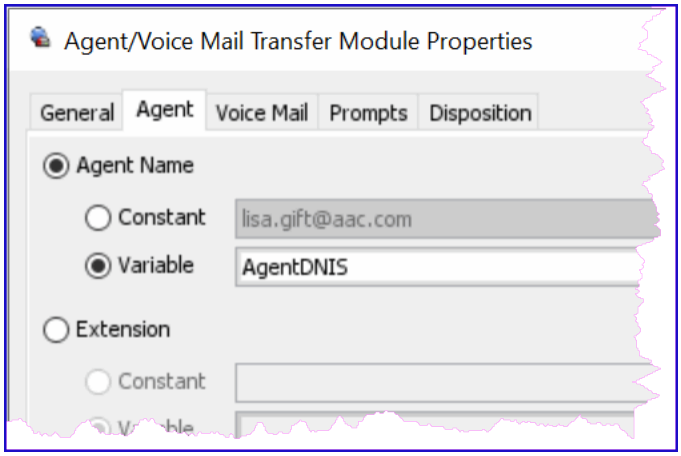
2. Populate the `Custom.campaign_sms_number` variable using an IVR **Set Variable** module.



3 Use an IVR **Lookup Contact Record** module to associate a specific variable that you define, such as **AgentDNIS**, and have identified to receive these incoming SMS messages.



4 Configure an IVR **Agent/Voicemail Transfer** module to route the interaction using the **AgentDNIS** variable.



SMS Segmentation and Billing

SMS usage billing is based on the number of segments in a message. SMS service providers segment SMS messages based on the number of characters in a message, and count each segment within a message as a single unit. If an SMS message contains 200 characters, it is counted as two SMS messages: one containing 160 characters (maximum per segment), and one containing 40 characters. Character encoding type affects how the number of characters are counted. A message containing special (Unicode or non-GSM) characters are counted as additional segments. For example, the following message contains 206 characters and is billed as four segments.

```
"Name, you are considering school, that's great! We will
reach out to you later from this phone number (4087897938)
to discuss more about our University. Our next start date
is right around the corner!".
```

The apostrophe in “that’s” and the two parentheses in “(4087897938)” result in the additional segments.

The number of segments in your messages may impact your billing. Contact your account team for more information.

Keywords

A keyword is a unique word or phrase that customers or subscribers can send to your 10DLC, TFN, or short code number to subscribe or unsubscribe from future text messages. You can create multiple keyword definitions to suit different purposes.

Example

Text “JOIN” to 54327 to subscribe to alerts and deals.

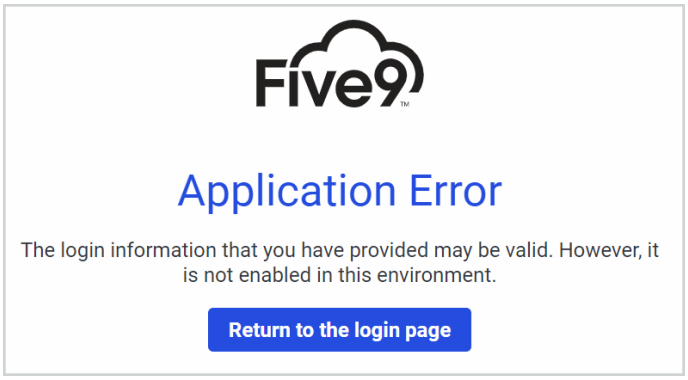
By default, Five9 automatically handles standard English-language reply messages such as STOP, UNSUBSCRIBE, JOIN, or CANCEL for 10DLC and long-code numbers, following industry standards. These keywords trigger predefined replies that you can customize.

Logging In

You use the Five9 Administrator Console to log into your Five9 account and access Keywords.

1. Enter the URL that applies to your location.
    - US domains: https://admin.us.five9.net/
    - Canadian domains: https://admin.ca.five9.net/
    - UK domains: https://admin.uk.five9.net/
    - European domains: https://admin.eu.five9.net/
2. Enter your credentials (username and password).

This message indicates that you may have valid credentials to access Admin Console, but may not be enabled for the selected region. Ensure that the region you select represents your contact center locale.



Note: If you don't see the Keywords card on the Admin Console home page, contact your administrator and ask them to assign the required permissions (see Permissions and Permission Sets).

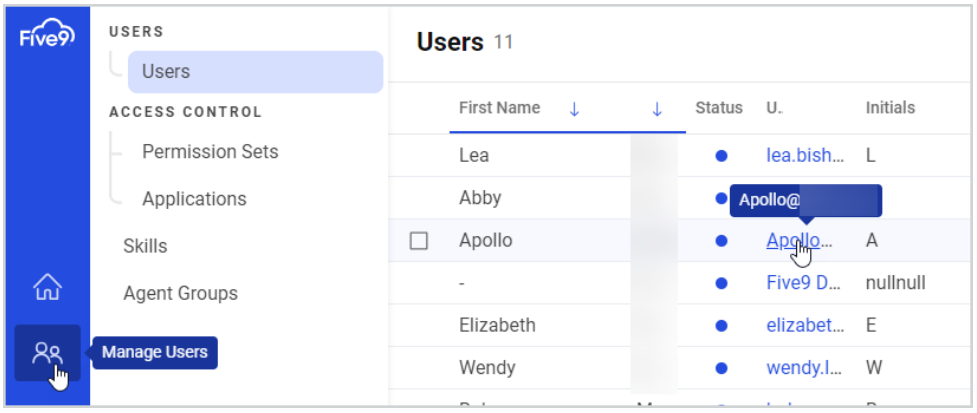
Permissions and Permission Sets

Permissions and permission sets in the Five9 Administrator Console control the features or functions users can perform. This section discusses how to assign the user permissions required to view the **Keywords** card in Admin Console.

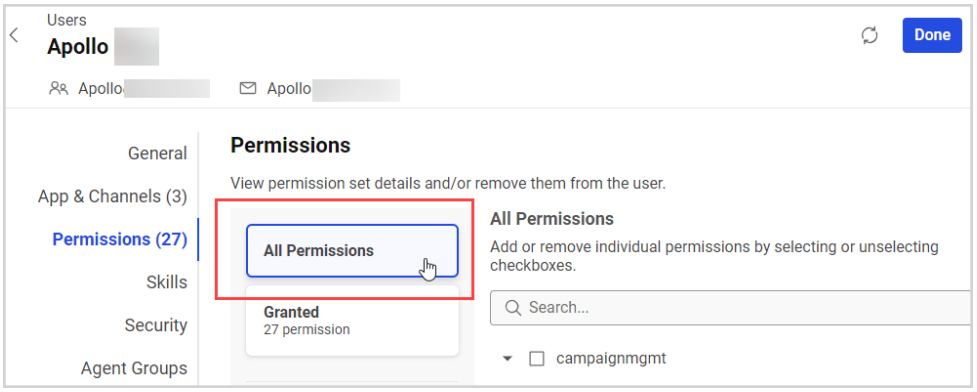
> **Note:** Only admins with permission to create and edit users can assign permissions on the Manage Users page. Contact your administrator to obtain these permissions.

Assigning Permission Sets

1. Select **Users** on the Admin Console home page.
2. Select the user hyperlink on the Users page.



3. Select the **Permissions** tab and select **All Permissions**.



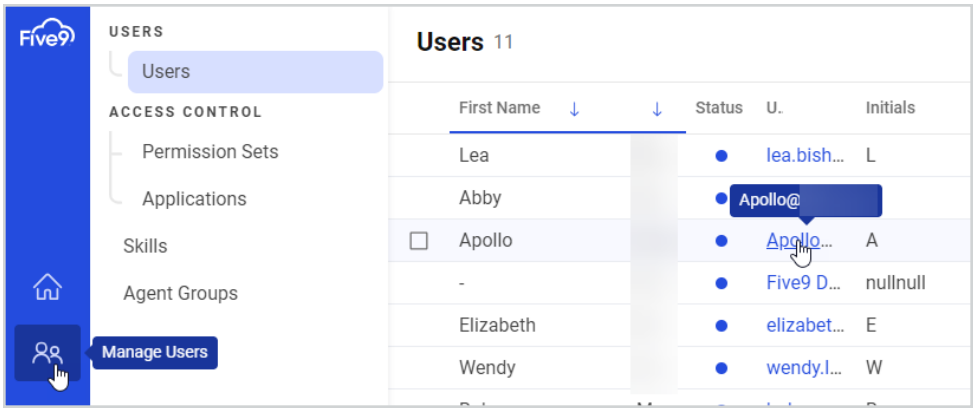
4 Type the permission group name from the table in **Keywords** into the search field or scroll the list to the permission group, and select the desired permissions or group.

5 Select **Done**.

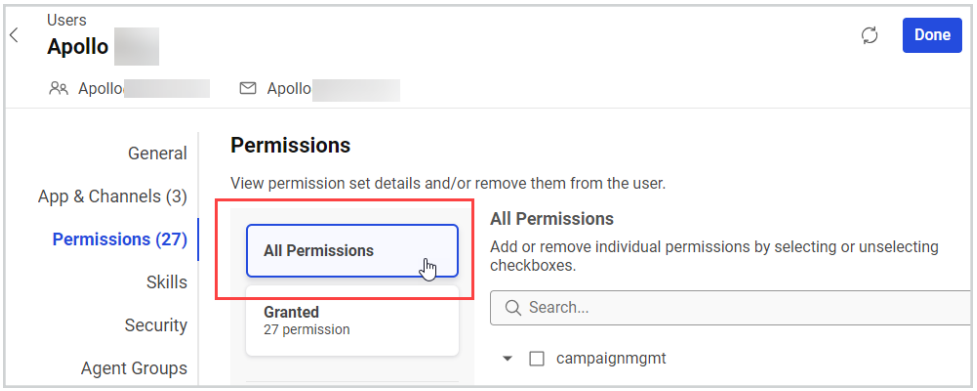
To assign the same permissions to multiple users, create a permission set (see *Permissions and Permission Sets* in the Five9 Admin Console documentation).

Assigning User Permissions

1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select **All Permissions**.



3 Type the permission group name from the table in **Keywords** into the search field or scroll the list to the permission group, and select the desired permissions or group.

4 Select **Done**.

For more information on assigning permissions, see *Permissions and Permission Sets* in the Five9 Admin Console documentation.

Keywords Permissions

This section presents the individual user permissions required to view the **Keywords** card on the Admin Console home page and access the described features. The **Keywords** permissions are:

Group	Subset	Permission	Description
digital	**keywords**	**Delete Keywords**	User can view and delete keywords to prompt an automated action, when managing a digital campaign.
		View Keywords	User can view keywords to prompt an automated action, when managing a digital campaign.
		Create Keywords	User can create keywords to prompt an automated action, when managing a digital campaign.
		Edit Keywords	User can view and edit keywords to prompt an automated action, when managing a digital campaign.

Creating Opt-Out Keywords

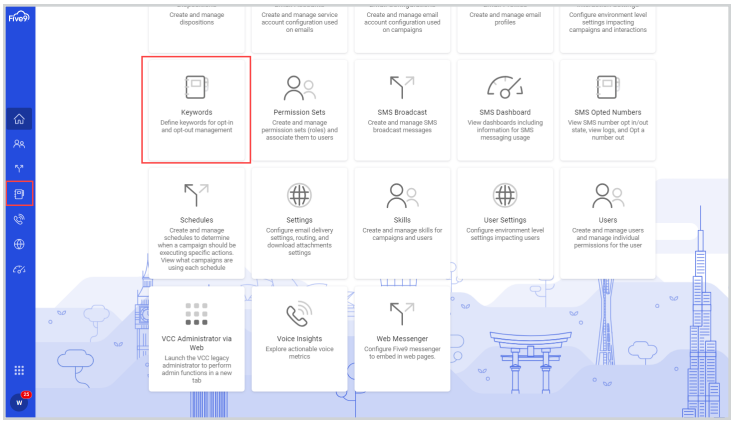
When a recipient replies with STOP, UNSUBSCRIBE, or any defined keyword to stop messages, they no longer receive texts from your organization.

As the sender, you cannot send messages to the customer on this campaign. The customer must opt in by sending a message to the 10DLC, TFN, or shortcode number associated with the campaign.

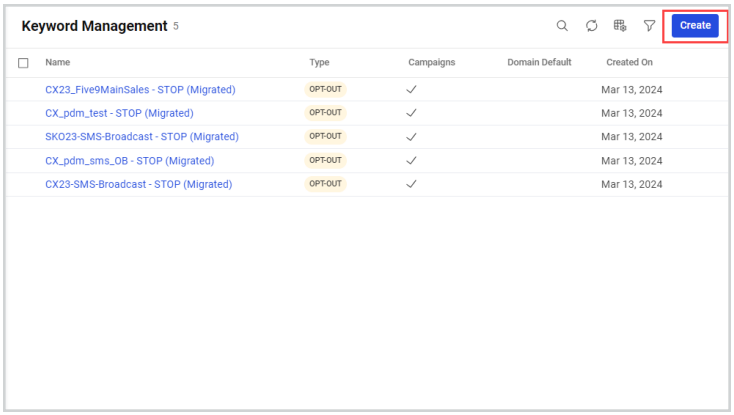
By default, Five9 processes standard English-language replies such as STOP, UNSTOP, UNSUBSCRIBE, or CANCEL for toll-free and long-code messages. These keywords trigger automatic responses based on industry standards.

To create a new Opt-Out keyword:

1. Ensure that you have the required permissions.
2. Select the **Keywords** card or the **Manage Contacts and Lists** icon in the sidebar navigation.



3 On the Keyword Management page, select **Create**.



4 If required, toggle **Default for Domain** to apply the keyword definition across the entire domain.

5 Select the **Opt-Out** Category.

6 Choose a **Message Frequency** option:

Always: Sends a response for every opt-out keyword reply.

First Only: Sends a response only for the initial opt-out message.

Never: Does not send any response when a recipient opts out.

7 Enter the required **Keywords**.

8 Enter the **Opt-Out Message** to be sent to unsubscribed recipients.

Example opt-out messages:

- **Your-Company-Name:** You have opted out and will no longer receive messages from this service. To resubscribe, reply UNSTOP.
- You have successfully unsubscribed from **Company-name**. You will not receive any more notifications from us. Reply UNSTOP to resubscribe.
- **Company-Name:** You have been opted out and will not receive any further messages.

9 Enter the **Confirmation Message** that confirms the recipient's choice.

> **Note**
>
> When a recipient replies STOP to a message, they will still receive phone calls from the same number—the STOP command only applies to SMS/MMS messages. If users send an SMS to the same number and campaign later, they are opted back in, equivalent to sending an UNSTOP message. As the sender, you can then resume sending messages to the customer.

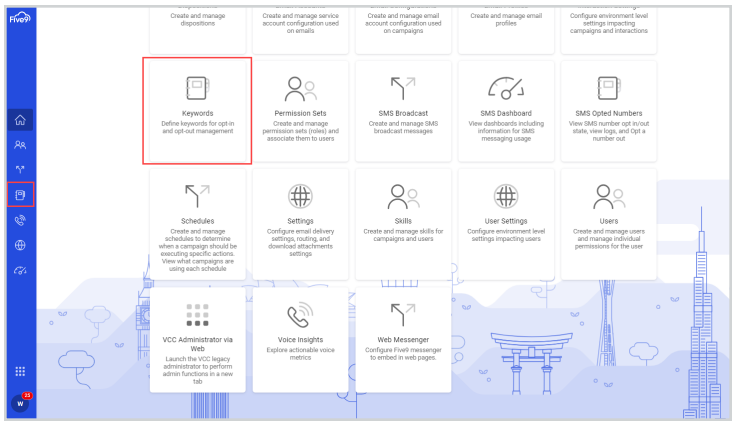
Creating Opt-In Keywords

To receive messages from a business, a consumer must first give their consent by opting in. The Opt-In Keyword definition enables the admin to specify how a consumer can provide this consent.

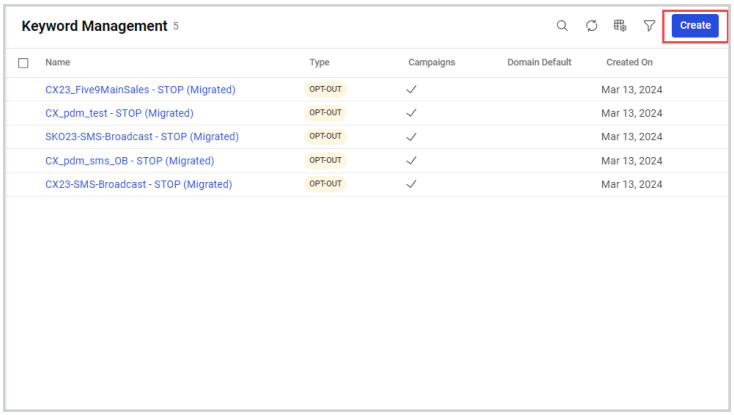
To create a new Opt-In keyword:

1 Ensure that you have the required permissions.

2 Select the **Keywords** card or the **Manage Contacts and Lists** icon in the sidebar navigation.



3 On the Keyword Management page, select **Create**.



4 If required, toggle **Default for Domain** to apply the keyword definition across the entire domain.

5 Select the **Opt-In** Category.

6 Enter the relevant keywords, such as "YES," "IN," or other business-specific terms. Customize these keywords in multiple languages with Opt-In messages tailored to your customers.

The Opt-In Keyword definition allows administrators to specify how consumers can give their consent. Methods include:

- **Customer Relationship:** Use an existing customer relationship to qualify for opt-in based on prior consent.
- **Verbal Consent:** Obtain consumer consent verbally, either through an agent or an IVR system.
- **Web Form:** Collect consent when consumers provide their phone number on your business website.
- **Public Source:** Use a consumer's number obtained from a public source where it was freely provided.
- **Point-of-Sale (POS) Signup:** Allow consumers to sign up for messages through an on-site POS system or other message senders.
- **Advertising Keyword:** Enable consumers to opt in by sending an advertising keyword to your company.

7 Create the **Opt-In Message** that consumers will receive after subscribing. Ensure the response includes your brand name, confirmation of the subscription,

instructions for seeking help, and clear instructions on how to unsubscribe (Opt-Out).

8 Enter the **Confirmation Message** that confirms the recipient's choice. Examples include:

- "You are now subscribed to [Company-Name]. Message frequency varies. To get help, reply HELP. To unsubscribe, reply STOP."
- "Welcome to [Company-Name]. You will start receiving text messages. For assistance, reply HELP. To unsubscribe, reply STOP."
- "[Company-Name]: Reply YES to subscribe to mobile alerts. You will receive periodic messages. Text HELP for help. Text STOP to unsubscribe."

> **Note**
>
> After receiving a message, recipients can respond with one of three text commands: STOP, UNSTOP, or HELP. Note that these commands do not apply to Toll-Free Numbers (TFNs).

Creating Help Keywords

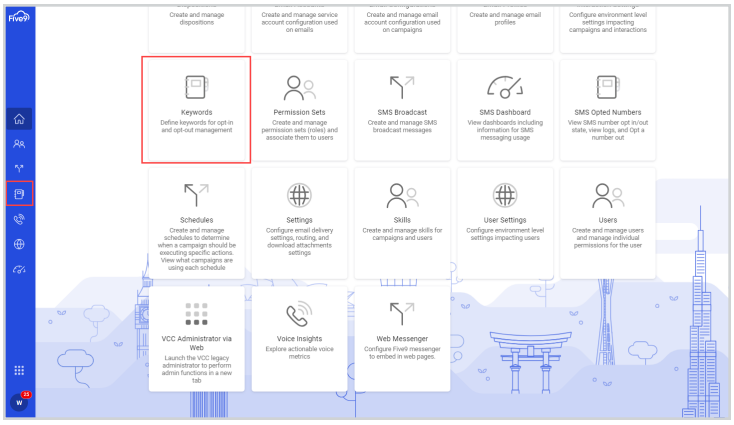
When users respond with the HELP command, they receive an automated message with the main contact number for further assistance. You can customize this message to fit your organization’s needs.

HELP keywords should generally provide useful information, such as how to opt out. If you customize the HELP message, we recommend including your business name in the response.

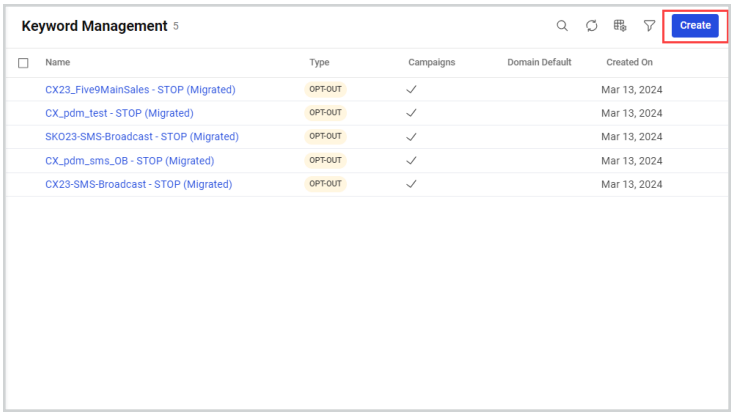
To create a new Help keyword:

1 Ensure that you have the required permissions.

2 Select the **Keywords** card or the **Manage Contacts and Lists** icon in the sidebar navigation.



3 On the Keyword Management page, select **Create**.



4 Select the **Help** Category.

5 Enter the required **Keywords**.

6 Enter a Help Message

7 Enter the **Help Message.** This is the initial message sent to a recipient in response to the HELP command. Examples include:

- "This is [Org Name]. If you have any questions, please visit our website. For further assistance, type HELP. Send STOP to unsubscribe.
- "[Org Name]: For help, email us at sales@orgname.com. To unsubscribe, reply STOP."

- "Welcome to [Org Name]. Reply with HELP for more information. Send END to unsubscribe."

Responses

Unstop

Customers who change their minds and want to opt in again can reply with the UNSTOP message. This opts them back in to receive messages from your organization, allowing you to send messages again.

Note

Standard messaging fees apply to the initial inbound STOP, START, HELP, or INFO message sent to your Five9 number, just like any other inbound SMS message. However, there are no additional fees for the blocklist changes triggered by these keywords, and no cost for the automatic reply to the sender.

Notice

Text message campaigns may be subject to various legal compliance requirements based on the nature of your campaign, the origin of your text messages, and the location of your recipients. While Five9 manages the messages described on long codes and Toll-Free numbers outlined in this article, you should consult your legal counsel to ensure your campaign complies with all applicable legal requirements. For further questions, please contact Five9 Support.

SMS Broadcast

The SMS Broadcast feature enables users to send SMS campaigns to multiple recipients through the chat console interface. The Administrator Console home page provides access to the SMS Broadcast section, displaying a list of previously delivered and failed broadcasts. Users can create a new SMS broadcast by selecting a campaign, specifying contacts either manually or via CSV file, composing the message, and scheduling the broadcast. This feature streamlines the process of reaching large audiences with targeted SMS communications.

SMS Broadcast Permissions

Note: If you don't see the **SMS Broadcast** card on the Admin Console home page, contact your administrator and ask them to assign the required

permissions (see Permissions and Permission Sets).

This section presents the individual user permissions required to view the SMS Broadcast card on the Admin Console home page and access the described features. The SMS Broadcast permissions are:

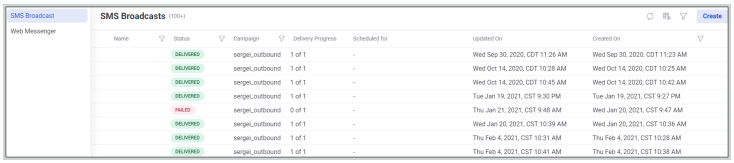
Group	Subset	Permission	Description
sms	**broadcast**	**View bulk SMS Broadcasts**	**Required**: View existing SMS broadcasts. Without this permission, the user cannot see the **SMS Broadcast** card in Admin Console.
		Cancel bulk SMS Broadcasts	Cancel SMS broadcasts.
		Create bulk SMS Broadcasts	Create SMS broadcasts.
		Delete bulk SMS Broadcasts	Delete SMS broadcasts.
	opt-in	**View SMS Opt-in List**	View the SMS opt-in list.
		Edit SMS Opt-in List	Edit the SMS opt-in list.

Creating a New SMS Broadcast

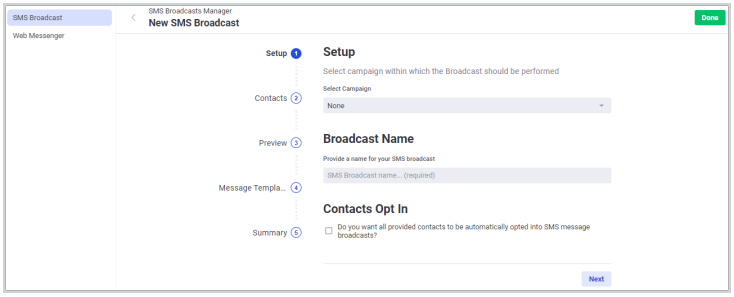
1 Select the **SMS Broadcast** card.



2 The **SMS Broadcast** page opens and displays a list of previously Delivered and Failed broadcasts.



3 Select **Create**.
The **New SMS Broadcast** page displays Step 1 **Setup**.

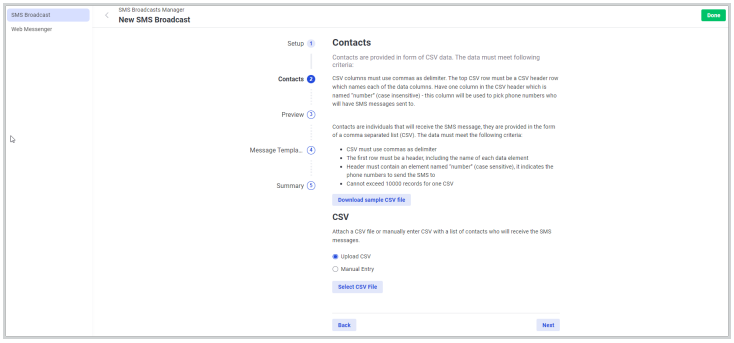


4 Select a campaign from the **Select Campaign** drop-down list.

5 Type a name for your broadcast.

6 (Optional) Select the checkbox under **Contacts Opt In** to broadcast your SMS to all of your provided contacts.

7 Select **Next**.
The page displays Step 2 **Contacts**.



- (Optional) If you need to view or use a sample CSV file, click **Download sample CSV file**.
  A CSV file downloads locally.
- (Optional) Open the CSV file by navigating to your download location from File Explorer or the browser. The CSV file contains sample data.

	A	B	C	D	E
1	number	contact.firstName	contact.lastName	contact.email	variable
2	2124567890	John	Doe	johndoe@five9.com	sample variable value

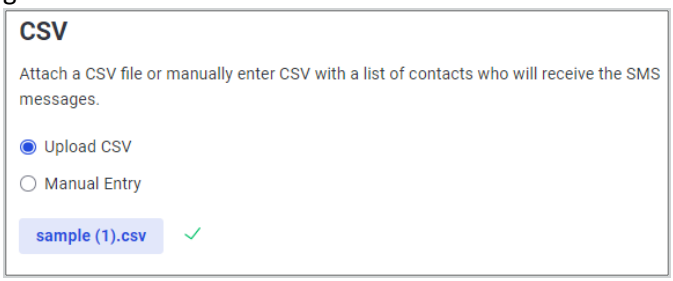
8 You can include contact information by typing it manually in the chat console or you can upload a CSV file.

To upload contacts using a CSV file:

a Select **Upload CSV**.

b Select **Select CSV File**.

c Navigate to the CSV file you want to upload, and select the file name. Select **Open**.
The CSV File is attached and appears in place of Select CSV File with a green checkmark.

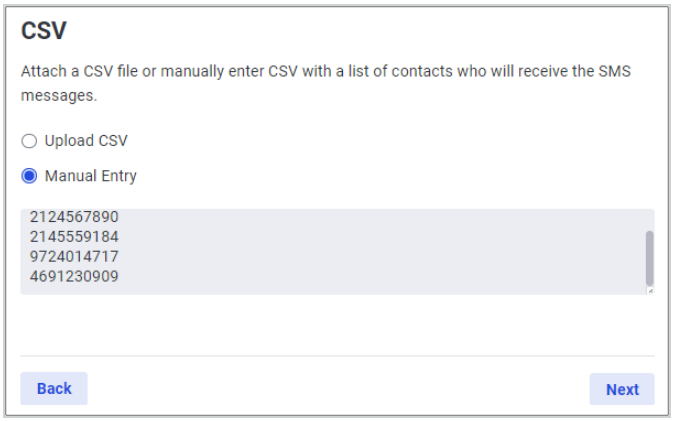


> **Note:** There is a limit of 10,000 records when you send a single broadcast using CSV. If you want to send to more than 10,000 contacts using CSV, you can schedule multiple broadcasts at the same time using different CSV files. For example if you want to send to 100,000 contacts at 9am, you can schedule 10 broadcasts at 9am, with each CSV files containing 10,000 records.

To upload contacts using **Manual Entry**:

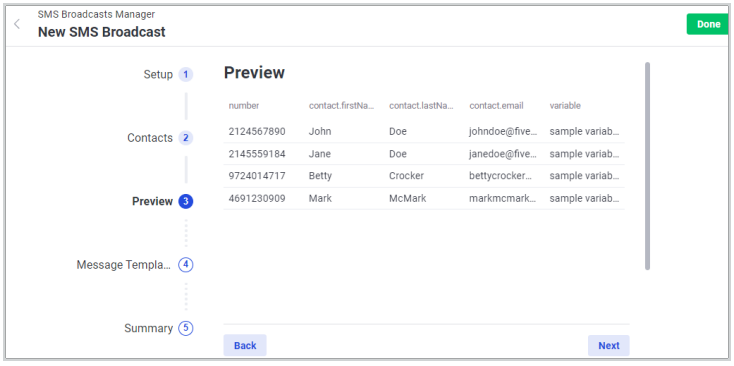
a Select **Manual Entry**.

b Copy and paste the phone number data from your CSV file into the text box.



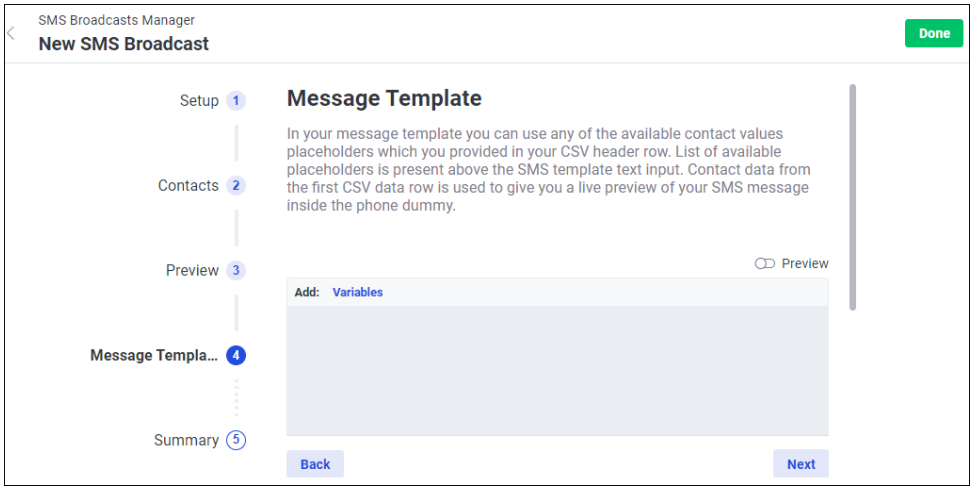
9 Select **Next**.

The **New SMS Broadcast** window displays Step 3 **Preview**.



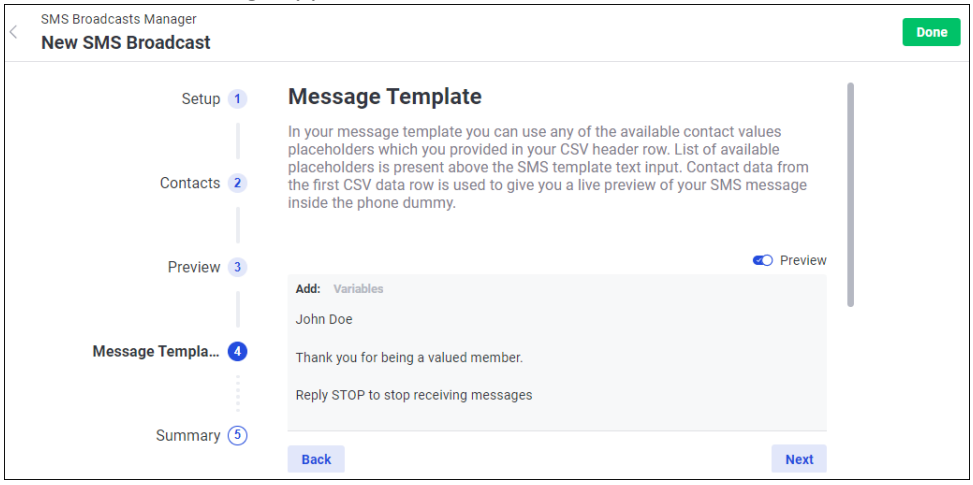
10 Select **Next**.

11 The **New SMS Broadcast** window displays Step 4 **Message Template.**



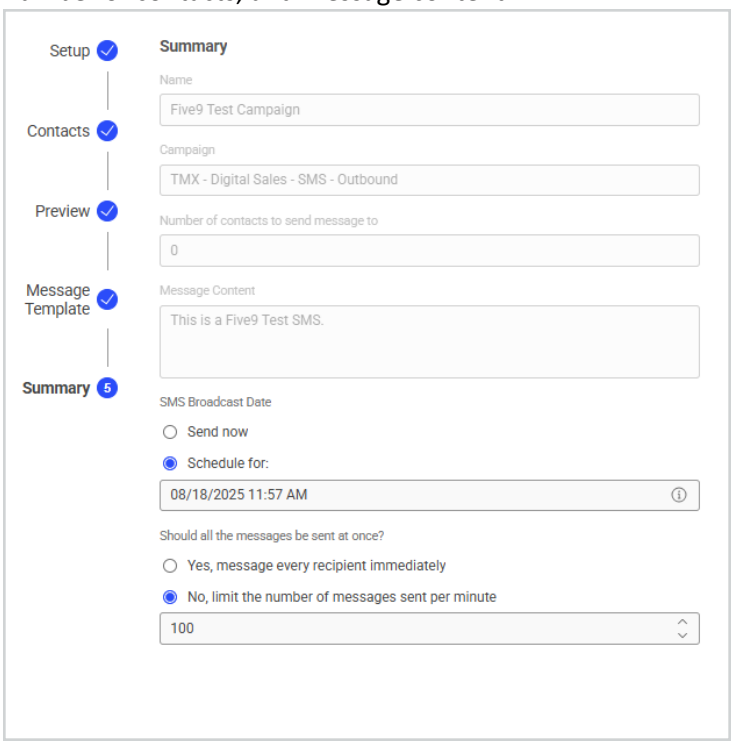
12 Select the **Variables** you included manually or in your CSV file from the drop-down list to add them to your SMS.

13 Type the desired text for your SMS and toggle **Preview**.
A draft of the message appears.



14 Select **Next**.
The **Summary** step displays your campaign details, including name, campaign,

number of contacts, and message content.



15 Review your SMS broadcast details and choose when and how to send the broadcast:

- **Send now:** Send the broadcast immediately.
- **Schedule for:** Select a date and time to send the broadcast later.

Then, select how messages should be delivered:

- **Yes, message every recipient immediately:** Sends to all recipients at once.
- **No, limit the number of messages sent per minute:** Enter the maximum number of messages per minute.

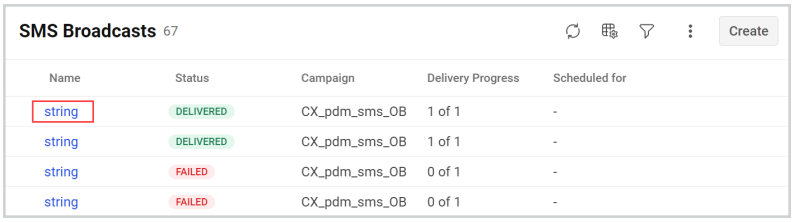
16 Select **Done**.

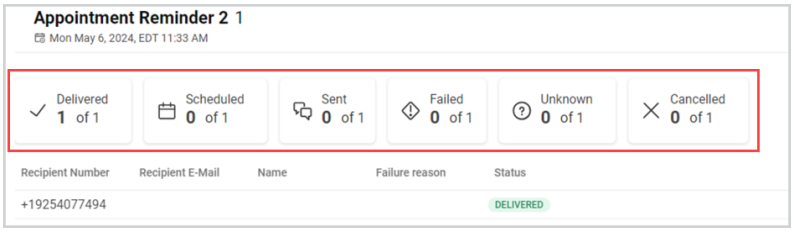
Note

You can export all records from a campaign after it has ended. Export options include CSV and Excel. You can also schedule an export for a specific future date and time.

Broadcast SMS Panel

The Broadcast SMS Panel allows you to monitor the status of your broadcast messages. By selecting a specific broadcast from the list on the SMS Broadcasts page, you can review the delivery status of messages, including those that have been successfully delivered or failed. This feature provides a comprehensive overview, enabling you to track the performance of your SMS campaigns.





Delivered: Monitors the delivery status of SMS messages to ensure they reach intended recipients. These metrics are crucial for organizations to verify successful message delivery.

Scheduled: Shows the number of messages scheduled for sending at a specified date and time.

Sent: Represents the total number of messages initiated via our SEND SMS API. This metric indicates the total number of messages sent, not whether they reached end-user devices.

Failed: Indicates the total number of messages that could not be delivered. Reasons include the recipient's phone being off, out of service area, or the number being incorrect or inactive.

Unknown: Represents the total number of SMS messages for which the delivery status is unconfirmed. This may occur due to factors like network disruptions, carrier limitations, or system errors, preventing confirmation of message receipt.

Canceled: Refers to the total number of SMS messages not sent because they were halted or stopped before delivery. This could occur due to sender intervention or system processes, indicating that the message was never delivered to the recipient's device. Resending may be necessary if the message is still required.

Consent Groups

Use Consent Groups to organize customer consent data by campaign. The system records consent from customer DID numbers on the **SMS Opted Numbers** page. Grouping this data into Consent Groups ensures that messages are delivered only to recipients who have opted in. This structure supports regulatory compliance and enables segmentation for different business units or campaign types.

Consent Groups Permission Sets

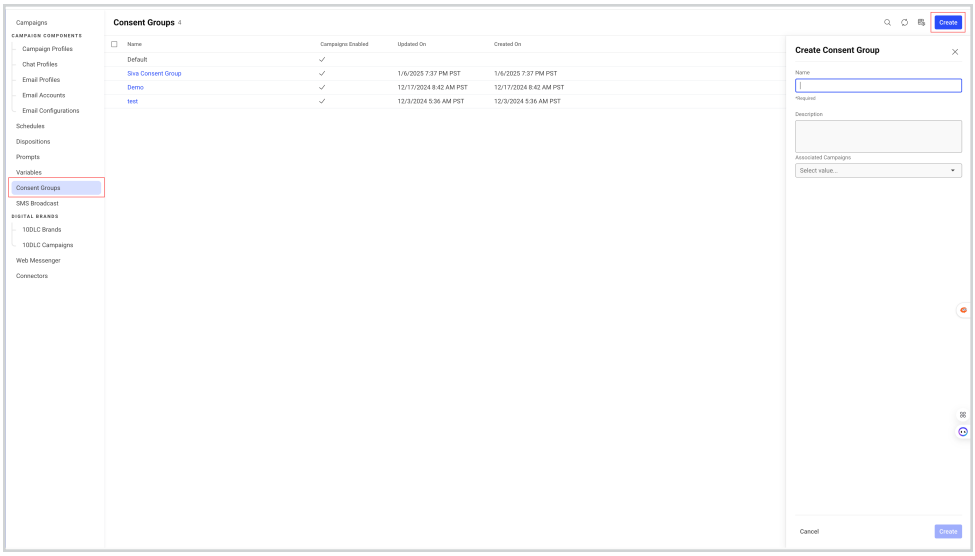
This section describes the user permissions required to view Consent Groups on the Admin Console home page and access related features. To assign these permissions to multiple users and create a permission set, see Permissions and Permission Sets in the Five9 Administrator Console documentation. Required permissions include:

Group	Subset	Permission	Description
digital	**consent-groups**	**Create Consent Groups**	Create consent groups.
		Delete Consent Groups	Delete consent groups.
		Edit Consent Groups	Edit consent groups.
		View Consent Groups	View consent groups.

Creating Consent Groups

1 Select the **Consent Groups** card or the **Manage Campaigns** icon in the sidebar navigation.

The **Consent Groups** page displays.



2 Select **Create**.

3 In the **Create Consent Group** panel:

- **a** Enter a **Name** for the new Consent Group. This field is required.
- **b** (Optional) Enter a **Description** to clarify the group's purpose.
- **c** Select one or more campaigns from the **Associated Campaigns** dropdown list.

4 Select **Create** to save the new Consent Group.

5 To cancel, select **Cancel** at the bottom of the panel.

Note

To edit a Consent Group, select its name on the Consent Groups page.

Assigning Numbers to Consent Groups

You can assign 10DLC and TFN numbers within a domain to specific campaigns and organize them into Consent Groups. When a customer opts out of a 10DLC campaign,

the opt-out applies only to that campaign or campaign group—not to the entire domain.

> **Note**
>
> For more information, see the **SMS Opted Numbers** page and the **Keywords** documentation.

Default Consent Groups

If the system cannot associate a number with a Consent Group—such as when importing opted numbers—it assigns the number to the Default Consent Group. Each domain includes one **Default Consent Group** by default. No client-side migrations or code changes are required. The system places all existing records in the Default Consent Group.

Registering SMS 10DLC and TFN

US Mobile Network Operators (MNOs) have implemented policies to decrease spam and phishing application-to-person (A2P) messages sent from 10DLC numbers. To comply with these policies, you must register your SMS-enabled numbers with a central registration system. This process varies depending on the type of your SMS-enabled numbers. There are two types of SMS-enabled numbers:

- 10DLC is a 10-digit long code that allows businesses to send messages to customers through standard (local) phone numbers.
- TFN is a 10-digit toll-free number that begins with an 800, 888, 877, 866, 855, 844, or 833 area code, and allows businesses to send messages to customers through national numbers.

This content guides you through Five9's 10DLC brands and campaigns (use cases) registration process in Administrator Console (Admin Console). You must register TFN separately. See Toll-Free Verification for details and FAQs on TFN registration.

Verifying your TFN

To verify your TFN with Five9:

1. Download the TFN Verification Form.
2. Complete the form and send it to smsregistration@five9.com

> **Note**
> The content in this topic refers to use case campaigns, which are not associated with VCC configured campaigns.

To register your 10DLC SMS-enabled numbers in Admin Console, you need to follow Creating a 10DLC Brand Creating a 10DLC Campaign, and then associate the brand with the campaign. A 10DLC brand is the entity from which you are sending the SMS. Brand registration is required for compliance and is usually done per EIN. A 10DLC campaign is based on the standard or special type use case of messages you are sending.

Five9 Admin Console Permissions

Permissions and permission sets in the Admin Console, allow you to control the functions or features users can perform. To configure 10DLC brands and campaigns, you must have the required campaign management registry permissions in the Five9 Admin Console. While editing a user record in Admin Console, go to **Permissions** > **All Permissions** > **campaignmgmt** > **registry** and select the permission. The available permissions are:

Permission	**Allows user to...**
View campaign registrations details for SMS 10DLC brands	**Required:** View 10DLC brands and 10DLC campaigns. Without this permission, the user cannot see the **10DLC Brand Registration** and **10DLC Campaign Registration** cards in Admin Console.
Create campaign registrations details for SMS 10DLC brands	Create 10DLC brands and 10DLC campaigns.
Delete campaign registrations	Delete 10DLC

for SMS 10DLC brands	brands and 10DLC campaigns.
Edit campaign registrations details for SMS 10DLC brands	Edit 10DLC brands and 10DLC campaigns.

For more information on assigning permissions, see *Permissions and Permission Sets* in the Five9 Admin Console documentation.

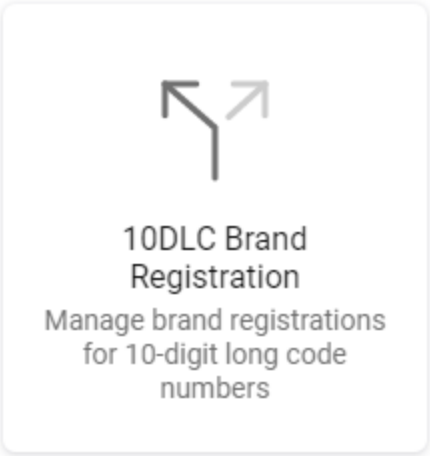
Creating a 10DLC Brand

A 10DLC brand provides the MNO with general and contact information about the entity that will send A2P messages in the 10DLC campaign. Follow these steps to create a 10DLC brand.

1. In Admin Console, click the **Manage Campaigns** icon in the sidebar. For help logging into Admin Console, see the **Logging In** section in the Administrator Console Administrators Guide.

   You can also click on the **10DLC Brand Registration** card on the Admin Console home page.

2. Click **10DLC Brands** and then click **Create Brand**.

3. Enter the information in the **General** section.

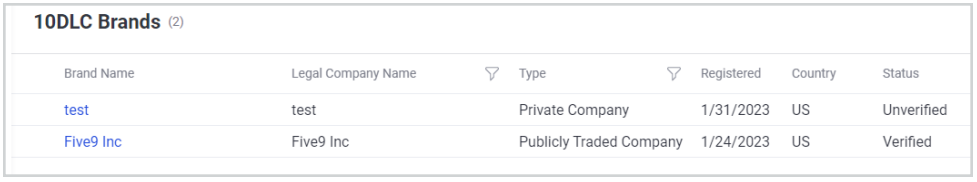
This table describes the **General** information requested for 10DLC brand registration. Fields are required unless otherwise noted.

Field name	Description
Legal Company Name	Legally registered company name. This is displayed in the header of the EIN confirmation letter from IRS.
Brand Name	Trade name for the entity of the business sending the SMS. This is usually the same as the legal company name.
Entity Type	Legal type of the organization.
Tax Number/ID/EIN	Unique 9-digit number assigned to a business. This is displayed in the header of the EIN confirmation letter from IRS.
Vertical	Line of business.
Stock Symbol	**Optionally required** If entity is a publicly traded company, stock symbol and stock exchange are required. Abbreviation that refers to a company's share listed on stock exchanges.
Stock Exchange	**Optionally required** Stock exchange where assets corresponding to stock symbol are listed.

After you complete the **General** section, click **Next**.

4 Enter the address and provide the website address in the **Contact** section.

5 Click **Done**. It may take several minutes to save and display the new brand.



You can filter on **Company Name** or **Type**. **Status** indicates the state of the the brand registration. When you first create the brand, the status shows as "-", and the status changes throughout the registration process. The possible status are:

- **- <blank>**: Brand registration is pending a response from the central registration process. It may take several minutes to receive a response.
- **Verified**: Brand registration is complete. The status must be in the Verified state to associate it with a 10DLC campaign.
- **Unverified**: You need to review the details you have provided in the brand registration. The common causes for an **Unverified** status response registration are:
  - **Tax Number/ID/EIN doesn't match the legal company name or business type.** Confirm that the number you entered matches with the identification number that the IRS has assigned to your business for tax purposes.
  - **Stock symbol is incorrect.** If your business is a publicly traded company, confirm that the stock ticker symbol is correct and the stock exchange matches the legal company name. The stock symbol and stock exchange are only required if you selected the publicly traded company entity type.

Creating a 10DLC Campaign

A 10DLC campaign provides the MNO with information on the types of A2P messages that will be sent in the campaign associated with the 10DLC brand. Follow these steps to create a 10DLC campaign.

1. In Admin Console, click the **Manage Campaigns** icon in the sidebar. For help logging into Admin Console, see the **Logging In** section in the Administrator Console Administrators Guide.

   You can also click on the **10DLC Campaigns** card on the Admin Console home

page.



2 Click **10DLC Campaigns**, and then click **Create Campaign Registry**.

3 Enter the information in the **Campaign Details** section.

This table describes the **Campaign Details** requested for 10DLC campaign registration. Fields are required unless otherwise noted.

Field name	Description
Campaign Description	Brief description of campaign use case.
Call-to-action/message flow	Describes how consumer gives consent to receive messages from the brand. Must be explicitly clear and inform the consumer of the nature of the program.
Entity type	Legal type of the organization.
Brand	10DLC brand to associate the 10DLC campaign. **Important**: You can only save a campaign that is associated with a verified brand.
Use Case	Use case for sending messages. Refer to the **Description of Use Cases** section that follows for details about use case types.

Description of Use Cases

The use cases you are required to associate with your campaign are categorized as standard or special. The following section and tables describes the two types.

Standard Use Cases

Standard use cases are automatically approved.

Use Case Type	Description
2FA	Any authentication, verification, or one-time passcode.
Account Notifications	Standard notifications for account holders, relating to and being about an account.
Customer Care	All customer care interaction, including but not limited to account management and customer support.
Delivery Notifications	Notification about the status of the delivery of a product or service.
Fraud Alert Messaging	Notifications regarding potential fraudulent activity on a user's account.
Higher Education	Messaging created on behalf of colleges or universities, including school districts and educational institutions. This use case is NOT for the "free to the consumer" messaging model.
Low Volume Mixed	For brands that have multiple use cases and only need low messaging throughput. Examples include: test or demo accounts, small businesses (single doctor's office, single pizza shop, etc.)
Marketing	Any communication that includes marketing and/or promotional content.
Mixed	Any messaging campaign containing two to five standard use cases.
Polling and voting	The sending of surveys and polling/voting campaigns.
Public Service Announcement	Informational messaging to raise an audience's awareness about important issues.
Security Alert	Notification that the security of a system, either software or hardware, has been compromised in some way and there is an action you need to take.

Special Use Cases

Special use cases may require additional vetting to complete the campaign registration. If you need assistance on special use cases, please contact customer

support.

Use Case Type	Description
Carrier Exemptions	Exemption by carrier.
Charity	Communications from a registered charity aimed at providing help and raising money for those in need. 501c3 tax-exempt organizations only.
Proxy	Peer-to-peer, app-based group messaging with proxy/pooled numbers. Supporting personalized services and non-exposure of personal numbers for enterprise or A2P communications.
Emergency	Notification services designed to support public safety/health during natural disasters, armed conflicts, pandemics, and other national or regional emergencies.
K-12 Education	Campaigns created for messaging platforms that support schools from grades K-12, and distance learning centers. This is not for post-secondary schools.
Sweepstakes	All sweepstakes messaging.
Political	Part of an organized effort to influence decision making of a specific group. Available only to registered 501(c)(4/5/6) and organizations with a Campaign Verify Token or Aegis Political Vetting.
Social	Communication between public figures/influencers and their communities. Examples include: YouTube Influencers' alerts or Celebrity alerts.
Platform Free Trial	Platform free trial offers with strict controls and MNO audit rights (MNO opt -n).
UCaaS Low Volume	UCaaS companies provide cloud delivered communication services for businesses. Each number assigned to a UCaaS campaign is typically assigned to a different employee of that business and the use cases are varied. This use case is not for API/automated driven communication, and is only available to approved UCaaS businesses. It has the same volume restrictions as the Low Volume Mixed standard campaign type.
UCaaS High Volume	UCaaS companies provide cloud-delivered

	communication services for businesses. Each number assigned to a UCaaS campaign is typically assigned to a different employee of that business and the use cases are varied. This use case is not for API/automated driven communication, and is only available to approved UCaaS businesses. It is for UCaaS campaigns that require higher volume.
Agents and Franchises	Brands that have multiple agents, franchises or offices in the same brand vertical, but require individual, localized numbers per agent/location/office.

After you complete the **Campaign Details** section, click **Attributes**.

4 Select the attributes that apply to the 10DLC campaign.

This table describes the possible **Attributes**. Required fields are indicated.

Field name	Definition
Subscriber Opt-in	**Required** Indicates whether the campaign is collecting and processing consumer opt ins.
Opt-in keywords	Indicates the keyword the customer can use to opt in.
Opt-in message	Message received by customer once they are opted in.
Subscriber Opt-out	**Required** Indicates whether the campaign is collecting and processing consumer opt out.
Opt-out keywords	Indicates the keyword the customer can use to opt out.
Opt-out message	Message informing customer how to opt out.
Subscriber Help	**Required** Indicates whether the campaign has implemented message reply to inform customers how to contact the message sender after they reply with the “HELP” keyword.
Help Keywords	Indicates the keyword the customer can use to ask for help.
Help Message	Message informing the customer how to ask for help.
Number pooling	Indicates if you are planning to add more than 49 numbers in the campaign.

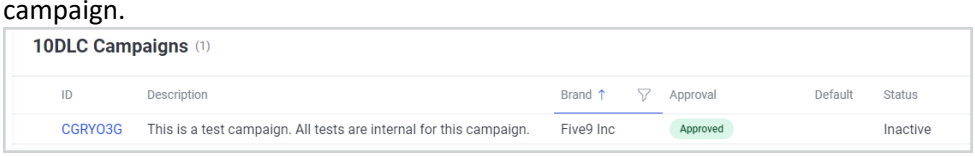
	If you wish to add more than 49 numbers to the same 10DLC campaign, you need to submit a request. Provide the additional information in the Five9 10DLC Campaign Number Pooling form and send it to smsregistration@five9.com. This is a manual process and may take several weeks. **Important**: Selecting the Number Pooling checkbox DOES NOT constitute a sub ID approval. You must still complete the Five9 10DLC Campaign Number Pooling form.
Embedded phone number	Indicates if messages contain an embedded phone number.
Age-gated content	Indicates if messages contain age-gated content.
Embedded link	Indicates if messages contain an embedded link.
Direct lending or Loan agreement	Indicates if messages include content related to direct lending or loan agreements.
CTIA Terms and condition	**Required** Indicates if you agree with CTIA terms and conditions.

After you complete the **Attributes** section, click **Sample Messages**.

5 Enter the message content for the messages in the **Sample Messages** section. You must provide at least two sample messages.
After you complete the **Sample Messages** section, click **Carrier Terms**.

6 The **Carrier Terms** section displays campaign qualification status and terms of each MNO. This is informational only, and no action is needed in this section.

7 Click **Done** to complete the 10DLC campaign registration and display the new campaign.



Note: After you create the 10DLC campaign, manual vetting is done by aggregators. The vetting process may take five business days or more to be completed. Once complete, the DIDs on your account are automatically associated to the default 10DLC campaign. Click the 10DLC campaign ID then click the **Numbers** tab to view the registered DIDs.

10DLC Vetting Tips and Guidelines

Bandwidth's aggregator vets all new 10DLC campaigns to ensure they comply with the wireless carriers' codes of conduct. This section provides clarity and insight to help you register your campaigns successfully and smoothly.

Common Reason for Rejection

- A Call to Action (CTA) that is incomplete or unclear.
- Opt-out messages that are missing or do not comply with guidelines.
- Including prohibited SHAFT-C content.
- Failing to provide a website or online presence.
- Not meeting Know Your Customer (KYC) guidelines.
- Providing inadequate Privacy Policy or Terms and Conditions.
- Incorrectly attributing campaigns or content.
- Issues related to sole proprietor campaigns.

Writing Effective Campaign Descriptions

Your campaign description must clearly explain the purpose of your messages. Address these questions:

- Who are you?
- Who is your target audience?
- Why are you sending these messages?

The purpose of text messages should be aligned to the use-case selected and the Opt-in verbatim published to consumers.

Good example:

"Messages for car dealership customers, including appointment reminders, repair updates, satisfaction follow-ups, online bill payment, and two-way conversations."

Bad example:

"Text messages for our team to communicate with customers and partners."

Why this fails: It does not identify the sender or the communication's purpose.

- Include message frequency in the description.

Creating Sample Messages

Create unique sample messages that show the type of content you will send and clearly demonstrate the interaction. The sample messages should align with the overall campaign description and include the sender's identification, such as a brand or sender name.

- Avoid generic descriptions or messages that obscure the use case and require additional research.
- Include opt-out language in at least one sample message (e.g., “Text STOP to unsubscribe”).
- If you include a phone number or link in any sample message, select the appropriate attributes, such as **Embedded Phone Number** or **Embedded Link**, during campaign registration.

  Good Examples:

  "Hello [Name], your appointment with John’s Car Dealership is on [Date] at [Time]. Reply YES to confirm or NO to reschedule. Thank you!"

  "Hi [Name], this is [Company]. We invite you to visit our booth at [Event]. Register at [Link]. Will you attend this year?"

  Bad Examples:

  "Thanks for your rating on Google. I’ll contact you soon."

  "I received your question and will reply as soon as possible."

Call to Action (CTA)

Incomplete or unclear Calls to Action (CTAs) or Message Flow sections frequently result in campaign rejections. The 10DLC vetting process evaluates the CTA through two key criteria:

1. **CTA/Message Flow Field in Campaign Registration**

   This section must provide a clear and concise description of how users sign up to receive messages. Opt-ins must meet the following requirements:

- Opt-ins must occur directly between you and the user and cannot involve third parties.
- Opt-ins must explicitly apply to text messaging and cannot be implied.
- The opt-in process must remain clear, noticeable, and separate from terms and conditions or other agreements.

Examples of Opt-in Methods:

- **Entering a phone number through a website:**

  Example: Customers visit www.examplewebsite.com, enter their phone number, and check a box agreeing to receive text messages from the brand.

  Note: Always include a direct link to the submission form in the CTA/Message Flow field. Missing this link will result in campaign rejection.

- **Clicking a button on a mobile webpage:**

  Example: Customers click a button to opt in via a mobile webpage.

  Note: Provide a link to the webpage in the CTA/Message Flow field.

- **Sending a message with a keyword:**

  Example: Consumers text START to (111) 222-3333 to opt in.

  Important: Explain how consumers are informed about the keyword. Acceptable methods include:

  - A webpage link where the keyword is advertised.
  - A screenshot of the keyword advertisement.

- **Signing up at a point of sale (POS) or on-site location:**

  > **Example:** Customers verbally opt in at a business location. Include a copy of the opt-in script read to customers.

- **Using interactive voice response (IVR):**

  > **Example:** Customers provide consent via an IVR system. Include details of how consent is collected.

2 CTA Disclosure Shared with Consumers

The CTA disclosure informs users they are opting in to receive messages. It must include the following details:

- Brand name.
- Types of messages being sent.
- Message frequency disclosure (e.g., “Message frequency varies,” or “2 messages per week”).
- A statement that “Message and data rates may apply.”
- Instructions for HELP (e.g., “Text HELP for support”).
- Instructions for opting out (e.g., “Text STOP to unsubscribe”).
- Links to the Privacy Policy and Terms & Conditions.

Include this information for all opt-in collection methods. Below are examples of various opt-in types:

- **Website/Online Opt-in:**

  "By submitting this form and signing up for texts, you consent to receivdoee marketing messages (e.g., promotions, cart reminders) from [Company Name] at the phone number provided. Consent is not a condition of purchase. Msg frequency varies. Msg & data rates may apply. Unsubscribe at any time by replying STOP or clicking the unsubscribe link. Reply HELP for support. Privacy Policy [link] & Terms [link]."

  > **Note:** Avoid forced opt-ins by making phone numbers optional fields on the website.

- **Keyword Opt-in:**

  "By texting START to [Phone Number], you consent to receive marketing messages from [Company Name]. Consent is not a condition of purchase. Msg frequency varies. Msg & data rates may apply. Unsubscribe at any time by replying STOP. Privacy Policy [link] & Terms [link]."

- **Consumer-Initiated Messaging:**

  "By starting a text conversation with [Company Name] by texting [Phone Number], you agree to receive conversational messages from [Company Name]. Msg frequency varies. Msg & data rates may apply. Unsubscribe at any time by replying STOP. Privacy Policy [link] & Terms [link]."

Verbal Opt-in:

Staff verbally ask customers if they would like to opt in for SMS-based notifications during registration. During this process, customers receive the following information:

- “Message and data rates may apply.”
- “Message frequency may vary.”
- “Text HELP for support or STOP to unsubscribe.”
- Their phone number will not be shared with third parties for marketing or promotional purposes.

Add links to the Privacy Policy and Terms and Conditions in the campaign’s CTA/Message Flow field.

Additional CTA Notes

- Include links to your Privacy Policy and Terms of Use in the CTA.
- Base all messaging traffic on prior opt-in consent.
- If you use a website for opt-ins, provide the website URL in the CTA field. Excluding this information will result in campaign rejection.
- The CTA must reflect donation-related messaging for donation campaigns.
- If you use a website for opt-ins, provide the exact URL in the CTA field where the online form is located. The link must direct users to the correct page. Campaigns will be rejected if the provided URL does not lead to the specific online form or if the home page link is submitted instead of the form page.

> **Example:** "By submitting this form and signing up for texts, you consent to receive marketing, donation requests, and informational messages from [Company Name]. Msg frequency varies. Msg and data rates may apply. Unsubscribe at any time by replying STOP. Privacy Policy [link] & Terms [link]."

Opt-Out Messaging Guidelines

- Use at least one of the following words in your opt-out message: END, STOP, UNSUBSCRIBE, or CANCEL.
- Include spaces between words in opt-out phrases (e.g., "STOP 2 END" is acceptable, but "STOP2END" is not).
- Demonstrate the opt-out process in at least one sample message in your campaign.

> **Example:** "[Business Name:] Your appointment is scheduled for Tuesday at 3:00 PM. Reply YES to confirm, NO to reschedule, or STOP to unsubscribe."

Responding to Opt-Out and HELP Requests

- **Opt-Out Response:**

  When a customer opts out, send a confirmation message that includes your brand name and explicitly states that no further messages will be sent.

  > **Example:** "You have successfully opted out of messages from [Company Name]. You will no longer receive any further communications."

- **HELP Response:**

  When a customer requests HELP, reply with your brand name and include contact details for assistance, such as an email address, phone number, or support website.

  > **Example:** "Thank you for contacting [Company Name]. For support, please call [Phone Number] or email us at [Email Address]. Reply STOP to unsubscribe."

SHAFT-C Content Restrictions

The following types of content are strictly prohibited in 10DLC campaigns and cannot appear on associated websites:

- CBD
- Cannabis
- Sexually explicit material
- Hate speech
- Alcohol*
- Firearms
- Tobacco*

> **Note:** Alcohol and tobacco-related content may be allowed if robust age-gating measures and proper opt-in processes are implemented.

Example of Non-Compliant Content:

> **Example:** If a chiropractor's website features CBD oils, the campaign will be denied, even if the marketing messages are unrelated to CBD.

Online Presence Requirements

- Maintain an accessible website or online presence for your business.
- Aggregators review associated websites during the vetting process. They reject campaigns if they find prohibited content on your website.
- If your business does not have a website, provide an alternative online presence, such as a social media page or Google business listing.
- If you cannot publicly link your Privacy Policy and Terms and Conditions, email these documents to your Five9 representative (TPM, TAM, IM, AM, CSM, or PM) to upload them into the campaign registration portal.

Compliance with Know Your Customer (KYC) Guidelines

Your brand name must accurately reflect the entity sending the messages, not the service provider delivering them.

> **Example:** The Employer Identification Number (EIN) and company details must belong to the message sender (your business), not the service provider (e.g., Five9).

Campaign and Content Attributes

Verify that the following attributes are accurate when setting up your campaign:

- **Subscriber Opt-In:** Include opt-in keywords and make sure the opt-in message provides the following details:
    - Brand name
    - Message frequency disclosure (e.g., "Message frequency varies")
    - "Message and data rates may apply" statement
    - HELP instructions (e.g., "Text HELP for support")
    - STOP instructions

      > **Example:** "Thank you for opting in to receive messages from [Company Name]. Msg frequency varies. Msg and data rates may apply. Reply HELP for help. Reply STOP to cancel."

- **Subscriber Opt-Out:** Provide opt-out keywords and include a message confirming no further messages will be sent.

  > **Example:** "You have successfully opted out of messages from [Company Name]. You will receive no further communications."

- **Subscriber Help:** Include HELP keywords and provide contact information in the response.

  > **Example:** "Thank you for reaching out to [Company Name]. For support, call [Phone Number] or email [Email Address]. Reply STOP to opt-out."

- **Number Pooling:** Select "Yes" if the campaign requires more than 49 phone numbers (TNs).
- **Embedded Content:** If your campaign includes embedded links or phone numbers, indicate this and make sure examples are provided in your sample messages.
- **Age-Gated Content:** Mark "Yes" if the campaign involves age-restricted material.
- **Terms & Conditions:** Make sure these are provided, with links to the document in the appropriate registration field.

Privacy Policy Requirements

Every message sender must provide a compliant Privacy Policy when registering 10DLC campaigns. The policy must clearly outline how the company collects, uses, and manages consumers' mobile numbers. It is critical to detail:

- How consumer data will be used.
- Whether data will be shared with third parties (if applicable).
- How consumers can contact the message sender.

A well-defined Privacy Policy is essential for successful campaign registration and vetting.

Linking Requirements

Include direct links to your Privacy Policy and Terms and Conditions in the Call-to-Action (CTA) section of your campaign registration. Providing these links ensures faster review and a more streamlined vetting process.

Consent Requirements

During the vetting process, reviewers closely examine the Privacy Policy to confirm compliance with consent standards. The policy must not falsely claim consumer consent for sharing end-user data with third parties for marketing purposes.

Although businesses may share data necessary for operations, do not sell or transfer consumer information (e.g., leads) to third parties for promotional use. Doing so will result in campaign rejection.

To comply with these requirements, include explicit language in the Privacy Policy that states the sender does not share consumer data for non-essential purposes.

Example of Compliant Language:

> **Example:** "Mobile information will not be shared with third parties or affiliates for marketing or promotional purposes. The categories above exclude text messaging originator opt-in data and consent; this information will not be shared with any third parties."

Opt-Out Instructions

Message senders must respect and honor the consumer's right to opt out of a messaging campaign to uphold the integrity of recipient consent. The Privacy Policy must clearly explain how consumers can opt out of future communications.

> **Example:** "If you wish to stop receiving communications, you can opt out by texting STOP, QUIT, END, REVOKE, OPT OUT, CANCEL, or UNSUBSCRIBE."

Guidance for Privacy Policy Development

Bandwidth strongly recommends that each brand create a customized Privacy Policy with SMS-specific disclosures as outlined above. Although Bandwidth does not provide legal advice, message senders and their providers are responsible for ensuring the Privacy Policy complies with TCPA laws and carrier-specific requirements.

For new or non-established brands, various online resources can help develop operational processes and Privacy Policy templates tailored to your business needs.

> **Important:** Even when using third-party resources, ensure your Privacy Policy, practices, and procedures include the required SMS disclosures and opt-out functionality. Failure to meet these standards may result in registration or vetting rejections, such as: “805 - Compliant privacy policy is required on the website.”

Terms and Conditions

All message senders must provide compliant Terms and Conditions for their consumers or recipients. This document is a required part of campaign registration. If your brand does not have a website, upload the Terms and Conditions as a PDF during registration.

Required Details:

- **Brand Name:** Clearly identify your brand.
- **Message Types:** Describe the types of messages consumers will receive.
- **Message Frequency Disclosure:** Indicate message frequency (e.g., “Message frequency varies”).
- **Message and Data Rates:** Include a disclosure stating, “Message and data rates may apply.”
- **Customer Care Contact Information:** Provide support options, such as “Text HELP for help” or “Contact [email address] for support.”
- **Opt-Out Instructions:** Specify how to opt out, such as “Text STOP to cancel.”

Example Terms and Conditions:

> **Example:** "You agree to receive informational messages (e.g., appointment reminders, account notifications) from [Company Name]. Message frequency varies. Message and data rates may apply. For assistance, reply HELP or email us at [email address]. You can opt out at any time by replying STOP."

For more information, refer to the Five9 10 DLC FAQ and Campaign Registration to learn about the A2P 10DLC Messaging Service.

SMS Opted Numbers

SMS Opted Numbers page keeps track of Customer DID numbers and whether they agree to receive text or social media messages from businesses. Their consent is recorded based on keywords they choose in response to messages, crucial for following regulations and ensuring welcome communications.

By default, Five9 handles common reply messages like STOP or UNSUBSCRIBE for Toll-Free Numbers and 10DLC numbers. It records customer consent, which can be checked and confirmed.

With the Keyword definition feature, users can set up custom keywords in different languages. Admins handle this and configure them for Opt-In or Opt-Out.

This content covers the benefits of managing opt-in/out preferences, including centralized management for admins, compliance with regulations like TCPA and GDPR,

improved customer experience, efficient communication, enhanced data security, targeted marketing, and scalability.

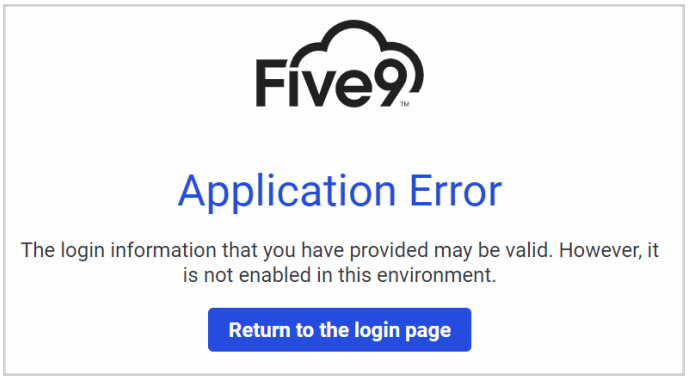
> **Note**
>
> It's essential to adhere to CTIA (Cellular Telecommunications Industry Association) guidelines to avoid serious penalties. Compliance with the CTIA Messaging Principles and Best Practices is mandatory for US organizations, as non-compliance can lead to hefty fines and restrictions on messaging capabilities. Understanding and following these CTIA regulations is essential for smooth, penalty-free communication within the US.

Logging In

You use the Five9 Administrator Console to log into your Five9 account and access SMS Opted Numbers.

1. Enter the URL that applies to your location.
    - US domains: https://admin.us.five9.net/
    - Canadian domains: https://admin.ca.five9.net/
    - UK domains: https://admin.uk.five9.net/
    - European domains: https://admin.eu.five9.net/
2. Enter your credentials (username and password).

This message indicates that you may have valid credentials to access Admin Console, but may not be enabled for the selected region. Ensure that the region you select represents your contact center locale.



> **Note:** If you don't see the SMS Opted Numbers card on the Admin Console home page, contact your administrator and ask them to assign the required permissions (see Permissions and Permission Sets).

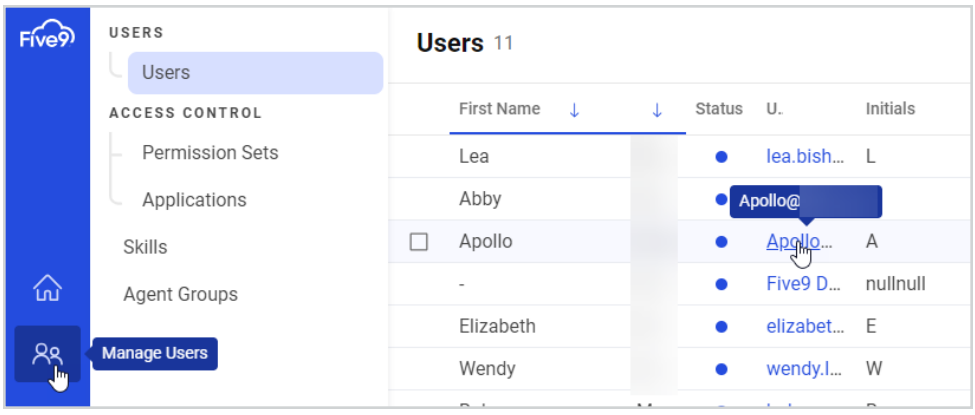
Permissions and Permission Sets

Permissions and permission sets in the Five9 Administrator Console control the features or functions users can perform. This section discusses how to assign the user permissions required to view the SMS Opted Numbers card in Admin Console, edit and view Opt-In lists.

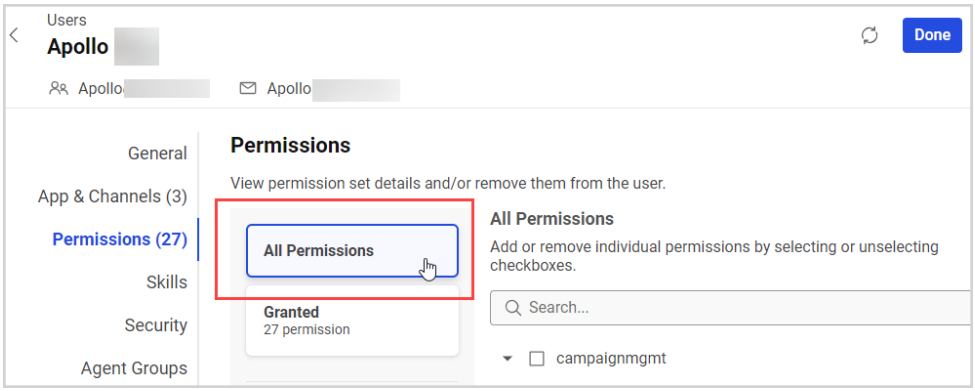
> **Note:** Only admins with permission to create and edit users can assign permissions on the Manage Users page. Contact your administrator to obtain these permissions.

Assigning Permission Sets

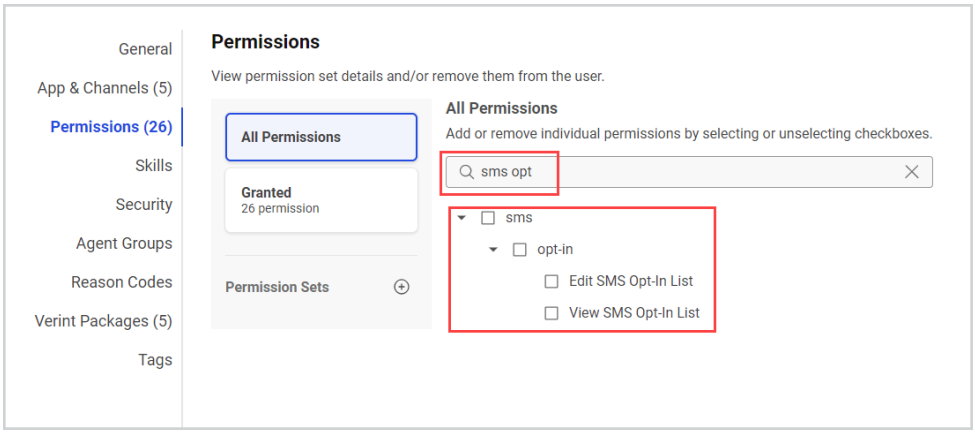
1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select the available permission set for the application.



3 Type the permission group name from the table in [SMS Opted Numbers] into the search field or scroll the list to the permission group, and select the desired permissions or group.

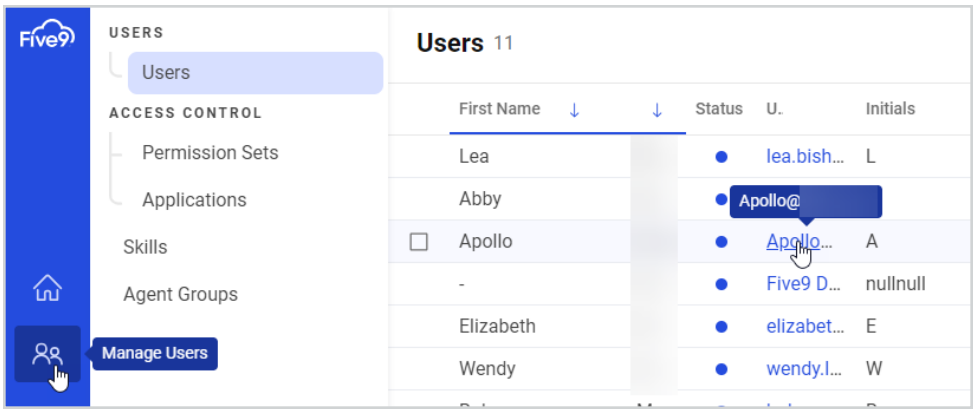


4 Select **Done**.

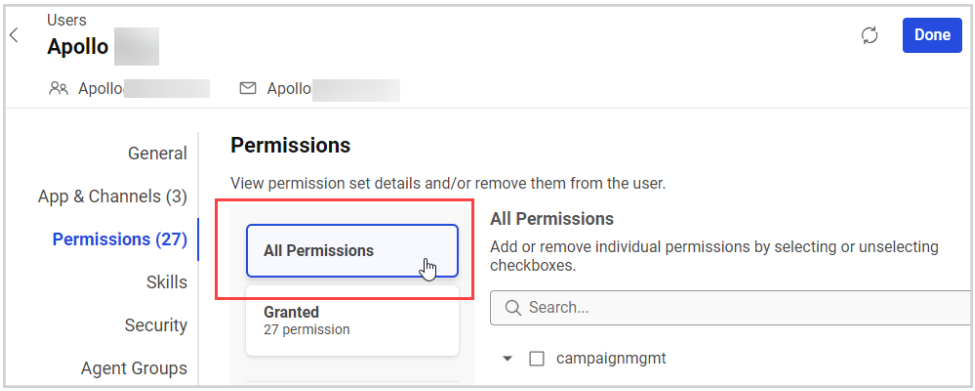
To assign the same permissions to multiple users, create a permission set (see *Permissions and Permission Sets* in the Five9 Admin Console documentation).

Assigning User Permissions

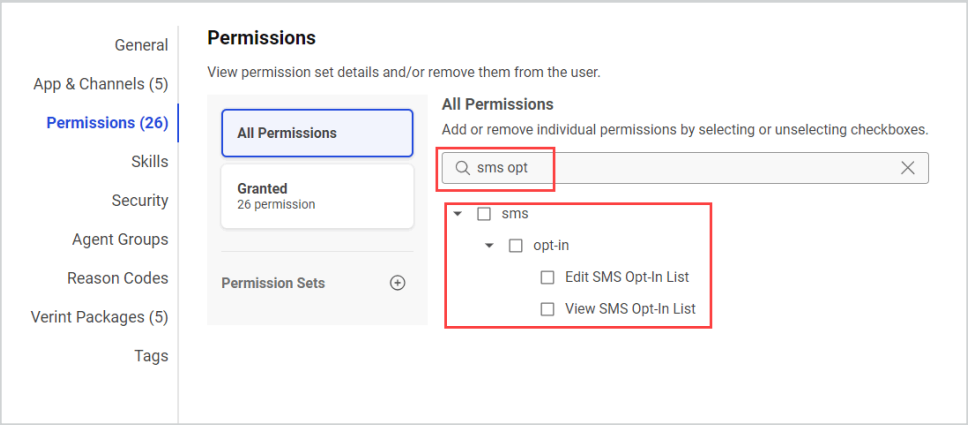
1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select **All Permissions**.



3 Type the permission group name from the table in **SMS Opted Numbers Permissions** into the search field or scroll the list to the permission group, and select the desired permissions or group.



4 Select **Done**.

For more information on assigning permissions, see *Permissions and Permission Sets* in the Five9 Admin Console documentation.

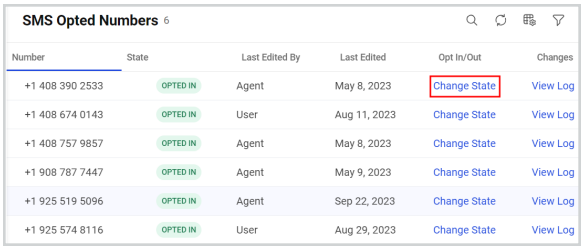
SMS Opted Numbers Permissions

This section presents the individual user permissions required to view the SMS Opted Numbers card on the Admin Console home page and access the described features. The SMS Opted Numbers permissions are:

Group	Subset	Permission	Description
sms	opt-in	Edit SMS Opt-In List.	Allows users to edit the SMS Opt-In List.
	opt-in	View SMS Opt-In List.	Allows users to view the SMS Opt-In List.

Updating Opt-In/Out Status

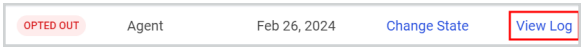
Users with edit permissions can adjust the Opt-In/Out status of the Customer DID. Once the status is updated, they'll receive a confirmation message indicating "Update Successful."





Change History

To see a record of all Opt-In/Out changes for a Customer DID number, users can click on **View Log**.

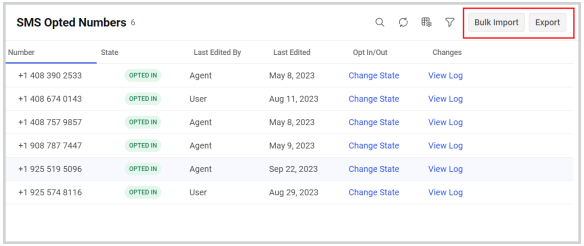


Import and Export of Opt-In/Out Data

On the Opt-In/Out page, users can export and import data.

Export Data

By selecting the **Export** button, users can export data to a CSV file, without any number restrictions.

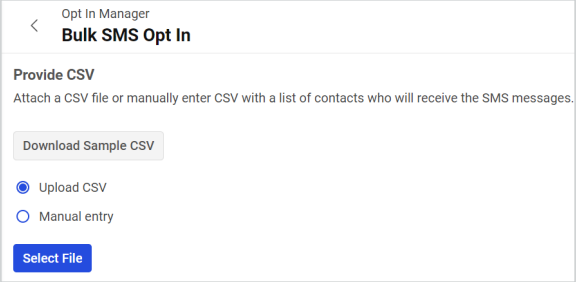


The data is exported into a CSV file.

	A	B	C
	Number	State	Last Edited
	14083902533	OPT_IN	5/8/2023 12:10
	14086740143	OPT_IN	8/11/2023 12:33
	14087579857	OPT_IN	5/8/2023 10:53
	19087877447	OPT_OUT	2/26/2024 8:03
	19255195096	OPT_IN	9/22/2023 12:36
	19255748116	OPT_IN	8/29/2023 13:27

Import Data

Users can import Opt-In/Out data into the list using an external CSV file. The system offers a sample CSV file as a reference and template.



Users have the option to edit a group of records in a CSV file, and then import the updated file back into the system.

> **Note**
>
> While there's no cap on the number of records displayed on the Opt-In/Out page, there are limitations on the quantity that can be transferred in or out at once due to pagination constraints and import limits. A maximum of 10,000 records can be imported at a time. It is crucial to ensure that all phone numbers are formatted according to the E164 standard before import.

SMS Dashboard

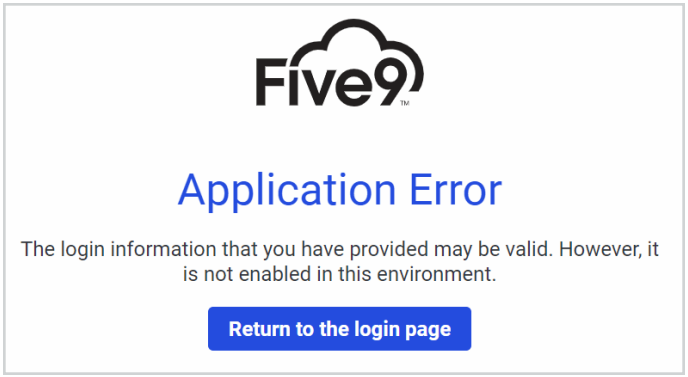
The SMS Dashboard is a centralized platform designed to provide administrators and supervisors with a comprehensive overview of SMS data across different time periods.

Logging In

You use the Five9 Administrator Console to log into your Five9 account and access Agent Assist Studio.

1. Enter the URL that applies to your location.
    - US domains: https://admin.us.five9.net/
    - Canadian domains: https://admin.ca.five9.net/
    - UK domains: https://admin.uk.five9.net/
    - European domains: https://admin.eu.five9.net/
2. Enter your credentials (username and password).

This message indicates that you may have valid credentials to access Admin Console, but may not be enabled for the selected region. Ensure that the region you select represents your contact center locale.



Note: If you don't see the SMS Dashboard card on the Admin Console home page, contact your administrator and ask them to assign the required permissions (see Permissions and Permission Sets).

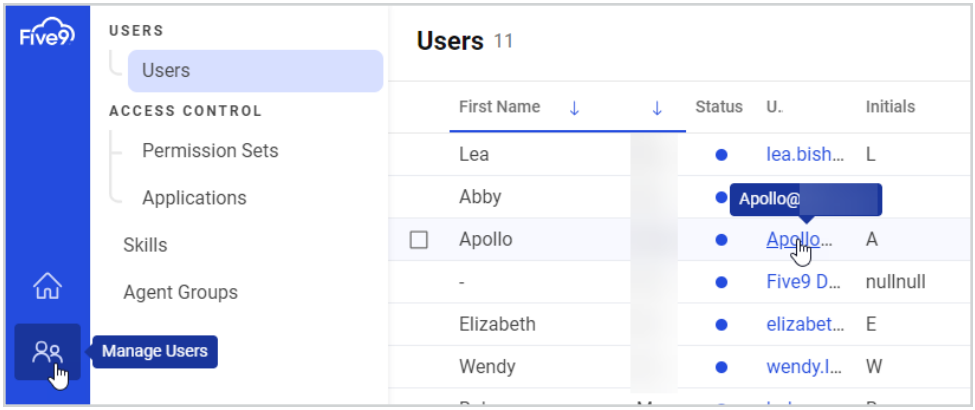
Permissions and Permission Sets

Permissions and permission sets in the Five9 Administrator Console control the features or functions users can perform. This section discusses how to assign the user permissions required to view the SMS Dashboard card in Admin Console.

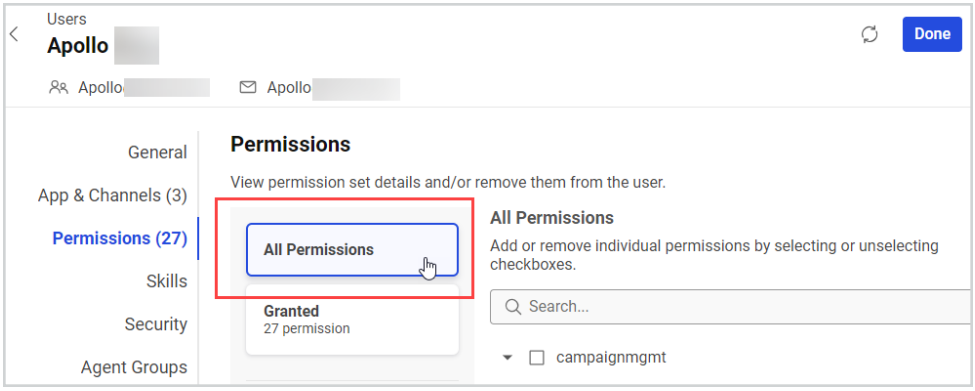
> **Note:** Only admins with permission to create and edit users can assign permissions on the Manage Users page. Contact your administrator to obtain these permissions.

Assigning Permission Sets

1 Select the user hyperlink on the Users page.

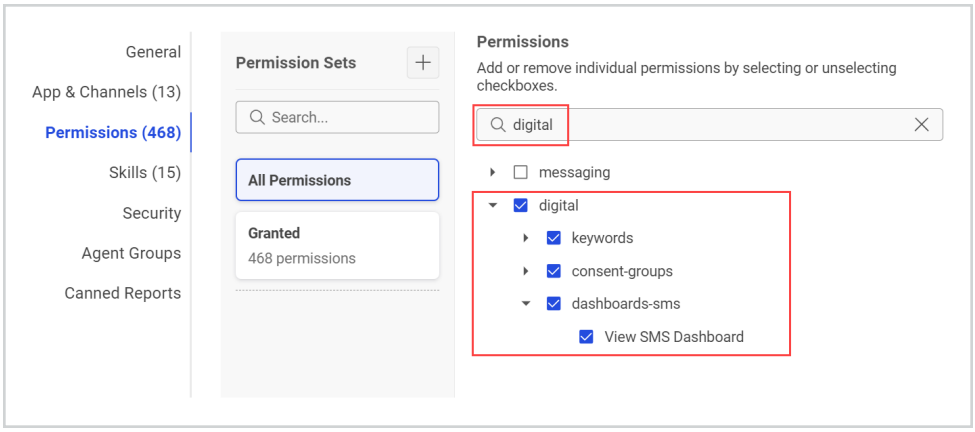


2 Select the **Permissions** tab and select **All Permissions**.



3 Type the permission group name from the table in SMS Dashboard Permissions into the search field or scroll the list to the permission group, and select the

desired permissions or group.

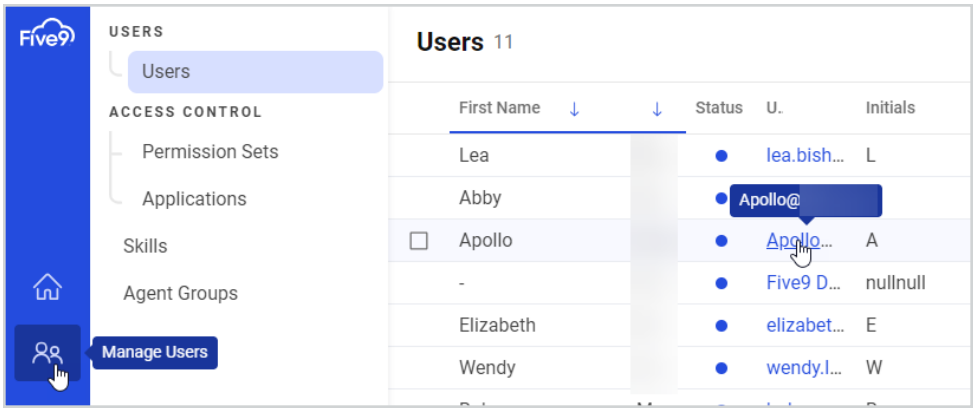


4 Select **Done**.

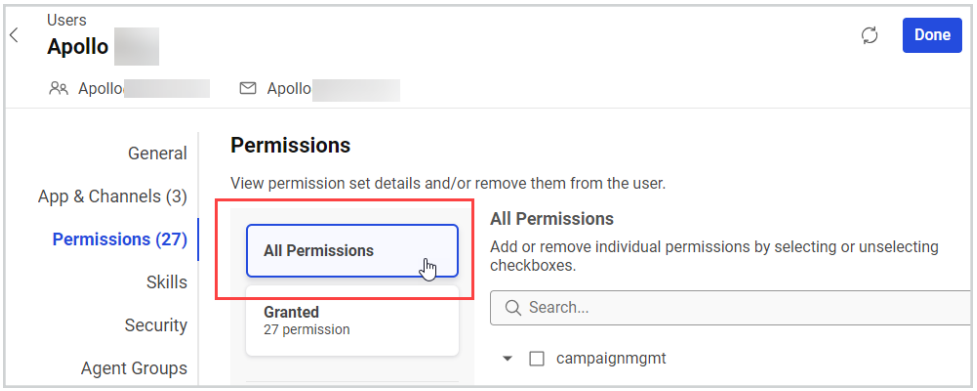
To assign the same permissions to multiple users, create a permission set (see *Permissions and Permission Sets* in the Five9 Admin Console documentation).

Assigning User Permissions

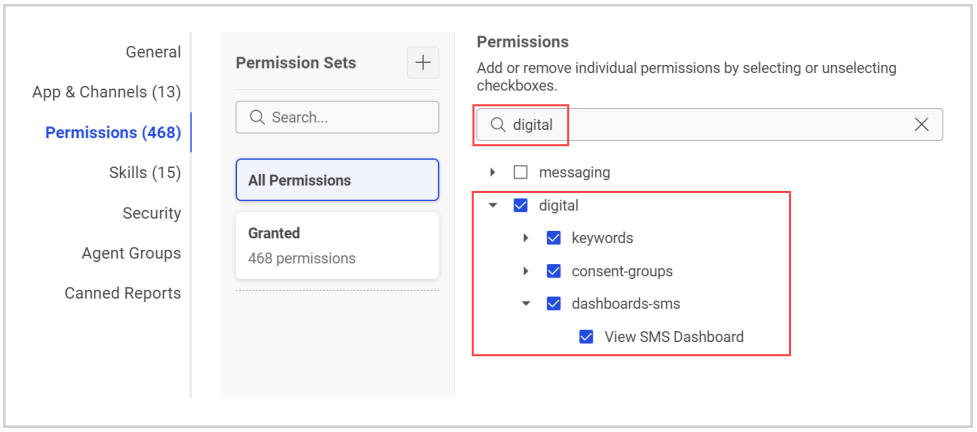
1 Select the user hyperlink on the Users page.



2 Select the **Permissions** tab and select **All Permissions**.



3 Type the permission group name from the table in [SMS Dashboard Permissions](#) into the search field or scroll the list to the permission group, and select the desired permissions or group.



4 Select **Done**.

For more information on assigning permissions, see *Permissions and Permission Sets* in the Five9 Admin Console documentation.

SMS Dashboard Permissions

This section presents the individual user permissions required to view the SMS Dashboard card on the Admin Console home page and access the described features. The SMS Dashboard permissions are:

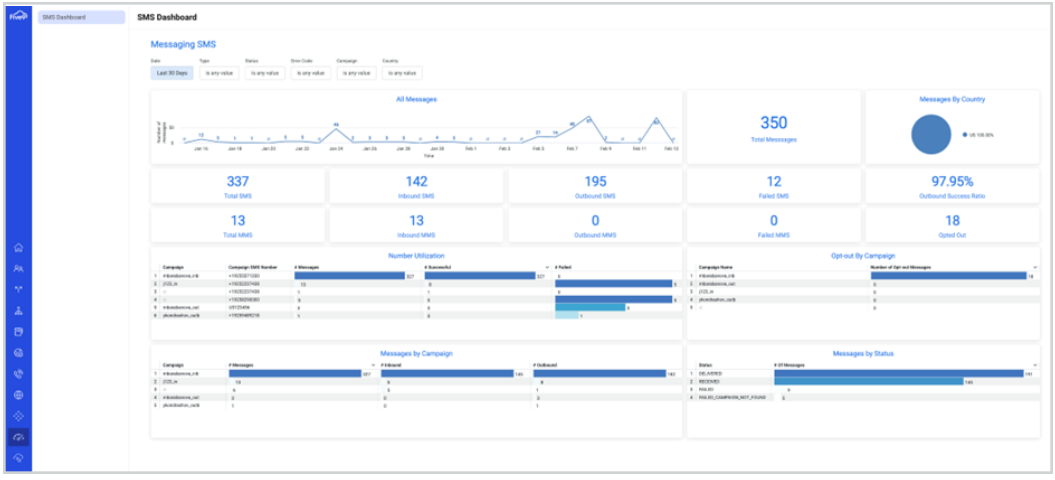
Group	Subset	Permission	Description
digital	dashboard-	View SMS	To access the Dashboard page, users

Group	Subset	Permission	Description
	sms	Dashboard	must have permission to view the SMS Dashboard. Without this permission, users will be unable to see the Dashboard page.

Accessing the SMS Dashboard

All Five9 SMS customers are granted access to the SMS Dashboard, with permissions automatically enabled for their domains. Users can access the Dashboard either through the search button or by navigating to **Operational > SMS Dashboard**.

> **Note**
>
> Five9 does not provide support or documentation for the schemas utilized within this Dashboard. Additionally, we do not endorse or support any modifications to the Looker view or customization of the Dashboard's appearance.



SMS Statistics

Below is the description of the statistics presented in the dashboard.

Statistics	Description
Total Mes-	The total number of messages sent and received across the

Statistics	Description
sages	domain. This will include SMS, MMS, Short Code, and Alpha Numeric Messages.
Message by Country	Segment the total messages (SMS, MMS, Short Code, and Alphanumeric) by country.
Total SMS	Determine the total number of SMS messages sent. This count does not include segmentation of SMS messages.
Inbound SMS	Calculate the total number of inbound SMS messages received across all campaigns and associated numbers.
Outbound SMS	Determine the total number of outbound SMS messages sent across the domain, including messages sent from ADP, API calls, and through outbound campaigns.
Failed SMS	The total number of failed SMS messages. Refer to the list of reasons for failed messages for more information.
Outbound Success Ratio	Calculate the ratio of successful outbound messages to unsuccessful messages. Failure of messages can occur due to various reasons. Consult the list of possible failures.
Total MMS	Determine the total number of inbound and outbound multimedia messages (MMS).
Inbound MMS	Calculate the total number of inbound multimedia messages.
Outbound MMS	Determine the total number of outbound multimedia messages.
Failed MMS	Calculate the total number of failed multimedia messages.
Opted Out	Count the total number of customer responses received with the Opted Out option. Refer to the keyword documentation for definitions of Opt-In and Opt-Out.
Number Utilization by Campaign	The Number Utilization table consolidates key metrics, categorizing them by campaign and associated SMS number. It includes aggregates such as the total number of messages sent, the total number of successful deliveries, and the total number of messages that failed to be delivered.
Opt-out by Campaign	Provide the total number of users opting out by responding to specific keywords. Group the total number by campaigns.
Messages by Campaign	Segmentation of messages (SMS + MMS) by the campaign, listed by the total number of messages, total number of inbound messages, and total number of outbound messages.

Statistics	Description
Messages by Status	Segmentation of messages by the total number of delivered, the total number of messages received, the total number of messages failed, and the total number of messages with the Failed Campaign Not Found disposition.

Carrier Reported Client Errors

Below is the description of Carrier Reported Client Errors.

Description	Explanation of the Error	Billable
invalid-service-type	The carrier rejected the message due to an invalid service type. This typically means that messaging (SMS or MMS) is not supported by the carrier or handset.	Yes
destination-service-unavailable	The carrier service is reporting that the destination is not reachable or the SMS service is not available.	Yes
destination-subscriber-unavailable	This error indicates that the subscriber is unavailable. There are several reasons for this, including the subscriber having turned off their handset, the destination being unreachable or barred, the GSM subscriber being busy for outbound SMS, the SIM card being full, voicemail being full, or the inability to reach the destination handset, with the message stored for retry in the Store & Forward function.	Yes
rejected-message-size-limit-exceeded	The downstream vendor cannot retrieve the media as the MMS attachment is too large.	Yes
media-content-invalid	The media content type is not supported. Please review the accepted media types.	Yes
invalid-destination-address	The carrier rejected the message due to an invalid destination address. This could indicate that the number is not in the numbering plan (area code does not exist or the number is invalid) or that the number is not enabled for messaging (such as a landline). Additionally, for toll-free messages to T-Mobile, this could also mean that the	Yes

Description	Explanation of the Error	Billable
	user has opted to block all toll-free and short code traffic.	
destination-tn-deactivated	The phone number you are attempting to send to is on the deactivation list. It is not associated with a carrier to receive messages or is inactive.	Yes
no-route-to-destination-carrier	The carrier is reporting that there is no route available for the message. This could be because there is no routing to the destination, no roaming route is available, the destination handset is roaming on a network that cannot be reached, there is no SS7 route, or routing was denied.	Yes
invalid-source-address-address	The carrier is rejecting the message due to an invalid source address - the number does not exist in the numbering plan. Other reasons for this error code include the source carrier being invalid or disabled, the source not being authorized, or the number type not being supported.	Yes
destination-rejected-message	The destination carrier has rejected the message without providing a specific reason. For AT&T traffic, this could be due to a prepaid user whose account is out of money, a subscriber provisioned to not receive this type of SMS, or the message being identified as spam.	Yes
destination-rejected-message-size-invalid	The carrier has rejected the message because the message length is invalid or too long.	Yes
destination-rejected-malformed	The carrier is rejecting the message because it is malformed. This could be due to various reasons such as a blank message, unacceptable data value, the receiving SMSC or SME not accepting messages with more than 160 characters, syntax error, invalid content, invalid message ID, invalid parameter length, missing expected TLV, invalid TLV value, invalid data coding scheme, invalid number of destinations, error in the optional part of the PDU body, TLV not allowed, or XML validation error.	Yes
destination-rejected-handset	The handset has rejected the message.	Yes
destination-spam-detected	The carrier is reporting this message as blocked for spam. Spam blocks could result from content violations, SHAFT violations (including specific keywords), or originating	Yes

Description	Explanation of the Error	Billable
	addresses flagged for repeated spam content.	
rejected-shortened-url	There was an error with the shortened URL used. Aggregator recommends customers obtain their own dedicated domain if shortened links are needed for their messaging campaign.	Yes
rejected-tn-blocked	This error indicates a blocked sender or receiver on the downstream platform. Please contact Aggregator support so we can engage our vendor to determine which telephone number is blocked and why.	Yes
inactive-campaign	The campaign associated with this TN is not active for the destination. Please check the status with TCR (The Campaign Registry). You will receive this error if the campaign is pending or rejected by the DCA or suspended by an MNO but the TN is still assigned to the campaign.	Yes
provisioning-issue	There is an issue with how the number is provisioned in the industry's database. Some components of 10DLC provisioning may be incorrect or missing. Please contact Aggregator support to investigate and correct this issue.	Yes
destination-rejected-due-to-user-opt-out	The user has opted out of receiving messages from a particular sender. Remove the destination TN from the subscriber list and cease communication with the destination.	Yes
volume-violation-tmo	T-Mobile rejected the message due to a volumetric violation. You have exceeded the daily limit for your 10DLC brand. Please review your brand's daily throughput limit to ensure you are not exceeding the approved volumes.	Yes
volume-violation-att	T&T rejected the message due to a volumetric violation. You have exceeded the rate limit for your 10DLC campaign. Please review your campaign's throughput limit to ensure you are not exceeding the approved volumes. This error can also indicate throttling by AT&T for other reasons, including high spam rates.	Yes
volumetric-violation	The carrier rejected the message due to a volumetric violation. You have exceeded the allotted limit and need to reduce sending. Please retry after some time.	Yes
destination-rejected-sc-	The carrier rejected the message due to short code restriction. The destination address is blocked by the	Yes

Description	Explanation of the Error	Billable
not-allowed	mobile operator and cannot receive short code messages, or the mobile operator blocked the destination from receiving messages from this short code for some other reason.	
destination-rejected-campaign-not-allowed	The carrier rejected the message because the short code campaign is not allowed or blocked by the mobile operator.	Yes
destination-rejected-sc-not-provisioned	The short code is not provisioned on the mobile operator's network.	Yes
destination-rejected-sc-expired	The short code has expired with the mobile operator.	Yes
tfn-not-verified	The message was blocked because the toll-free number is not verified. This could also be due to spam on the unverified TFN. Please review unverified sending limits and submit the TFN for verification as soon as possible.	Yes

Aggregator Service Failure

Below is the description of Aggregator Service Failure messages.

Description	Explanation of the Error	Billable
temporary-app-error	An application within the Aggregator service is experiencing a temporary error, which is preventing the message from being processed.	No
temporary-app-shutdown	The app is currently down. The message was not received. The sender should try sending this message later or to another host.	No
impossible-to-route	It's impossible to route the message, and attempts to deliver through retries have failed.	No
temporary-app-connection-closed	Received a message for a connection that has already been removed.	No
temporary-rout-	The aggregator service expired the message after	No

Description	Explanation of the Error	Billable
error-retries-exceeded	attempts to deliver through retries failed.	
temporary-app-error-app-busy	The aggregator service application is temporarily busy and cannot receive messages at this time.	No
temporary-store-error	The message was not received. It cannot be saved to the store.	No
discarded-concatenation-timeout	The aggregator did not receive all parts of the message. Therefore, the message cannot be sent.	No
message-send-failed	The destination carrier has reported a general service failure with sending the message.	No
message-send-failed	The message is unable to be sent because no destination is available.	No
unknown-error	An unknown error was generated by the aggregator when the aggregator core reports an unknown error.	No

Carrier Reported Service Failures

Below is the description of Carrier Reported Service Failures.

Description	Explanation of the Error	Billable
destination-carrier-queue-full	Carrier service is unavailable. This could result from network congestion, a messaging queue full on the vendor side, or a throttling error on the vendor side.	Yes
submit* sm-or-submit* multi-failed	The downstream carrier application is experiencing an error. Submitting the message has failed or canceling the message has failed.	Yes
destination-app-error	The carrier is reporting a general error associated with their application processing the message.	Yes
message-not-acknowledged	NACK - no response or acknowledgment received from the carrier.	Yes
destination-failed	The carrier service is reporting a failure to send to the destination (mobile operator or handset).	Yes

Carrier Errors with Ambiguous Cause

Below is the description of Carrier Errors with Ambiguous Cause.

Description	Explanation of the Error	Billable
delivery-receipt-expired	The aggregator timed out waiting for the delivery receipt. This could be because the downstream provider did not send the requested delivery receipt, or they sent it after the system timed out at two hours.	Yes
unknown-error	The aggregator does not recognize the vendor's error response or does not have the vendor code mapped internally.	Yes

SMS Surcharges

Telecommunication companies in the United States and Canada apply SMS surcharges due to operational, regulatory, and infrastructural factors. Carriers impose these additional costs for sending and receiving text messages to meet specific needs within the telecommunications framework.

Regulatory Environment

The regulatory environment directly drives SMS surcharges in the United States and Canada. In the United States, the Federal Communications Commission (FCC) regulates telecommunications and allows carriers to charge fees to comply with regulations. These fees cover the cost of spam monitoring, network integrity, and security enforcement through systems like STIR/SHAKEN. Similarly, Canadian carriers face regulations that require compliance with strict SMS policies, including spam prevention and pricing structures.

Operational Costs

Operational expenses for maintaining and upgrading network infrastructure contribute to SMS surcharges. Carriers incur costs for customer support, network upgrades, and data management. For example, carriers offset the transition to technologies like 5G by increasing surcharges for services that use existing infrastructure.

Carrier Fees and Interoperability

Carriers impose fees for interoperability between networks, which SMS messages rely on to reach recipients. These fees cover the infrastructure required for transmitting messages across different carrier networks. Carriers also charge surcharges for Application-to-Person (A2P) messaging, where businesses send high volumes of messages that require prioritized routing.

Market Dynamics and Competition

Market competition influences SMS surcharge strategies. Leading carriers such as Verizon, AT&T, Bell, and Telus use surcharges to sustain revenue, fund new technologies, and compete effectively. These fees support carrier investments while enabling them to meet evolving customer demands.

Key Surcharge Components

Carrier-Imposed Fees

- A2P Messaging Fees
    - Carriers charge fees for A2P messaging, which includes business messages for marketing, notifications, and transactions.
    - These fees compensate carriers for the additional infrastructure demands caused by high message volumes.
- Carrier-Specific Costs
    - Carriers like AT&T, Verizon, T-Mobile, Bell, and Rogers impose different surcharges based on their infrastructure and pricing models.

Compliance and Regulations

- 10DLC Registration
    - In the U.S., the 10DLC system allows businesses to send A2P messages using local long codes. Businesses must register their numbers and campaigns with carriers, and the registration fees cover compliance costs.
- Canadian Spam Laws (CASL)
    - Canada enforces anti-spam regulations, requiring businesses to meet compliance standards for SMS, which incur additional costs.

Anti-Spam and Filtering Mechanisms

- Carrier Filters
    - Carriers use advanced filtering systems to prevent spam and fraudulent messages. Surcharges fund these systems to ensure high message quality.

- Verified Sending
    - Surcharges also cover verification processes that authenticate business messages, reducing spam and phishing risks.

Differentiating P2P and A2P Messaging

- Higher Costs for A2P Messaging
    - Person-to-Person (P2P) messages incur lower fees due to their lower infrastructure demands. A2P messages require prioritized routing, resulting in higher surcharges.
- Infrastructure Maintenance
    - Carriers use A2P surcharges to maintain and upgrade SMS infrastructure to ensure reliable delivery for high-volume traffic.

Campaign Management and Monitoring

- Campaign Review
    - Carriers charge fees to review and approve SMS campaigns to ensure compliance with standards.
- Ongoing Monitoring
    - Surcharges fund continuous monitoring of SMS traffic to identify misuse or non-compliance.

Carrier-Specific Surcharges

The following tables list surcharge rates for U.S. and Canadian carriers. These fees include local, toll-free, and short-code messaging and reflect inbound and outbound rates.

Local A2P/10DLC

Carrier	Type	Inbound	Outbound	Start Date
AT&T - Registered	SMS	$0.0030	$0.0030	10/1/2024
AT&T - Registered	MMS	$0.0075	$0.0075	10/1/2024
AT&T - Unregistered	SMS	$0.0100	$0.0100	10/1/2024

Carrier	Type	Inbound	Outbound	Start Date
AT&T - Unregistered	MMS	$0.0150	$0.0150	10/1/2024
T-Mobile - Registered	SMS	$0.003	$0.0030	6/1/2021
T-Mobile - Registered	MMS	$0.010	$0.0100	6/1/2021
T-Mobile - Unregistered	SMS	$0.011	$0.011	10/1/2024
***New* T-Mobile - Unregistered**	SMS	$0.012	$0.012	12/1/2024
T-Mobile - Unregistered	MMS	$0.02	$0.02	10/1/2024
***New* T-Mobile - Unregistered**	MMS	$0.021	$0.021	12/1/2024
TextNow	SMS	$0.00	$0.0020	8/1/2021
TextNow	MMS	$0.00	$0.0020	8/1/2021
US Cellular	SMS	$0.00	$0.0050	3/1/2019
US Cellular	MMS	$0.00	$0.0100	3/1/2021
Verizon - Registered	SMS	$0.00	$0.0030	9/1/2022
Verizon - Unregistered	SMS	$0.00	$0.0100	7/1/2023
Verizon	MMS	$0.00	$0.0050	2/1/2020

Toll-Free

Carrier	Type	Inbound	Outbound	Start Date
AT&T	SMS	$0.0030	$0.0030	10/1/2024
AT&T	MMS	$0.00	$0.0075	10/1/2024
T-Mobile	SMS	$0.00250	$0.0025	9/24/2021
T-Mobile	MMS	$0.0100	$0.0100	9/24/2021

Carrier	Type	Inbound	Outbound	Start Date
US Cellular	SMS	$0.00	$0.0035	9/24/2021
US Cellular	MMS	$0.00	$0.0100	9/24/2021
Verizon	SMS	$0.00	$0.0030	9/24/2021
Verizon	MMS	$0.00	$0.0050	9/24/2021

Canada: Local

Carrier	Type	Inbound	Outbound	Start Date
Bell & Virgin	SMS	$0.00	$0.0081060	9/1/2023
***New* Bell & Virgin**	SMS	$0.00	$0.008100	11/1/2024
Bell & Virgin	MMS	$0.00	$0.03021169	9/1/2023
***New* Bell & Virgin**	MMS	$0.00	$0.030300	11/1/2024
Eastlink (Bragg Communications)	SMS	$0.00	$0.0058950	9/1/2023
***New* Eastlink (Bragg Communications)**	SMS	$0.00	$0.005900	11/1/2024
Eastlink (Bragg Communications)	MMS	$0.00	$0.0072912	9/1/2023
***New* Eastlink (Bragg Communications)**	MMS	$0.00	$0.007400	11/1/2024
FIDO Solutions	SMS	$0.00	$0.0073690	9/1/2023
***New* FIDO Solutions**	SMS	$0.00	$0.008100	11/1/2024
FIDO Solutions	MMS	$0.00	$0.0147370	9/1/2023
***New* FIDO Solu-**	MMS	$0.00	$0.016300	11/1/2024

Carrier	Type	Inbound	Outbound	Start Date
tions				
Freedom Mobile (Globalive Wireless/WIND)	SMS	$0.00	$0.0066	1/1/2024
***New* Freedom Mobile (Globalive Wireless/WIND)**	SMS	$0.00	$0.006700	11/1/2024
Freedom Mobile (Globalive Wireless/WIND)	MMS	$0.00	$0.0088	1/1/2024
***New* Freedom Mobile (Globalive Wireless/WIND)**	MMS	$0.00	$0.008900	11/1/2024
Rogers	SMS	$0.00	$0.0073690	9/1/2023
***New* Rogers**	SMS	$0.00	$0.008100	11/1/2024
Rogers	MMS	$0.00	$0.0147370	9/1/2023
***New* Rogers**	MMS	$0.00	$0.016300	11/1/2024
Saskatel	SMS	$0.00	$0.0058950	9/1/2023
***New* Saskatel**	SMS	$0.00	$0.005900	11/1/2024
Saskatel	MMS	$0.00	$0.0058950	9/1/2023
***New* Saskatel**	MMS	$0.00	$0.005900	11/1/2024
Telus	SMS	$0.00	$0.0058950	9/1/2023
***New* Telus**	SMS	$0.00	$0.007400	11/1/2024
Telus	MMS	$0.00	$0.0095790	9/1/2023
***New* Telus**	MMS	$0.00	$0.014800	11/1/2024
Videotron	SMS	$0.00	$0.0066	1/1/2024
***New* Videotron**	SMS	$0.00	$0.006700	11/1/2024
Videotron	MMS	$0.00	$0.0088	1/1/2024
***New* Videotron**	MMS	$0.00	$0.008900	11/1/2024

Canada: Toll-Free

Carrier	Type	Inbound	Outbound	Start Date
Bell & Virgin	SMS	$0.00	$0.008165	9/1/2023
***New* Bell & Virgin**	SMS	$0.00	$0.00810	11/1/2024
Bell & Virgin	MMS	$0.00	$0.030433	9/1/2023
***New* Bell & Virgin**	MMS	$0.00	$0.03030	11/1/2024
Eastlink (Bragg Communications)	SMS	$0.00	$0.007041	9/1/2023
***New* Eastlink (Bragg Communications)**	SMS	$0.00	$0.00590	11/1/2024
Eastlink (Bragg Communications)	MMS	$0.00	$0.007360	9/1/2023
***New* Eastlink (Bragg Communications)**	MMS	$0.00	$0.00740	11/1/2024
FIDO Solutions	SMS	$0.00	$0.007422	9/1/2023
***New* FIDO Solutions**	SMS	$0.00	$0.00670	11/1/2024
FIDO Solutions	MMS	$0.00	$0.014846	9/1/2023
***New* FIDO Solutions**	MMS	$0.00	$0.01110	11/1/2024
Freedom Mobile (Globalive Wireless/WIND)	SMS	$0.00	$0.004461	9/1/2023
***New* Freedom Mobile (Globalive Wireless/WIND)**	SMS	$0.00	$0.00440	11/1/2024
Freedom Mobile (Globalive Wireless/WIND)	MMS	$0.00	$0.008907	9/1/2023

Carrier	Type	Inbound	Outbound	Start Date
***New* Freedom Mobile (Globalive Wireless/WIND)**	MMS	$0.00	$0.00890	11/1/2024
Rogers	SMS	$0.00	$0.007423	9/1/2023
***New* Rogers**	SMS	$0.00	$0.00740	11/1/2024
Rogers	MMS	$0.00	$0.014846	9/1/2023
***New* Rogers**	MMS	$0.00	$0.01480	11/1/2024
Saskatel	SMS	$0.00	$0.005938	9/1/2023
***New* Saskatel**	SMS	$0.00	$0.00590	11/1/2024
Saskatel	MMS	$0.00	$0.005938	9/1/2023
***New* Saskatel**	MMS	$0.00	$0.00590	11/1/2024
Telus	SMS	$0.00	$0.004454	9/1/2023
***New* Telus**	SMS	$0.00	$0.00740	11/1/2024
Telus MMS	MMS	$0.00	$0.007423	9/1/2023

Other

Carrier	Type	Inbound	Outbound	Start Date
Claro - PR	SMS	$0.00	$0.0065	7/1/2023
Claro - PR	MMS	$0.00	$0.0150	1/1/2023
Cellular South	SMS	$0.00	$0.0025	9/1/2022
Cellular South	MMS	$0.00	$0.0100	8/1/2022
Digicel Carib-bean	SMS	$0.00	$0.0250	8/1/2022
Reliance Jio Infocom LTD - IN	SMS	$0.00	$0.0530	8/1/2022
Bharti Airtel	SMS	$0.00	$0.0530	8/1/2022

Carrier	Type	Inbound	Outbound	Start Date
Limited - IN				
Vodafone Idea Limited - IN	SMS	$0.00	$0.0530	8/1/2022
Telstra Corporation LTD - AU	SMS	$0.00	$0.0790	8/1/2022
Optus Networks Pty LTD - AU	SMS	$0.00	$0.0790	8/1/2022
TPG Telecom Limited - AU	SMS	$0.00	$0.0790	8/1/2022
Everything Everywhere Limited - UK	SMS	$0.00	$0.0840	8/1/2022
Telefonica O2 UK Limited - UK	SMS	$0.00	$0.0840	8/1/2022
Vodafone UK - UK	SMS	$0.00	$0.0790	8/1/2022

SMS Failed Messages

Below is the description of SMS failed messages.

Description	Explanation of the Error	Billable
Service-not allowed	This error indicates that the service you're trying to use is not permitted. Possible reasons include inaccurate permissions, formatting issues, or the service not being enabled for your use.	No
malformed-invalid-encoding	This message contains invalid characters that are not supported. The aggregator cannot re-encode the message for the destination.	No
malformed-	The From number associated with the message is not	No

Description	Explanation of the Error	Billable
invalid-from-number	routable to a carrier or valid in the industry. For example, it may be a 9-digit number.	
malformed-invalid-to-number	The To number associated with the message is not routable to a carrier or valid in the industry. For example, it may be a 9-digit number.	No
malformed-for-destination	The message passed validation during the receive stage but failed during the send stage. This is likely because the destination number (To) is invalid.	No
message-not-sent-expiration-date-passed	The message was not sent because the specified expiration date passed before the message could be sent.	No
rejected-routing-error	The message cannot be routed within the aggregator, especially when the source and destination are the same number. This could be due to mis-provisioning of the destination (To) number or a configuration issue causing the message to be sent repeatedly between the same numbers.	No
rejected-forbidden-from-number	Messaging from this From number is forbidden, primarily because the number does not belong to BW or the associated account. Other reasons include: the number not being enabled in the Aggregator Dashboard, the account not being enabled for this type of messaging, the number being disconnected, or it being an invalid number (e.g., 11111111111).	No
rejected-forbidden-to-number	Messaging to this To number is forbidden. This could be because the number is not active, not enabled for messaging, or is an invalid number (e.g., 11111111111).	No
rejected-unallocated-from-number	The From telephone number is considered unallocated when it does not exist in our database as an active number. This may occur if the number is not enabled for messaging at the industry level, or if the number has not yet been released in the industry.	No
rejected-unallocated-to-number	The To number associated with this message is a valid North American number but has not yet been assigned to a carrier. As a result, the message cannot be sent downstream.	No
rejected-	The source account ID is undefined. The From number	No

Description	Explanation of the Error	Billable
account-not-defined-from-number	associated with this message is either not associated with this account, is an invalid number, or is not configured appropriately to send messages.	
rejected-account-not-defined-to-number	The destination account ID is undefined. The 'To' (destination) number is either not associated with an account, is an invalid number, or is not configured correctly to receive messages.	No
rejected-invalid-from-profile	The aggregator failed to create the destination. This is typically due to the destination profile being invalid, often because the destination number does not support MMS.	No
media-unavailable	An error occurred while retrieving the media from the media web server. Please check the media URL and try accessing it directly to see if the media can be fetched successfully.	No
rejected-message-size-limit-exceeded	The total size of the MMS message media/attachments exceeded the maximum file size supported.	No
media-content-invalid	The media content type is not supported.	No
rejected-carrier-does-not-exist	The upstream carrier associated with the message does not exist in the aggregator configuration.	No
rejected-forbidden-no-destination	The message cannot be sent downstream because the account associated with the message does not have permission to send to this destination. You may not be provisioned to send to this destination.	No
rejected-forbidden-shortcode	The message cannot be sent because the account associated with it is not provisioned for short code messaging.	No
rejected-forbidden-country	The aggregator system indicates that the account associated with the message is not enabled for messaging in this zone, this country, or this country is outside of messaging reach (specifically for MMS).	No
rejected-forbidden-tollfree	The account associated with this message is not enabled for toll-free messaging.	No

Description	Explanation of the Error	Billable
rejected-forbidden-tollfree-for-recipient	Messaging to this toll-free number is not allowed. The number is likely not enabled for messaging or is not active.	No
forbidden-too-many-recipients	The group message has too many recipients. When sending group messages, there's a maximum of 10 participants allowed in a group.	No
rejected-wrong-user-id	The user ID is not valid. Please verify the user ID and retry the message.	No
rejected-wrong-application-id	The specified Application ID is not valid or not associated with the account.	No
rejected-spam-detected	This message has been filtered and blocked by the aggregator for spam. Messages can be blocked for various reasons, including volumetric filtering, content blocking, SHAFT violation, etc.	Yes
rejected-from-number-in-blacklist	The From number has been flagged by the aggregator as prohibited from sending messages. This is typically due to several violations, such as reports of spam or P2P violations, associated with this number by the aggregator or downstream carriers.	No
rejected-to-number-in-blacklist	The number you are attempting to send to is blocked from receiving messages.	No
reject-emergency	Messaging to an emergency number is forbidden.	No
rejected-unauthorized	The aggregator service indicates that the sender is not authorized to send messages from the account.	No

Using the Script Generator

This tool enables you to speed up the creation of the Five9 Chat and Five9 Email Web Forms by generating a basic script that you can customize as needed. However, you cannot add or modify these elements in the forms:

- Variables.
- Five9 information at the bottom of the chat console.

Use the form that corresponds to the location of your domain:

- https://app.five9.com/consoles/Generator/index.html
- https://app.five9.eu/consoles/Generator/index.html
- https://app.ca.five9.com/consoles/Generator/index.html

Generating a Script

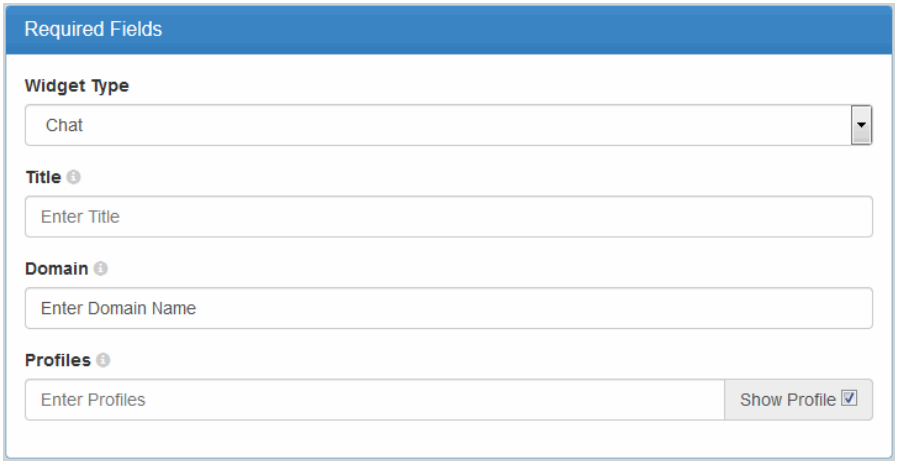
You can generate a script for the chat or proactive chat console. The web forms are similar. The sections below describe the main steps.

When done configuring the form, click **Generate Script**, and customize the results.

Required Fields

Each form contains an identical required fields section.

The bottom row enables you to enter the names of your profiles and to display the names of these profiles to your customers in a menu that may contain names such as Support or Sales. Customers can then select an item for their chat request. If you do not want your customers to see internal profile names, do not enable the option.

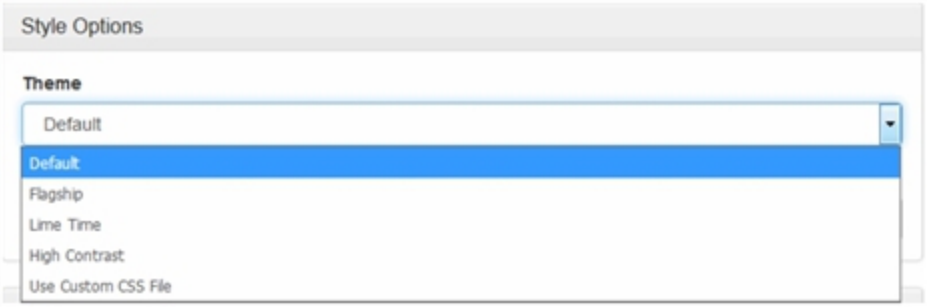


Options

Set or select the options that you want. The fields are different for each type of console.

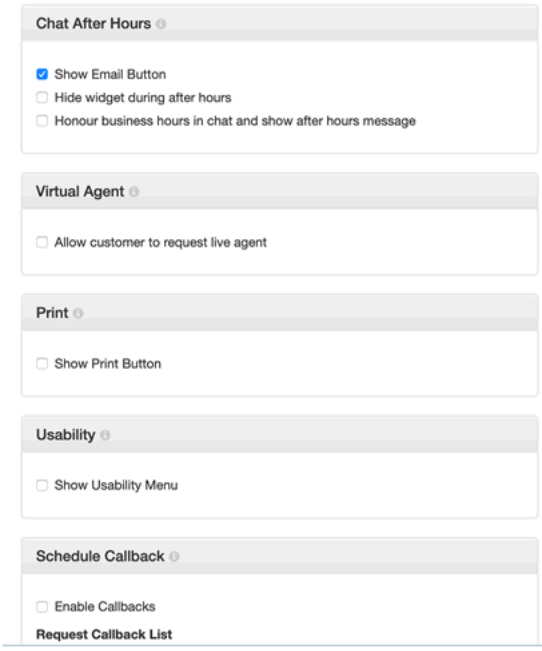
Chat Console

Select a default or custom style sheet and, optionally, add a custom logo.



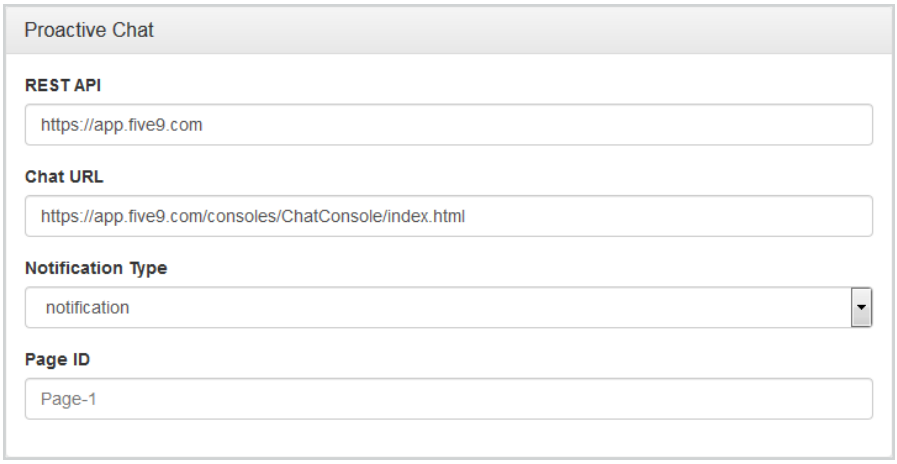


Enable the options that you want.



Proactive Chat

Complete the fields as needed.



Customizing the Results

Your script is displayed as a browser string at the top.

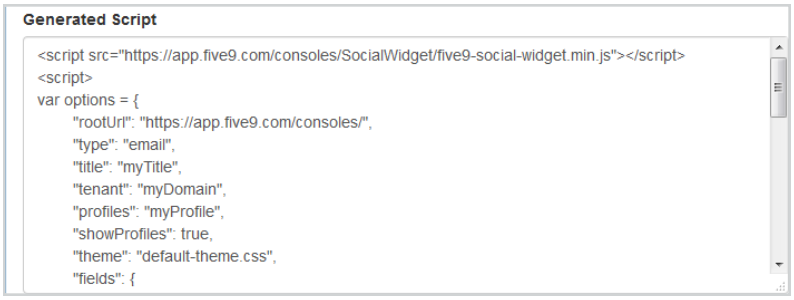


You can copy the string, which contains all the parameters and fields that you have configured to a text editor, for example:

```
https://app.five9.com/consoles/EmailConsole/index.html?title=myTitle&
tenant=myDomain&profiles=myProfile&showProfiles=true&theme=default-
theme.css&fields%5Bname%5D%5Bvalue%5D=&fields%5Bname%5D%5Bshow%5D=tru
e&fields%5Bname%5D%5Blabel%5D=whoAmI&fields%5Bemail%5D%5Bvalue%5D=&fi
elds%5Bemail%5D%5Bshow%5D=true&fields%5Bemail%5D%5Blabel%5D=Email&fie
lds%5Bsubject%5D%5Bvalue%5D=&fields%5Bsubject%5D%5Bshow%5D=true&field
s%5Bsubject%5D%5Blabel%5D=
```

Customizing the Script

If you want to customize your script manually, paste it in a text editor.



Previewing the Console

As you work, you can test your changes with the preview buttons.

Customizing the Results

Your script is displayed as a browser string at the top.

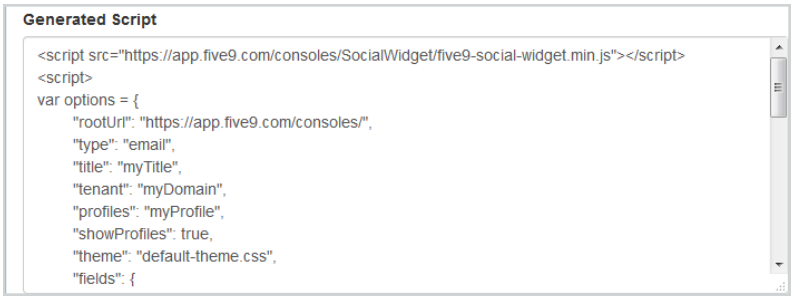


You can copy the string, which contains all the parameters and fields that you have configured to a text editor, for example:

```
https://app.five9.com/consoles/EmailConsole/index.html?title=myTitle&
tenant=myDomain&profiles=myProfile&showProfiles=true&theme=default-
theme.css&fields%5Bname%5D%5Bvalue%5D=&fields%5Bname%5D%5Bshow%5D=tru
e&fields%5Bname%5D%5Blabel%5D=whoAmI&fields%5Bemail%5D%5Bvalue%5D=&fi
elds%5Bemail%5D%5Bshow%5D=true&fields%5Bemail%5D%5Blabel%5D=Email&fie
lds%5Bsubject%5D%5Bvalue%5D=&fields%5Bsubject%5D%5Bshow%5D=true&field
s%5Bsubject%5D%5Blabel%5D=
```

Customizing the Script

If you want to customize your script manually, paste it in a text editor.


Generated Script
<script src="https://app.five9.com/consoles/SocialWidget/five9-social-widget.min.js"></script>
<script>
var options = {
"rootUrl": "https://app.five9.com/consoles/",
"type": "email",
"title": "myTitle",
"tenant": "myDomain",
"profiles": "myProfile",
"showProfiles": true,
"theme": "default-theme.css",
"fields": {

Email Interactions in SCC

Important

Five9 does not recommend sending shared attachments with personally identifiable information (PII) data. Any attachment with PII should be attached directly to only one contact. If you choose to send an attachment with PII data to multiple users, the compliance responsibility for the California Consumer Privacy Act (CaCPA) and the General Data Protection Regulation (GDPR) is your responsibility to address. Five9 will only purge attachments that are related to a single user. If you use an attachment to send to multiple users when we purge for one of the users then that shared attachment will also be purged.

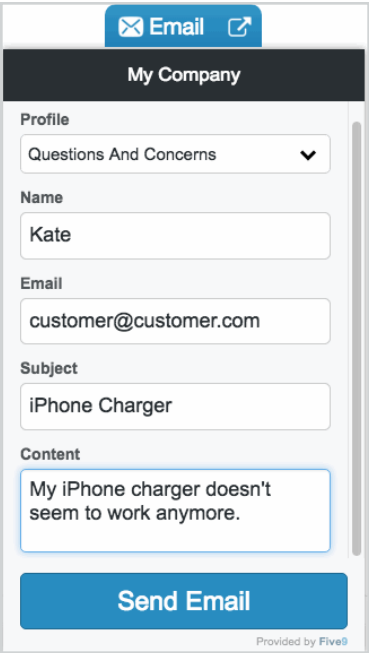
Email Console
Creating Email Accounts in SCC Admin

For information about customizing the email console, see .

Email Console

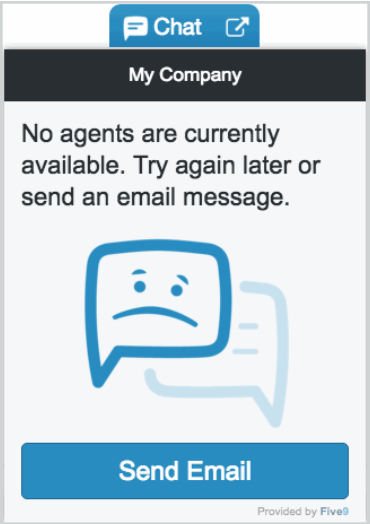
The **Email Console** in Five9 Digital Engagement allows customers to send an email using a simple form when no live agents are available. This ensures customers can still reach out for assistance even outside of active chat sessions.

Example: A customer selects an issue type, fills out the form, and submits it so an agent can respond later.



To allow customers to send an email when no chat agents are available:

1. Add a **Send Email** button to your chat interface.
2. Configure the form fields (e.g., Name, Email, Subject, Message).
3. Test the workflow to ensure emails route correctly to your support team.



Technical Requirements

This feature is intended for web developers familiar with:

- REST API architecture
- HTTP, HTTPS, and WebSocket protocols
- JavaScript, JSON, and jQuery
- HTML5 and CSS

Survey Console Integration

Five9 also provides a Survey Console to collect customer feedback before they leave your website. This helps measure satisfaction and identify areas for improvement.

Creating Email Accounts in SCC Admin

You can create accounts for Microsoft and other exchanges in the Email option of your profile.

Gmail Account
All Email Accounts
Microsoft Exchange
Configuring OAuth2 for Office 365 Exchange Server
Other Email Account Types
Troubleshooting Email Activity

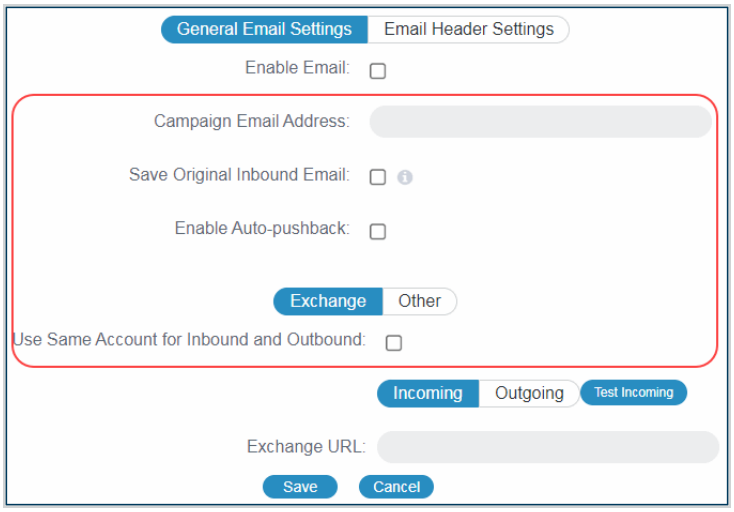
Gmail Account

New Gmail accounts use basic authentication and require additional configuration for Five9 to pull email interactions from your Gmail account. To complete your Gmail configuration, see sign in with app passwords.

Google may require an additional step when signing into a new application. If you receive an email from Google about a critical security alert, see unblock Five9 from consuming email from your Gmail account.

All Email Accounts

1 For all types of accounts, complete these fields as needed:



- **Enable Email**: Enables the email account.
- **Campaign Email Address**: The address used for agent email replies in this format: *email-account-name@domain.type*

  > **Example:** support@five9.com

  The account email address used to authenticate the email proxy is used when this field is not specified.

  > **Important:** This email address is used to synchronize contact information. This field must match a custom contact field in the VCC administrator application and should not be reassigned or re-created once in place.

- **Save Original Inbound Email**: Creates a new folder to store a copy of processed emails.

  - Disabled (default): No additional folders are created and emails are deleted after processing.
  - Enabled: Five9 creates a folder, Five9Processed_<ProfileName>, to store a copy of processed email interactions.

Important

If Five9 cannot process an email, it will either keep the email in the inbox for a later retry or move it to the `Five9Unprocessed_<CampaignName>` folder.

- **Enable Auto-pushback**: Returns email interactions to the queue so that the interactions are reassigned if the agent who owns the interaction has not responded after the time specified in the **Auto-pushback Interval** field below.
- **Auto-pushback for Logged-In Users**: Controls whether email interactions are returned to the queue for reassignment to other agents:
  - Disabled: Interactions are returned to the queue only if the agent is logged out. In this case, the timer starts when the agent who owns the interaction logs out. If the agent logs back in before the allowed time expires, interactions are not returned to the queue.
  - Enabled: Interactions are returned to the queue whether or not the agent is logged in. In this case, the timer starts when the agent locks the interaction.
- **Auto-pushback Interval**:

  Displayed when **Enable Auto-pushback** or **Auto-pushback for Logged-In Users** is enabled. Time when email interactions are returned to the queue if the agent who owns the interaction has not responded. Applies only the first time after the interaction is locked.

1. Select your exchange option.
   - **Exchange or Other**: Whether to connect directly to the Microsoft Exchange or other type of server. When you select **Other**, two options I**ncoming** and **Outgoing,** are displayed.
2. Select your Incoming and Outgoing email servers.

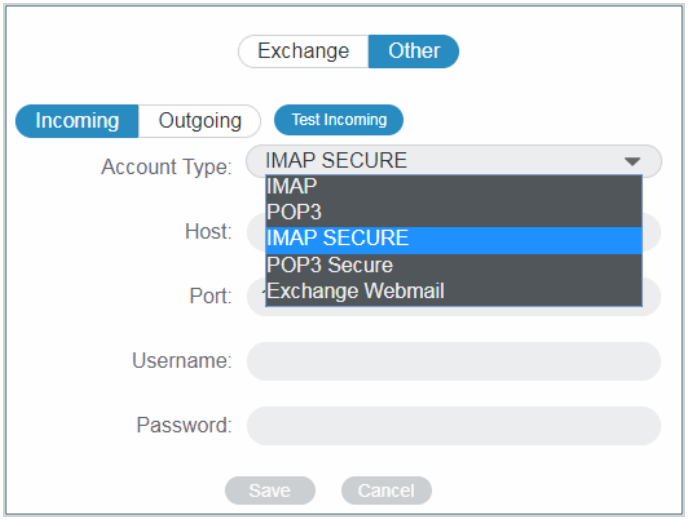
- **Use Same Account for Inbound and Outbound**:
  - Selected: The same email account will be used for both inbound and outbound email interactions.
  - Deselected: Enables you to specify distinct account for incoming and outgoing email interactions.

3 Complete the appropriate section:

- Microsoft Exchange (see **Microsoft Exchange** in Creating Email Accounts)
- Other Email Account Types (see **Other Email Account Types** in Creating Email Accounts)

Microsoft Exchange

Complete the fields as needed.



Field	Description
Use Same Account for Inbound and Outbound	Enabled by default. If you disable this option, as shown above, you may send email from an account other than your inbound account. In this case, email is created and stored in an outbound email account.

Field	Description
	Example: Your customer receives email from `customer_support@<company>.com`. However, when you create an outbound account, the customer receives email from `test.five9@<company>.com`.
Test Exchange Test Incoming Test Outgoing	Tests the connection, username, and password. The button that is displayed depends on the type of account that you are creating.

Exchange URL
Incoming Exchange URL
Outgoing Exchange URL
	URL of your exchange server in the appropriate format. Automatic URL discovery is not supported.
	Exchange URL:
	• Web Outlook: `https://mail.`***`<yourDomain>`***`.com/owa`
	• Exchange Web Services: `https://mail.`***`<yourDomain>`***`/EWS/Exchange.asmx`
	Incoming Exchange URL: Same as Exchange URL above.
	Outgoing Exchange URL: `https://`***`my.exchange.server`***`/EWS/Exchange.asmx`
	Example:
	`https://outlook.office365.com/EWS/Exchange.asmx`
	`https://mail.infodev.net/EWS/Exchange.asmx`

Exchange Username Outgoing Exchange Username	User name for the Microsoft Exchange email account in this format: `emailAccountName@enterprise.type` **Example:** `support@`***`<yourDomain>`***`.com`
Exchange Password Outgoing Exchange Password	Password for the Microsoft Exchange email account receiving the email.

If you use Outlook Exchange, a **Five9 Manual** folder is automatically created to store messages that are malformed or contain bad header information, which the Five9 email proxy is unable to process. The URL for this folder contains the server address followed by `/EWS/Exchange.asmx`.

Example

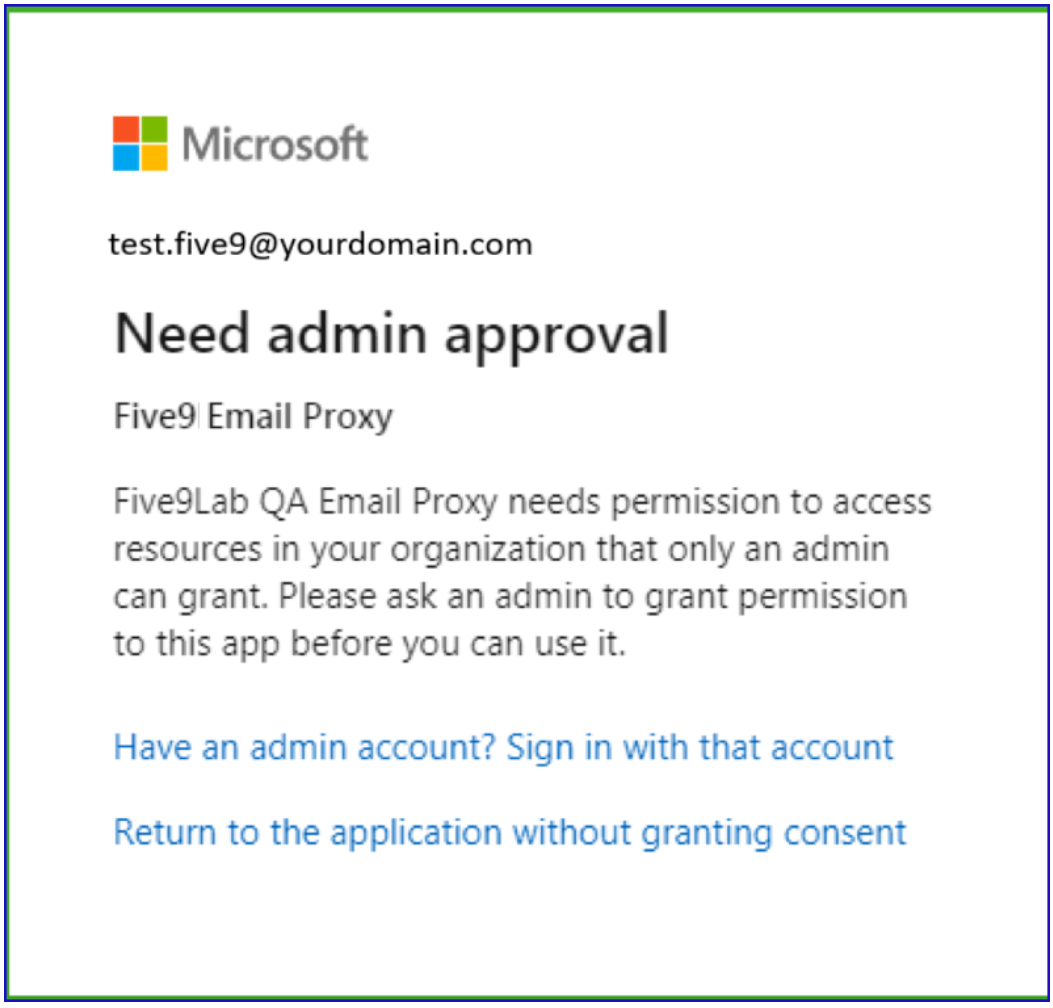
`https://mail.<yourDomain>.com/EWS/Exchange.asmx`

To ensure that the mail administrator can monitor this folder when items are delivered, Five9 recommends that you create an alert in your mail server. These malformed messages must be processed manually.

Configuring OAuth2 for Office 365 Exchange Server

Microsoft is ending support for Basic authorization for Office 365 Exchange Server. Therefore, if you have accounts that use basic authorization, you are required to upgrade to OAuth2. If you select the POPS, IMAPS, or Exchange protocol and Office 365 Exchange Server, you can assign OAuth2 authentication for email interactions.

If Azure AD tenant administrator has disabled ability to consent to applications accessing company data for the organization users, user will see the following screen after authentication when trying to add token:



In this instance, your domain administrator must provide admin consent for Five9 application before you will be able to configure OAuth2. To grant corporate consent for OAuth2 configuration, you must have administrative consent from a global administrator, application administrator, or cloud application administrator.

Granting Administrator Consent

You have two options for consent.

Option 1: Authenticate Using Administrator Consent

To authenticate using administrator consent, follow these steps.

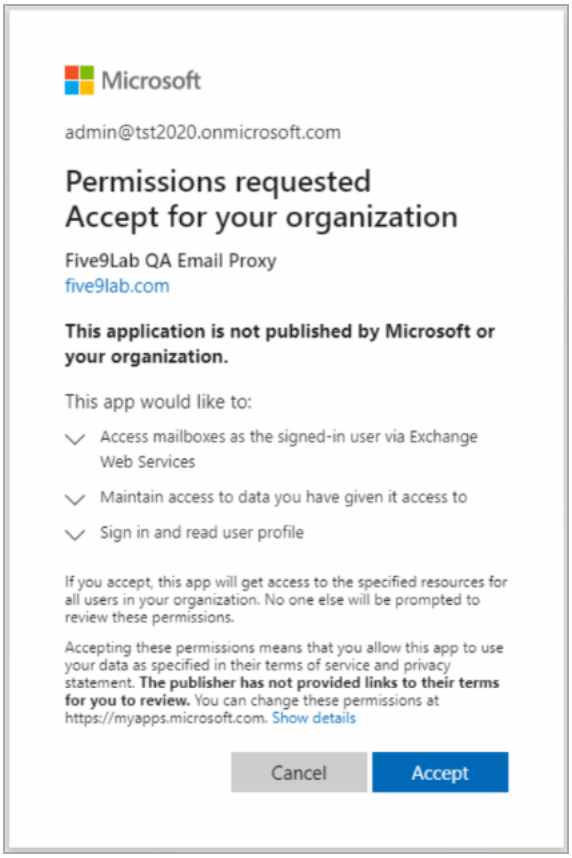
1 Share the appropriate admin consent screen link with tenant administrator, based on your location:

location	URL
US	https://login.microsoftonline.com/common/adminconsent?client_id=628fc081-b066-4302-9878-69974e6bb61e
CA	https://login.microsoftonline.com/common/adminconsent?client_id=628fc081-b066-4302-9878-69974e6bb61e
IN	https://login.microsoftonline.com/common/adminconsent?client_id=628fc081-b066-4302-9878-69974e6bb61e
EU	https://login.microsoftonline.com/common/adminconsent?client_id=f24962af-4f46-494f-a64d-344361177216
UK	https://login.microsoftonline.com/common/adminconsent?client_id=f24962af-4f46-494f-a64d-344361177216

Note

You must replace <**us_client_id**> and <**eu_client_id**> with the actual Five9 application IDs.

2 When opened, you will be prompted for authentication and consent. Click **Accept**.



3 Once consent has been granted, you may start adding tokens.

Option 2: Authenticate Using Powershell and Azure AD

To obtain administrator consent using PowerShell and Azure AD, connect to Azure AD in PowerShell and then create new service principal by issuing one of the following commands, based on your location:

Five9.com:

```
New-AzureADServicePrincipal -AppId <us_client_id>
```

or

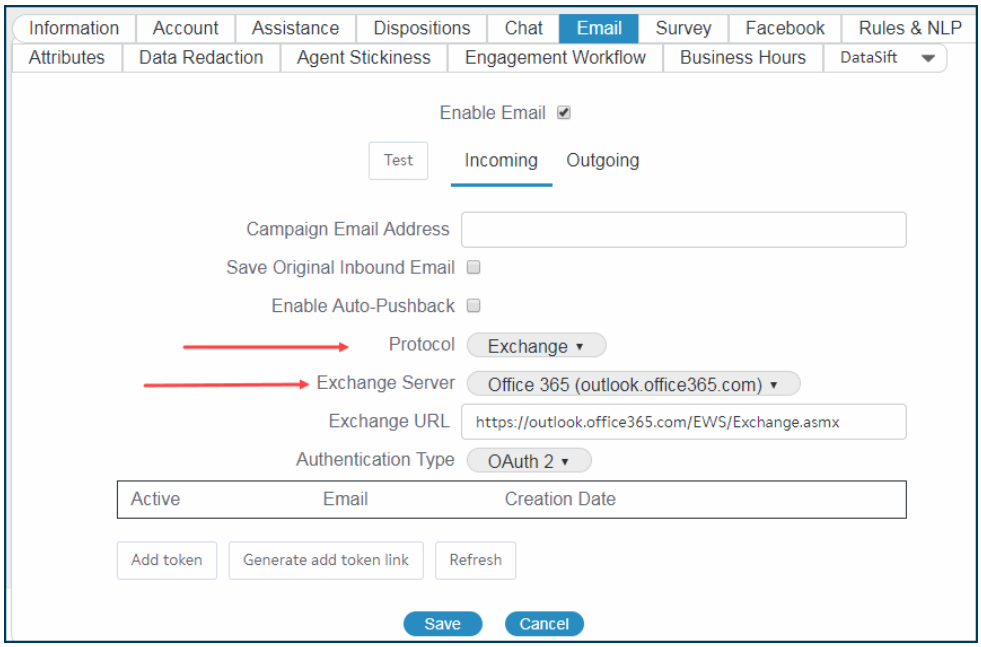
Five9.eu:

```
New-AzureADServicePrincipal -AppId <eu_client_id>
```

> **Note**
>
> You must replace <**us_client_id**> and <**eu_client_id**> with the actual Five9 application IDs.

After service principal has been created, open Azure AD administration screen, go to enterprise applications and search for Five9 applications. Click the application name, then **Permissions**. Once selected, click **Grant consent for** <application>, then click **Accept**. Refresh the permissions screen to verify that permissions have been granted. You may start adding tokens.

Enabling Authentication in SCC Admin



To enable OAuth2 authentication, follow these steps.

1. Select your email profile in the SCC administrator console.
2. Select a protocol. OAuth2 is supported in POPS, IMAPS, and Exchange.
3. Confirm that **OAuth2** is selected as your Authorization type.
4. If you are not the account owner, proceed to step 9.
5. To add a token, click **Add token**.

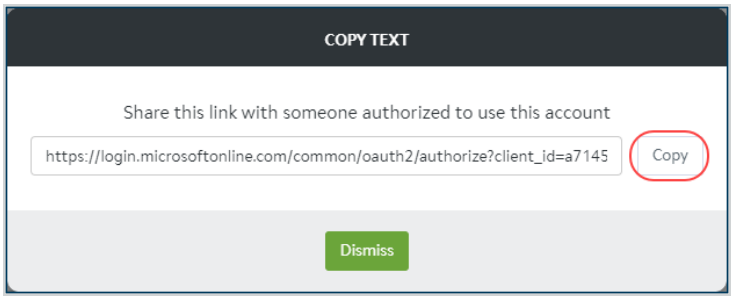
6 Follow the instructions to log into your Microsoft Exchange account.

This window closes once authentication is verified.

7 Proceed to step 11.

8 If you are not the account owner, click **Generate add token link**.

This button generates a link that you can send to the account owner to grant OAuth2 access to your Office 365 Exchange instance.



9 Send the generated link to the Office365 Exchange account owner to grant aOAuth2 access to your Office 365 Exchange instance.

Once accepted, the OAuth2 token appears in your token list. You can refresh the list to see any updates.

10 Select the authenticated token from your token list.

If this is your first authorization token, it is selected automatically.

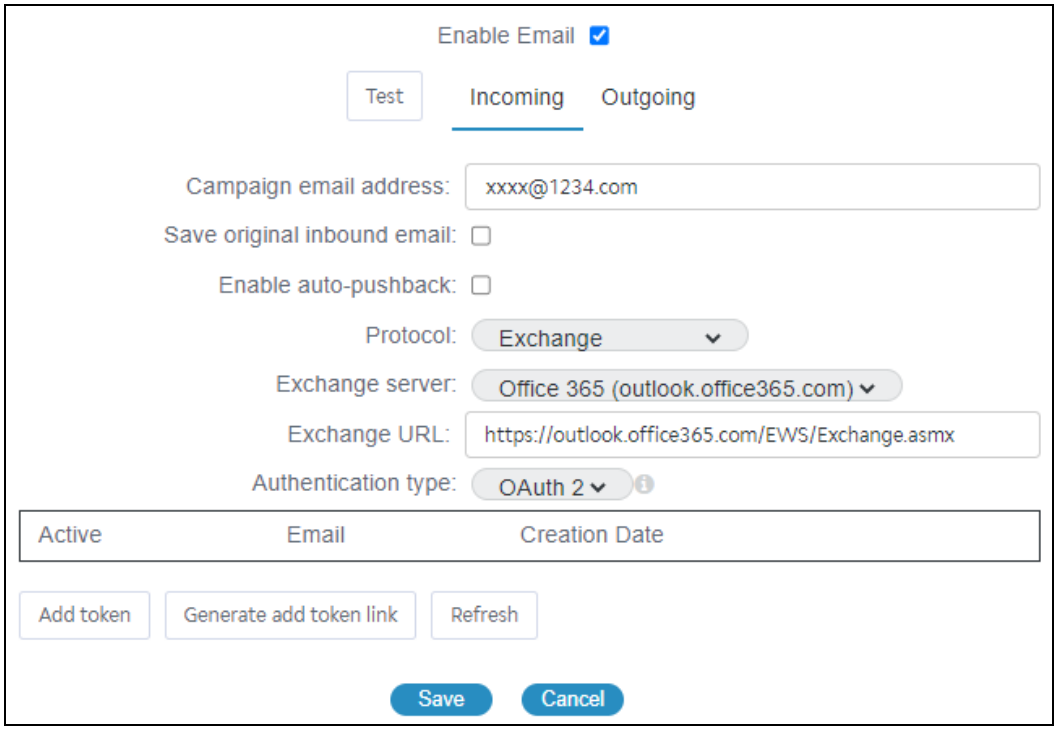
11 To verify that your OAuth2 setup is complete, click **Test**.

Note

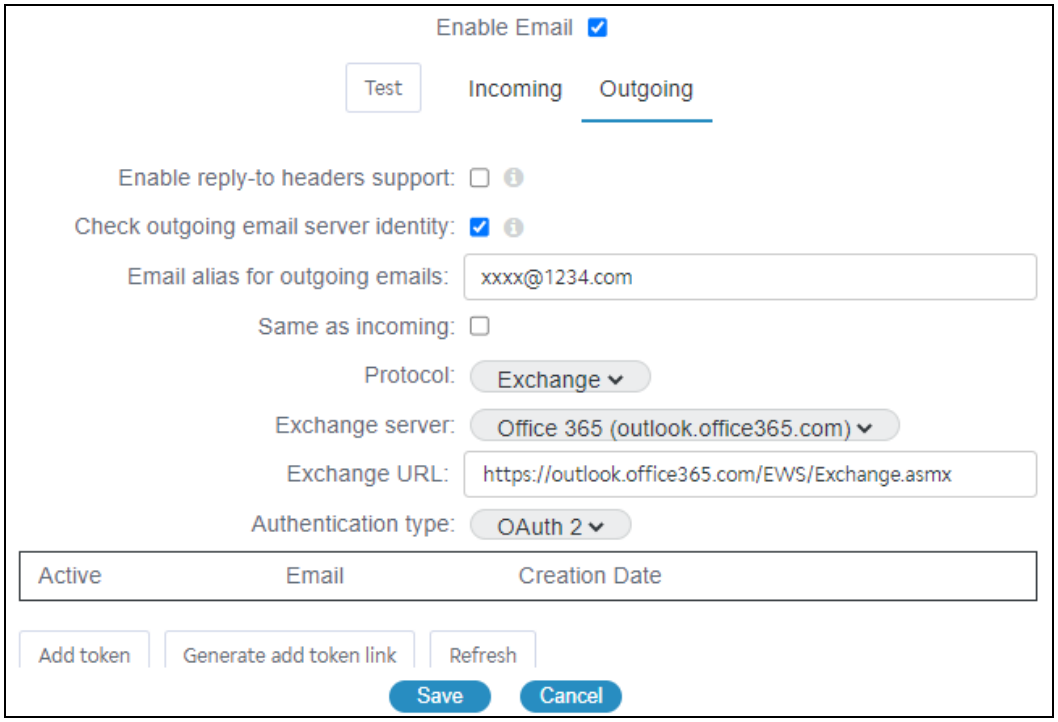
Five9 recommends to connect Exchange Online with Exchange protocol, although it is possible to connect with IMAPS or POP3S protocols and Oauth2 authentication type.

Other Email Account Types

Select **Incoming** and complete the fields as needed. The image shows Exchange selected as Protocol:



Select **Outgoing** and complete the fields as needed. The image shows Exchange selected as Protocol:



This table describes the possible options:

Field	Description
Test Incoming Test Outgoing	Tests the proxy connection that validates the user name, password, connection, and host settings.
Account Type	Possible types of incoming account: IMAP, POP3, IMAP secure, POP3 secure, Exchange, and Exchange Webmail.
Host Outgoing Host	Host name of the incoming or outgoing mail server. Format: *mail.enterprise.type* Example: mail.company.com
Port Outgoing Port	Default port: • Incoming mail: 110 • Outgoing email: 25
Username Outgoing Username	User name for the incoming or outgoing email account in this format: `emailAccountName@enterprise.type` **Example:** five9.support@five9.com

Field	Description
Password Outgoing Password	Password for the incoming or outgoing email account.

Troubleshooting Email Activity

If email interactions are not pulled from your mailbox by Five9, test the connection.

1. Log in to the SCC Administrator, and navigate to **Profiles > Email**.
2. Click **Test.**

   This test validates that Five9 can connect to your email account.

> **Important**
>
> If the password in your email account changes in the future, you must also update your password in this console.

Configuring Email Interactions

When customers send email messages, they click a link in your corporate Web site. You define the email account to direct incoming email messages for the profile. The fields for incoming and outgoing email accounts may differ.

For information about customizing the email console, see .

> **Important**
>
> Agent Desktop Plus and the Five9 CRM adapters support inbound email attachments of up to 25 MB. However, in Microsoft Outlook the email message itself is about 2.5 MB, so with Microsoft Outlook the effective maximum attachment size is 22.5 MB. Outbound email interaction attachments are limited to 10MB in size and have no file type constraints.

Preparing Your Environment

Five9 supports POP3, IMAP, EWS, and Microsoft Graph connectivity protocols for inbound/outbound email processing for your mailboxes.

Recommendations

- If your mail server is behind a firewall, obtain OWA or other access to test mail client connectivity to target accounts.
- If you use a cloud-based mail provider to forward or redirect email to your on-premise mail server, ensure that the original email address remains intact when an external recipient replies to an agent's email.
- All inbound email is deleted from your email server's inbox once email is enabled for Five9. To retain a copy of these interactions, enable **Save Original Inbound Email: Creates a new folder to store a copy of processed emails.** which creates a folder to store processed messages.

For additional firewall whitelisting requirements, see the Technical Requirements Guide.

Email Signature

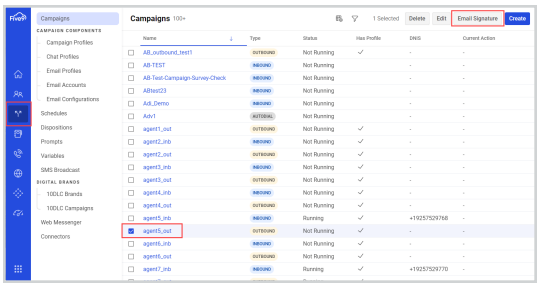
Email Signature by Campaign allows customers to maintain brand alignment and consistency across all outbound email communication. Administrators can define signatures at the campaign level, ensuring:

- Brand alignment and consistency are maintained.
- Promotions can be easily added to campaigns, facilitating connections for sales, customer service, and more.

The signature specified for a campaign will be automatically included in every new and outbound email. Agents can view the campaign signature, but they cannot edit or remove it.

Updating the Email Signature

1. Select **Manage Campaigns** and then the campaign.
2. Select **Email Signature**.



3. Upload your email signature and select **Save**.

> **Note**
>
> The system scans inline campaign signature content for unsafe HTML and malware



Note: The signature can include branding, promotions, contact information, links, images, and text. A campaign signature may contain up to 5300 characters, plus up to 16 attachments.

To remove the email signature, select the **Remove Signature** button at the bottom of the window.

Previewing Email Signatures

Your administrator can configure an email signature for each campaign. If a signature is defined at the campaign level, it appears below the personal signature when a new outbound email or reply is delivered to the recipient. It doesn't appear in the email editor. The signature can include, for example, branding, promotions, contact information, links, images, and text.

If a signature is defined for a campaign, you can preview it when composing an outbound email. To preview the signature, click **Campaign Signature** at the bottom of the email page.

Park Email

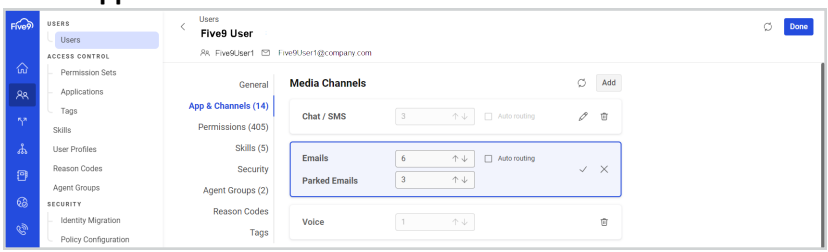
This feature allows agents to park email interactions while they are waiting for additional information, or are otherwise unable to respond to the email interactions immediately. Parked email interactions do not count toward an agent's email capacity. Being able to park emails, allows agents to work full capacity on other email interactions.

You can allow agents to park email interactions for a specific or unlimited duration. If the park duration expires, the agent receives a notification within the agent application. This notification allows them to unpark the email interaction or take other actions as needed. It is essential for the agent to manage their capacity before they can proceed with unparking or any related tasks.

Configuring Parked Email Interaction Limits

1 Select **Users** and then select the user's name.

2 Select **App & Channels** and then **Edit**.



If you do not see **Emails** and **Parked Emails** listed under **Media Channels**, select **Add** and then select **Emails**.

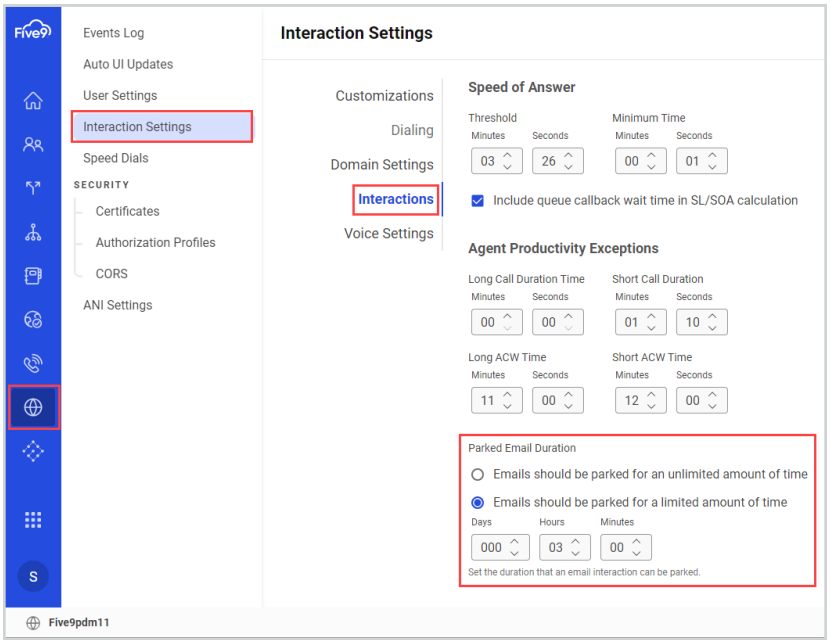


3 Use the up and down arrows in Parked Emails to specify the number of email interactions you want the user to be able to park. The capacity of Parked Emails cannot exceed the number of Emails.

> **Important**
>
> For email parking to function properly, it's essential to define open dispositions for the campaign in the Admin Console.

Configuring the Parked Email Interaction Duration Per Domain

1 Parked email duration can be configured for all campaigns in the domain under **Manage Environment** > **Interaction Settings** > **Interactions**.



2 To allow users to park email interactions with no limit on duration, select **Emails should be parked for an unlimited amount of time**. If you want to set a limit on the duration, select **Emails should be parked for a limited amount of time**, then specify the desired duration in days, hours, and minutes using the up and down arrows. By default, the timer for email parking is set not to expire. Administrators must actively set a duration if they wish for email parking to have an expiration.

> **Note**
> Park duration settings apply to all campaigns for the domain.

3 Select **Save**.

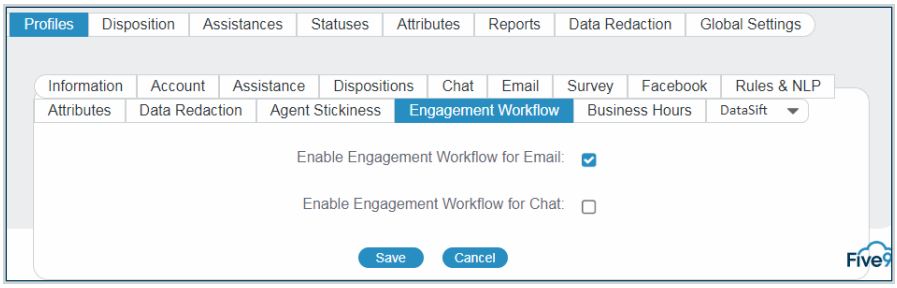
Inbound Email Requirements

This section describes the Five9 inbound email requirements.

Email Proxy

Five9 receives inbound email interactions from external email servers and subsequently routes these interactions through the agent console or through Five9 Engagement Workflow.

> **Note**
> Five9 software does not support TLS1.1 for customer chat and email services. If the customer server supports both TLS 1.1 and TLS 1.2, TLS 1.2 will be used.



Email Console

The Five9 email console is a web UI that can be used after business hours when chat is deactivated and generates an inbound email for a specified profile.

Email Console Enablement

The Five9 email console is disabled for a profile under these conditions:

- The account is disabled.
- The email account is deleted.

Email Proxy Enablement

The email proxy is disabled for a profile for these conditions:

- The profile is deleted.
- Enable Email is disabled.
- The profile's email tab connection is not fully configured.

Receiving Inbound Email Interactions

The following rules apply to inbound email interactions received by Five9.

Redaction

See **Configuring Data Redaction Rules** for more information. These regular expressions are used to mask characters in the subject and body of the email that match these regular expressions. Changes in your redaction rules are queried every 30 seconds.

Supported Email Attachment Types

Five9 supports the following attachment types for inbound email interactions to Agent Desktop Plus and CRM agents:

3GA, 3GP, AI, AMR, AVI, BMP, BZ2, CAD, CSS, CSV, DIB, DG, DOC, DOCX, DST, DT, DWG, EMB, EML, EMZ, EPS, FLAC, FLV, GIF, GZ, HEIC, HEIF, HTM, HTML, ICO, JFIF, JPE, JPG, JPEG, JS, JSON, M1A, M1V, M2A, M4A, M4B, M4P, M4R, M4V, MOV, MP1, MP2, MP3, MP4, MPA, MPEG, MPG, MPV, MSG, ODT, OGA, OGG, OGM, OGV, OGX, PDF, PJPEG, PNG, PPT, PPTX, PRC, QT, RTF, SMIL, SPX, SVG, TAR, TIF, TIFF, TXT, VCARD, VCF, WAP, WAV, WEBM, WEBP, WMV, XLS, XLSB, XLSM, XLSX, XML and ZIP.

No restrictions exist for outbound email attachment types.

Email Proxy From External Email Servers

Messages are received in batches up to 100 and are repeated until all emails are consumed, this does not wait for 30-second intervals.

Routing Email Interactions Using Engagement Workflow

Five9 Engagement Workflow can help to determine if an email is spam and automatically set a disposition the interaction without routing to an agent. You can use attributes or custom call variables to store email interaction header information and use Five9 Engagement Workflow to parse the headers and determine actions and routing for the email.

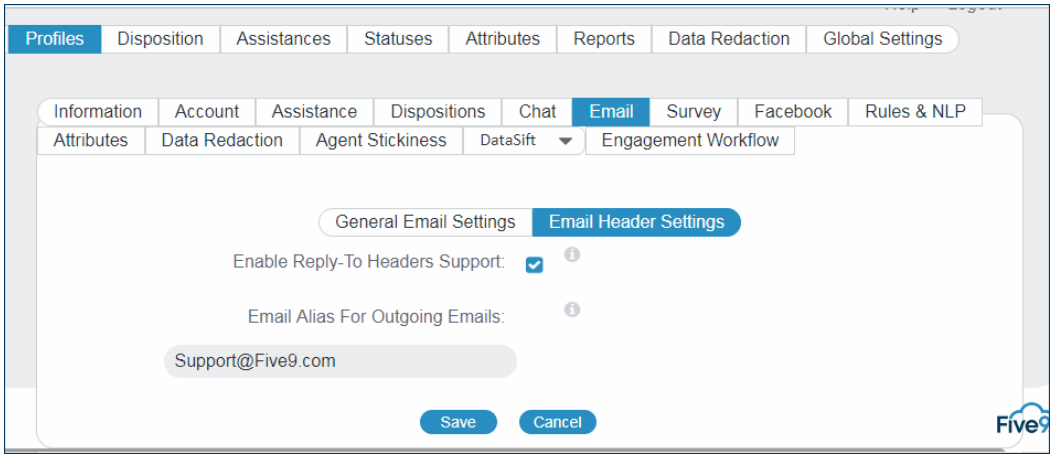
Routing or Segmentation Use Cases. Determine if the incoming email is a new interaction or a reply to an existing email thread. Within the email replies, determine which email thread this response references and route the email or apply actions using the Five9 Rules Engine.

Routing Replies to Marketing Campaigns. You can route email replies to support cases separately from email interactions that are replies to marketing campaigns. Use the reply-to field to identify the previous reply by an agent in the Five9 Rules Engine and expose this new rule to route the email to a skill or agent.

For more information about using the Five9 Rules Engine, see **Configuring Your Five9 Rules**.

Configuring Email Header

To configure your email header, click **Email Header Settings** in the Email tab.



Option	Description
Enable Reply-To Headers Support	Enabled: Uses the reply-to email address defined in the email header as the contact record for the interaction and for agent email replies. Disabled: Uses the Inbound email address as the contact record for the interaction and for agent email replies.
Email Alias for Outgoing Email	Address to be used when the customer replies to email messages. **Example:** Customer receives an email from Support@gmail.com, the email reply from the customer sent to Support@Five9.com.

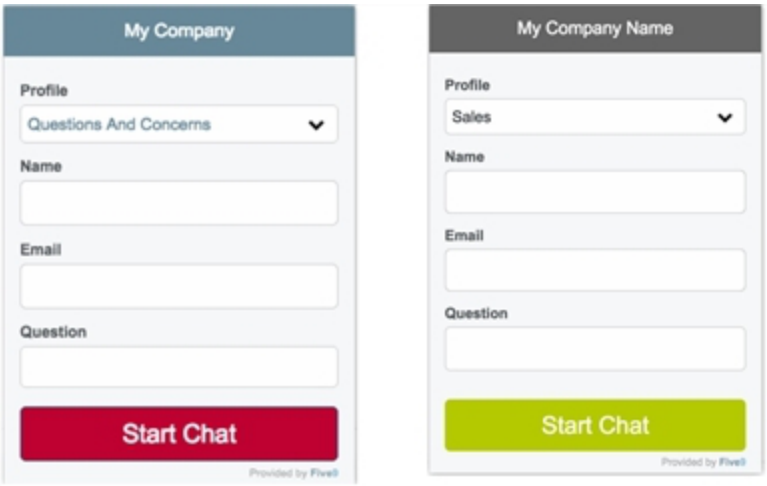
Choosing Your Email Console Theme

You may define your either a default or a custom theme with a CSS. The Five9 default CSS is located at `https://app.five9.com/consoles/Common/css/themes/default-theme.css`.

- Predefined Themes: The themes are located in the console application: `default`, `flagship` (left), and `lime-time` (right). The themes use neutral colors that are suitable for many web sites. The main differences are in the colors of the header and the button. Enter the name of the theme in the `theme` property when creating the social widget, for example:

  ```
  Five9 SocialWidget.addWidget({
  ```

```
theme: 'lime-time.css',
...
```



- Custom Theme

  You can customize every aspect of the console by using a custom style sheet. To do so, enter the URL of your file.

```
Five9 SocialWidget.addWidget({
    theme: 'https://<my-web-site>/css/<my-custom-theme.css>',
     ...
```

Hiding System Fields

The system fields for the email console is as follows:

Email Console
email
name
profiles
subject

System fields are required. Only `profile` and `chat` can be hidden. If `profile` is hidden, the first profile in the list is used. To hide a custom field, use the `show` property with

the value `true` or `false`. If the `chat` field is hidden, a generic chat value is generated and is sent to the system. This example shows the `chat` field hidden:

```
var fields = {
    chat: {
        // Hide the chat field.
        show:false
    }
};
Five9SocialWidget.addWidget({
    type: 'email',
    fields: fields,
    ...
};
```

Using Variables in the Chat and Email Consoles

You can use variables to enhance the interaction or capture additional information.

Example

When a customer submits a chat request with an account number, you can pass the account number in a connector to a third-party system to present the customer's account information to the agent.

1. Create a custom chat console field named **contact_id** as described in the previous section.
2. To store the new custom field, use the call variable named **Omni.contact_id**.

   For digital engagement interactions, you must use the call variable group named **Omni**.
3. Configure a connector to pass the value.

For more information about variables, see the Basic Configuration Administrator's Guide.

Managing Browser Notifications for Agents

This chapter applies to users of Five9 Chat, Email, and Social in Agent Desktop Plus. If you manually choose your interactions (*cherry pick*), by default you see and hear notifications in your browser when new interactions are routed to your station if your application is not in focus.

If you prefer to block Five9 notifications, follow these steps for your browser.

> **Important**
> If you do so, all browser notifications, including those for new calls, are disabled when your application is not in focus.

Firefox
Chrome
Internet Explorer

Firefox

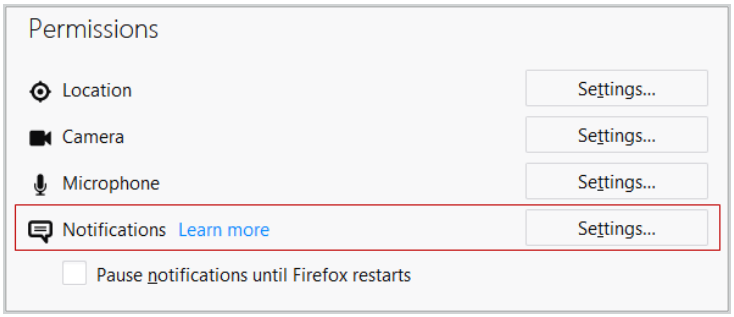
This section applies to users of Five9 Chat, Email, and Social in Agent Desktop Plus. If you manually choose your interactions, by default you see and hear notifications in your browser when new interactions are routed to your station if Agent Desktop Plus is not in focus.

To block Five9 notifications, follow these steps.

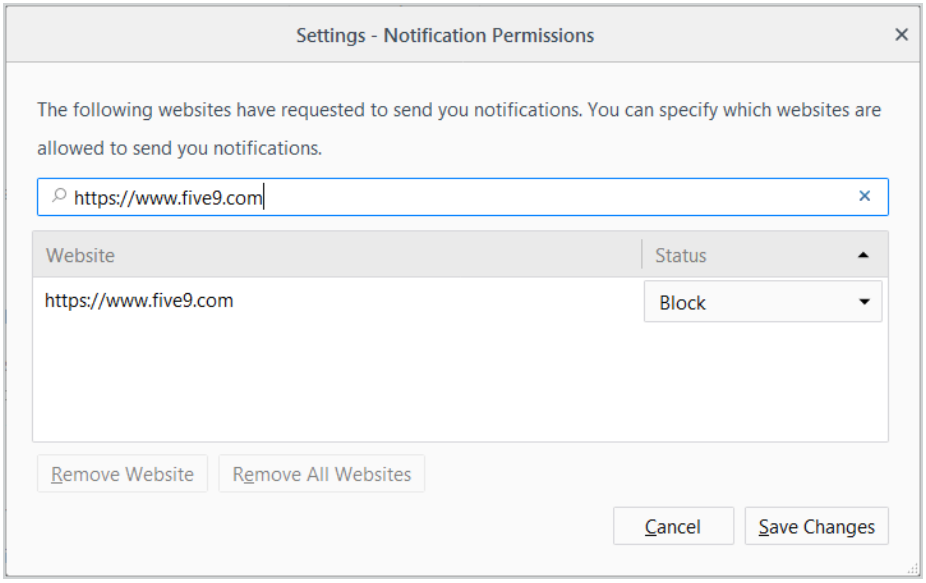
> **Important**
> If you do so, all browser notifications, including those for new calls, are disabled when your application is not in focus.

1 In the address bar, enter `about:preferences#privacy`.

2 Scroll down to **Permissions**, and click **Settings**.

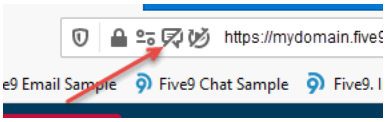


3 In the search field, enter **https://www.five9.com** and select **Block**.



4 Click **Save Changes**.

When notifications are blocked in Firefox in Windows, a speech bubble icon appears in the address bar. You can click this icon to change the settings.



Chrome

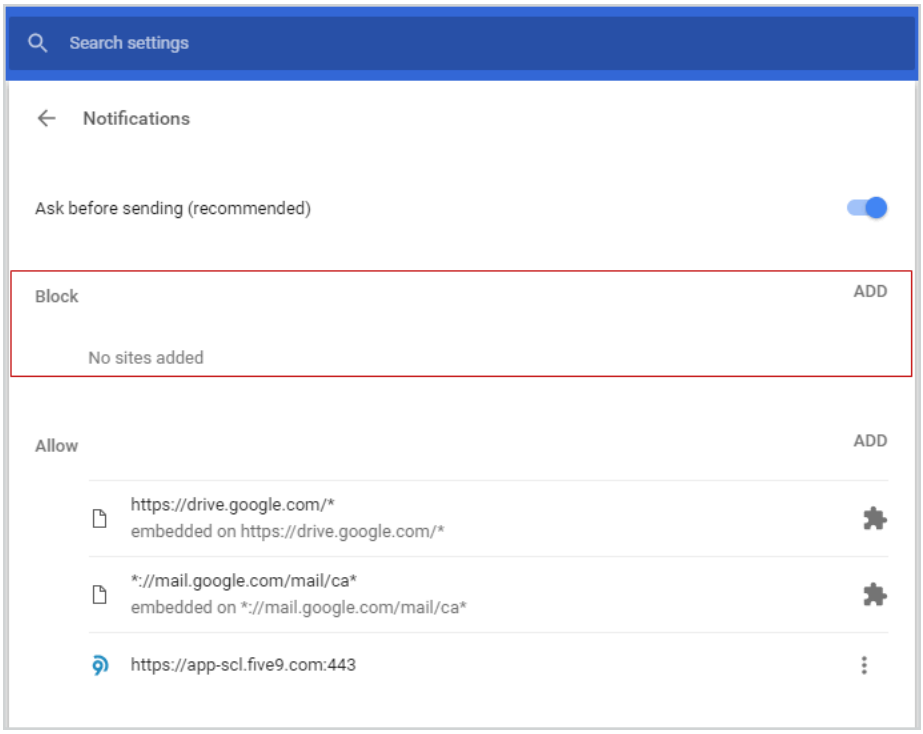
This section applies to users of Five9 Chat, Email, and Social in Agent Desktop Plus. If you manually choose your interactions, by default you see and hear notifications in your browser when new interactions are routed to your station if Agent Desktop Plus is not in focus.

To block Five9 notifications, follow these steps.

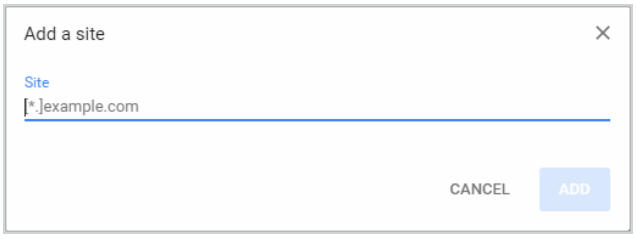
Important

If you do so, all browser notifications, including those for new calls, are disabled when your application is not in focus.

1 In your browser, paste **chrome://settings/content/notifications**.



2 Click **Add**.



3 Enter `[*.]five9.com`, and click **Add**.



Internet Explorer

This section applies to users of Five9 Chat, Email, and Social. If you manually choose your interactions, by default you see and hear notifications in your browser when new interactions are routed to your station if Agent Desktop Plus is not in focus. You cannot block Five9 notifications.

Single Sign-On

Administrator's Guide

December 2025

Learn how to synchronize authentication and authorization data between your application and Five9.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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What's New

Release	Change	Topic
Dec 2025	Added a note about configuring an identity provider for multiple domains.	Microsoft Azure Active Directory Troubleshooting Tips
Jul 2024	Refreshed content for Okta.	Configuring the VCC Administrator's Application
	Added a section for Salesforce-specific configuration in Azure.	Performing Application-Specific Configuration Steps
	Added a link to the Salesforce topic for modifying the call center definition for SSO.	Salesforce
Jun 2024	Removed references to service provider-initiated login.	Various
Sep 2023	Added Salesforce application short name.	Configuration Overview
Jun 2023	Updated Five9 domains.	Configuration Overview
Apr 2023	Added reference to CRM adapter admin guides for populating login URLs.	Configuring Identity Providers
Nov 2022	Moved Five9 domain and application short name information to overview.	Configuration Overview
May 2022	Updated procedures and screen captures.	Microsoft Azure Active Directory
	Added important information for Valid Until field.	Configuring the VCC Administrator's Application
Apr 2020	Updated procedures and screen captures.	Microsoft Azure Active Directory
Oct 2020	Updated the VCC configuration image.	Microsoft Azure Active Directory
	Corrected the relying party trust identifier for Agent Desktop Plus.	Microsoft Active Directory Federation Services
	Corrected the login URL example.	Performing Application-Specific Configuration Steps
Aug 2020	Initial release.	

Release	Change	Topic
	Note: SSO-related information from all Five9 Plus Adapter administration guides was moved into this document.	

Using Single Sign-On with Five9 Applications

Single sign-on enables you to synchronize authentication and authorization data between your application and Five9 so that users can access both systems simultaneously:

- If you enable single sign-on, your agents use only one set of credentials to automatically log into the adapter when they log into your application.
- If you do not enable single sign-on, your agents must use two sets of credentials to log into your application and Five9 separately.

This guide describes how to configure single sign-on with commonly used identity providers. To determine if your current IT infrastructure can support single sign-on configuration, refer to the Technical Requirements Reference Guide.

Prerequisites
Configuration Overview

Prerequisites

Ensure that the following requirements are met before configuring single sign-on. Contact your Five9 support representative for more information.

Ensure that your domain is enabled for Five9 Plus applications.

Five9 supports identity providers that adhere to the SAML 2.0 (Security Assertion Markup Language) specification. For example, these identity and CRM providers function with Five9 applications: Okta, Microsoft Active Directory Federation Services, Microsoft Azure Active Directory, Salesforce, Oracle Service Cloud, Auth0, OneLogin, and Google Cloud Identity and Access Management (IAM).

You may configure and simultaneously use multiple identity providers in each domain. To enable identity providers to recognize users, you must assign a unique Federation ID to each user in the user's properties on the VCC Administrator application.

Configuration Overview

1. Install and configure the basic identity provider features, noting the server's domain name.
2. Configure single sign-on in the identity provider application.
3. Configure single sign-on in the VCC application.
4. Verify your single sign-on configuration.

Five9 Domains and Application Short Names

During the single sign-on configuration, you need to provide URLs that include your Five9 domain and the short name that Five9 uses for your CRM application.

Individual configuration tasks require specific URL formats, but generally use this format where you substitute *<five9_domain>* with your Five9 domain and *<application>* with the appropriate application short name.

`https://<five9_domain>/appsvcs/saml/SSO/alias/<application>`

For example, the following is the identifier URL format to use when you configure SSO for Azure. This URL example is for the Agent Desktop Plus application and the location is the US.

`https://app.five9.com/appsvcs/saml/SSO/alias/agent`

For SSO configuration tasks that require a similar URL, use the URL format specified in the configuration instructions.

Before you begin the configuration, become familiar with your domain and your application short name.

Five9 Domains

Use the domain that applies to your location:

Location	Five9 Domain
US	app.five9.com
Canada	app.ca.five9.com
Europe	app.eu.five9.com
UK	app.five9.eu

Application Short Names

Each CRM application has a short name to use in SSO configuration URLs.

CRM Application	Application Short Name
Agent Desktop Plus	agent
Agent Desktop Toolkit	adt
Microsoft Dynamics 365	msdc
NetSuite	ns
Oracle Service Cloud	ora
Salesforce Classic	sf
Salesforce Lightning	sfli
ServiceNow	servicenow
Supervisor Plus	supervisor
Zendesk	zd

Configuring an Identity Provider

Use these procedures to configure an identity provider in the VCC Administrator application.

Defining Single Sign-On Identity Providers
Configuring Identity Providers

Defining Single Sign-On Identity Providers

For single sign-on, you may configure and simultaneously use multiple identity providers in each domain. To enable users to be recognized by all the identity providers that you configure, you must assign each user a unique Federation ID in their user properties.

In this section, you configure the parameters of your single sign-on providers and certificates.

Configuring Identity Providers

You create, edit, or delete identity providers in the upper section of the Single Sign-On tab in the VCC Administrator application.

Defining an Identity Provider

To create an identity provider, follow these steps:

1. Go to **Actions > Configure > Single Sign-On**.
2. Click **Create new IDP**.

3 Populate these fields.

Field	Value
Alias	Descriptive name.
Issuer URL	URL of the identity provider to issue the security token.
SingleSignOnService HTTP-POST Binding URL	SAML POST binding URL.
SingleSignOnService HTTP-Redirect Binding URL	SAML redirect binding URL.
Valid Until	Termination date/time/time zone for identity provider expiration.
Default Name ID Format	Format for default Name ID.

4 Click **Save**.

Deleting an Identity Provider

To delete an identity provider, select that provider from the drop-down list and click **Delete IdP**.

Configuring Login URLs

A login URL enables your users to use single sign-on credentials managed by a third-party identity provider. Once the connection is configured, you can create SAML single sign-on users who can log into their Five9 account through an identity provider-initiated single sign-on URL. You can populate login URLs for Five9 Plus Adapter for Salesforce, Five9 Plus Adapter for ServiceNow, Five9 Plus Adapter for Oracle Service Cloud, and Plus Adapter for Agent Desktop Toolkit. For more information about populating the login URL, see the Administrator's Guide for the relevant adapter.

Importing Digital Certificates

The SAML single sign-on feature in Five9 enables you to connect to your identity provider with digital certificates, which provides an additional layer of security beyond user name and password credentials.

To add your digital certificate for configuration, follow these steps.

1. Click **Add** to display the list of certificates available.
2. Scroll to the certificate you want to add, and click **Open** to add the certificate to the list.
3. Click **Save**.

Microsoft Active Directory Federation Services

This chapter provides information about configuring single sign-on in Zendesk, Microsoft Dynamics 365, Agent Desktop Toolkit, Agent Desktop Plus, and ServiceNow.

Once your domain is enabled, install and configure the basic features of Microsoft Active Directory Federation Services (AD FS), noting the domain name of the AD FS server. The domain name is the Identity Provider host that you will need when you configure single sign-on.

Configuring Active Directory
Configuring the VCC Administrator's Application
Performing Application-Specific Configuration Steps
Testing Active Directory Single Sign-On

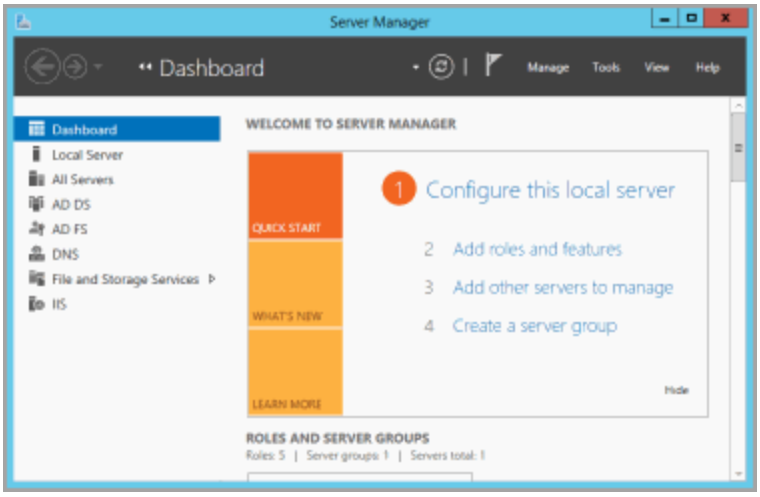
Configuring Active Directory

Configuring a Relying Party Trust
Configuring Assertion Consumer Service
Configuring a Rule to Set the Federation ID

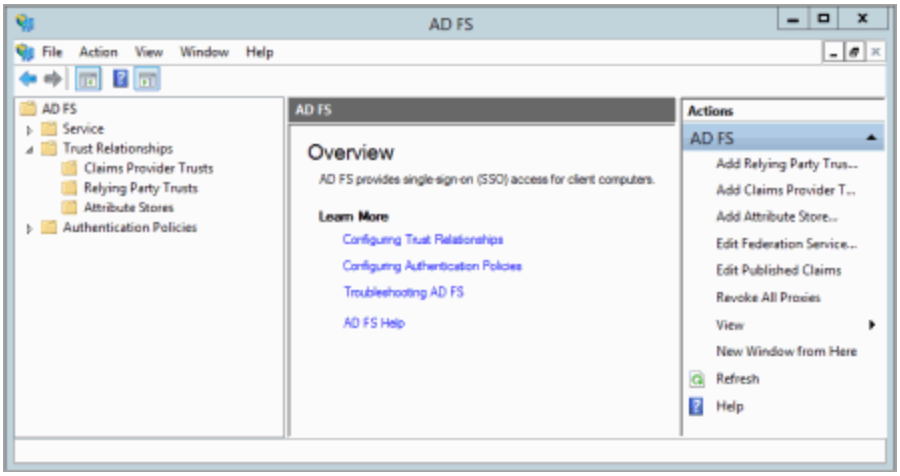
Configuring a Relying Party Trust

This section describes how to create a relying party trust for Five9 in AD FS.

1 Open **Server Manager**.



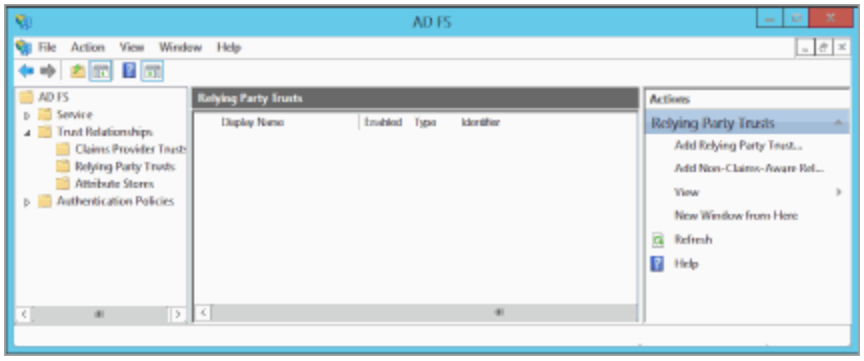
2 Click the **Tools** tab at the top, and select **AD FS Management**.



3 In the navigation pane, open **Trust Relationships**.

4 Select **Relying Party Trusts**.

In the central panel, you see the current trusts.

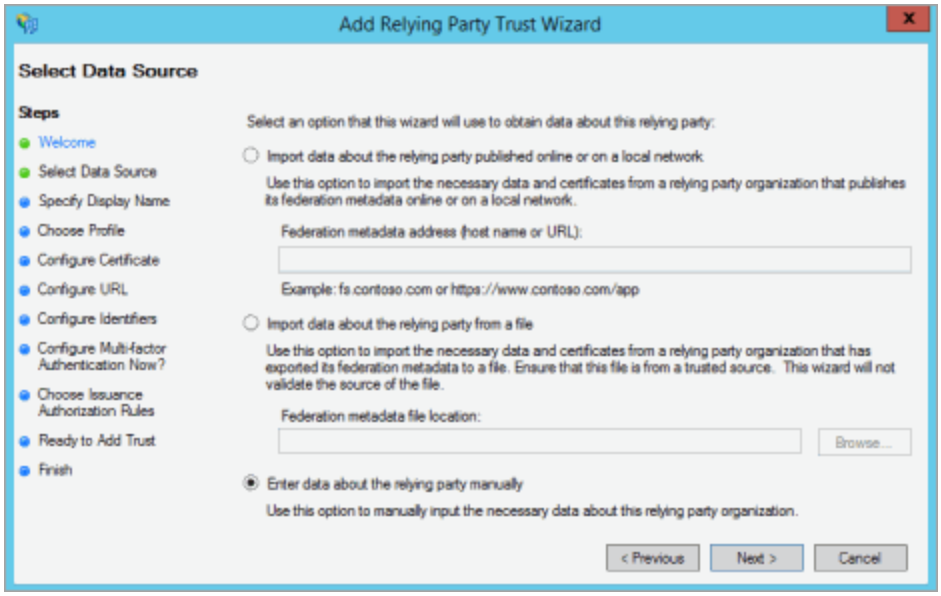


5 In the **Actions** pane on the right, click **Add Relying Party Trust**.

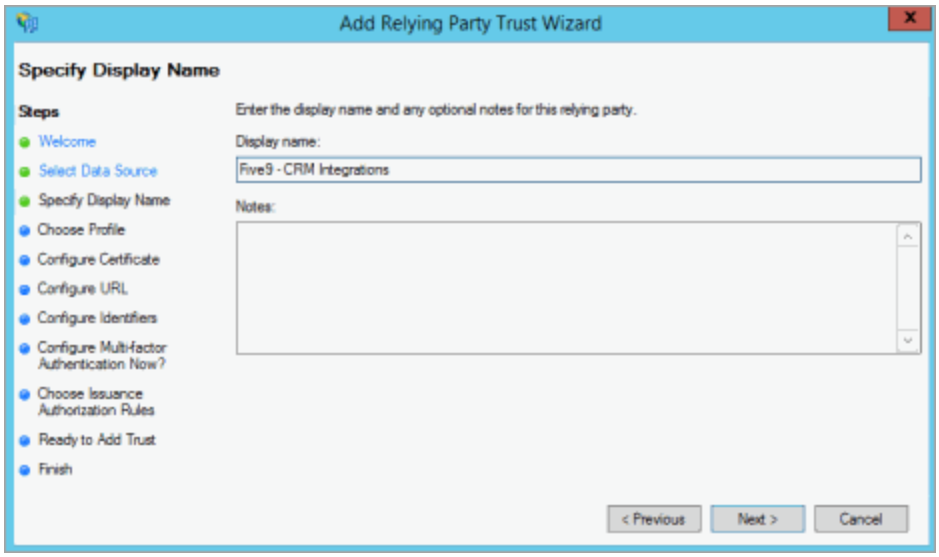


6 Click **Start**.

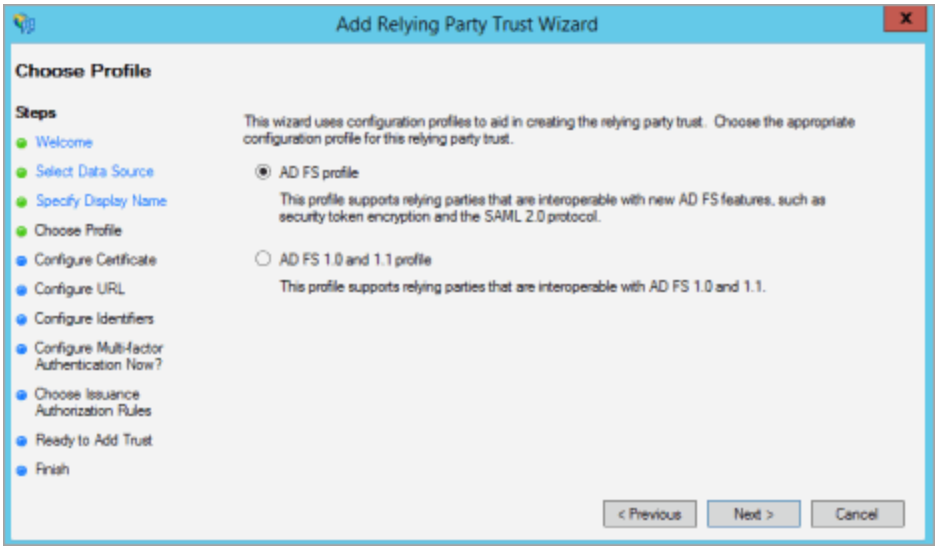
7 In the Select Data Source step, select **Enter data about the relying party manually**, and click **Next**.



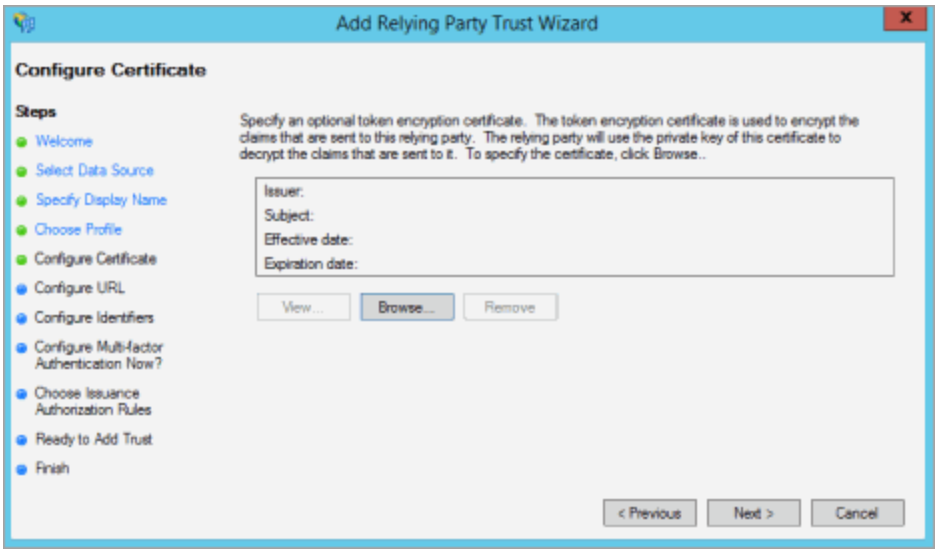
8 Enter the name that will appear in the Display Name column of the list of Relying Party Trusts, and click **Next**.



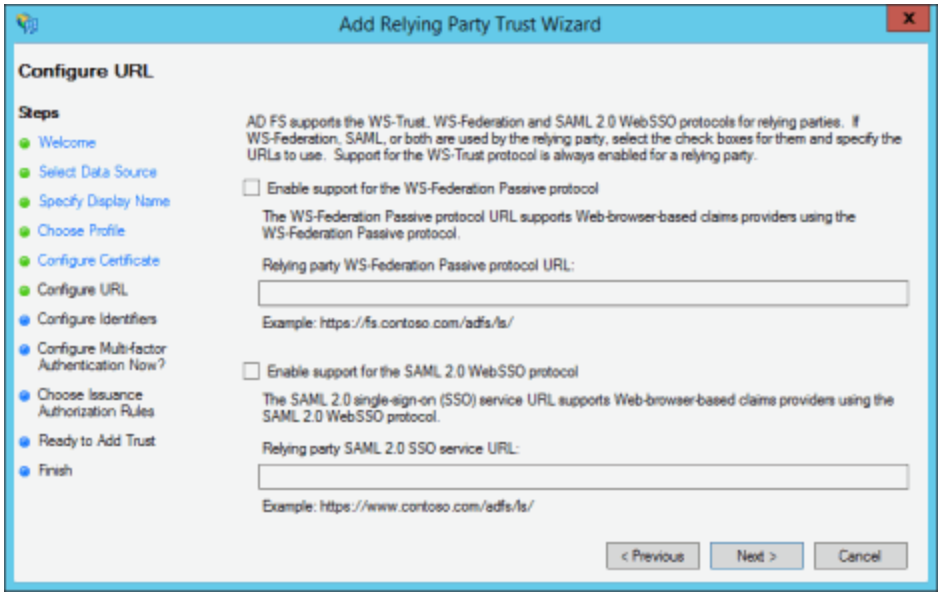
9 Select AD FS and click **Next**.



10 In the Configure Certificate step, click **Next**.



11 In the Configure URL step, click **Next**.



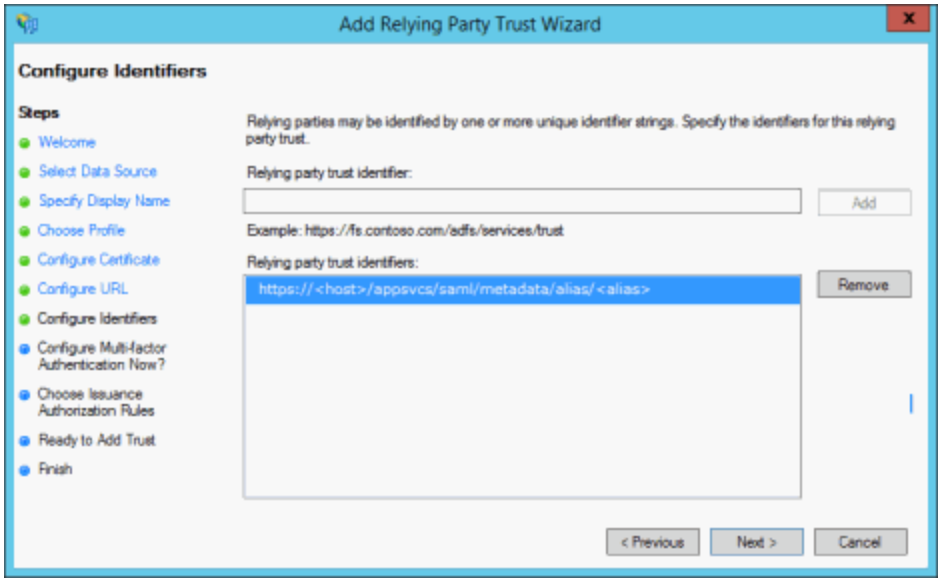
12 In the Configure Identifiers step, enter a relying party trust identifier in the field, and click **Add** and **Next**.

13 Ensure that the URL matches your Five9 host.

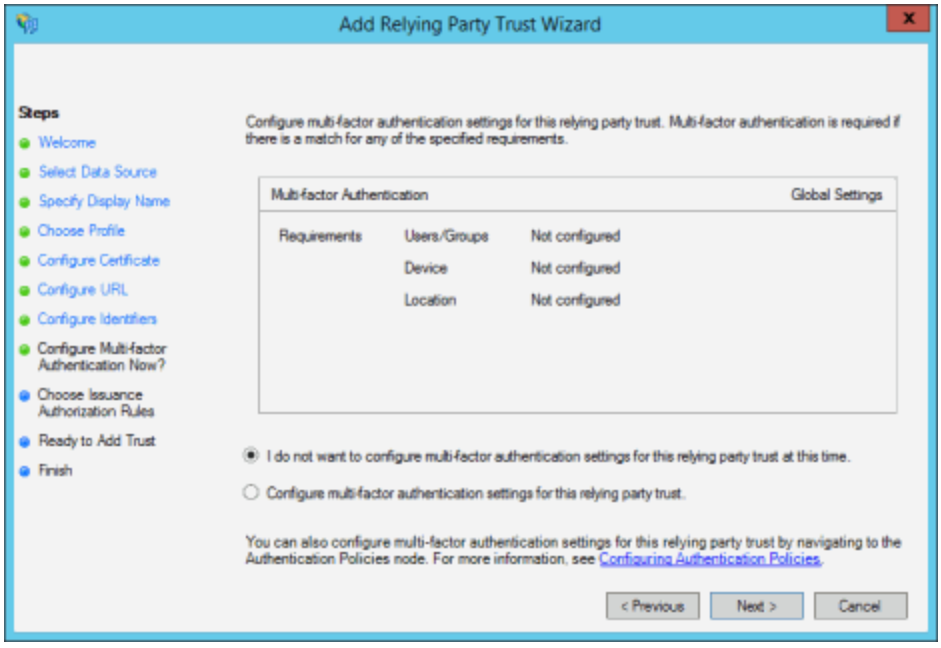
Use this pattern for the URL, replacing *<five9_domain>* and *<application>* with the appropriate information:

`https://<five9_domain>/appsvcs/saml/metadata/alias/<application>`

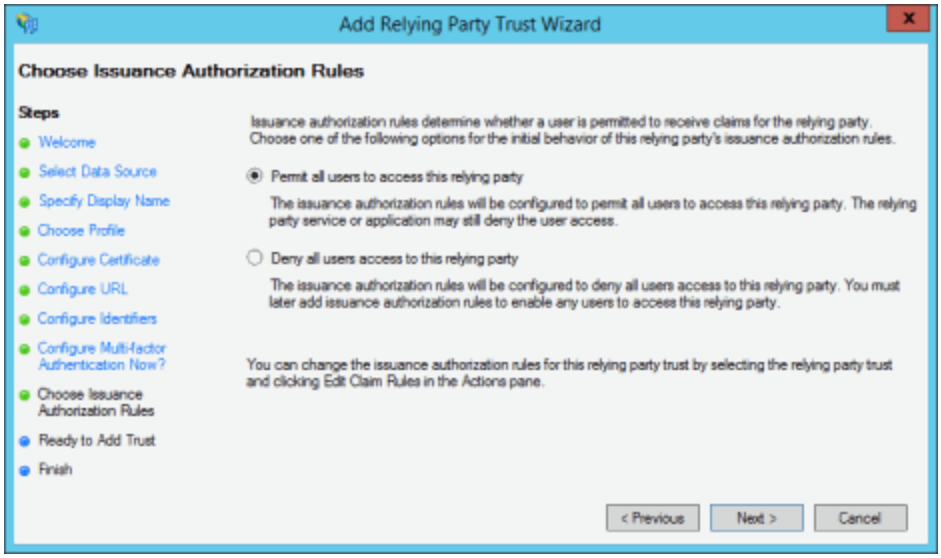
For a list of Five9 domains and application short names, see **Configuration Overview**.



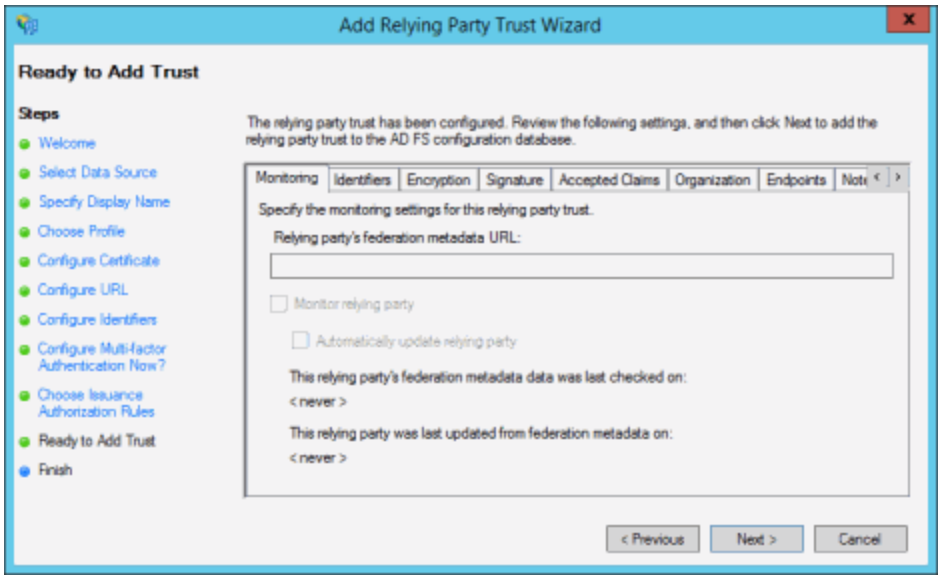
14 In the Configure Multi-factor Authentication Now step, click **Next**.



15 In the Choose Issuance Authorization Rules step, click **Next**.



16 In the Ready to Add Trust step, click **Next**.



17 In the last step, clear the **Open the Edit Claim Rules** checkbox, and then click **Close**.



The relying party trust is added to AD FS.

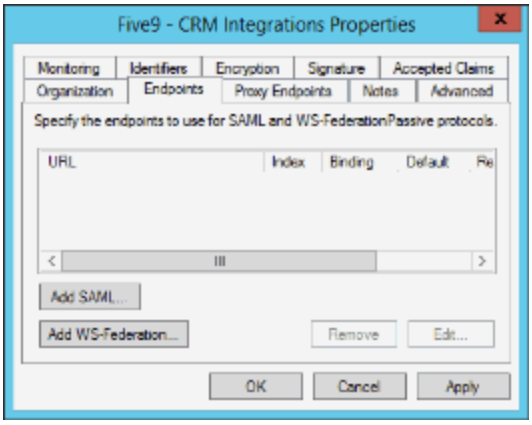
Configuring Assertion Consumer Service

The Assertion Consumer Service (ACS) handles the SAML response for identity-initiated login when the link is clicked.

The Federation ID or other persistent ID that you select must match the ID that you will enter in the Federation ID field in the user's properties in the VCC Administrator application. The value, such as an email address, must be the same in both applications and must persist until the user is deleted.

1. In the list of Relying Party Trusts of AD FS, right-click the trust that you created, and select **Properties**.

2. In the **Endpoint** tab, click **Add SAML**.

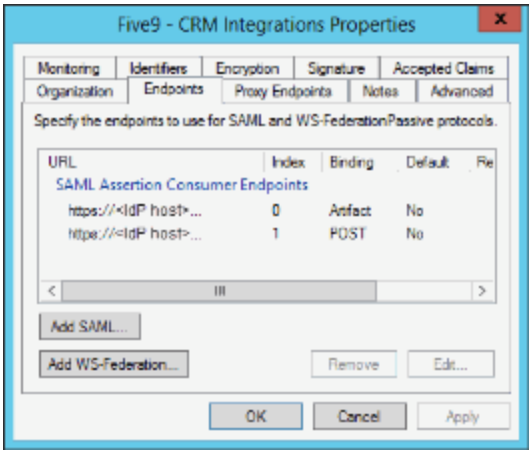


3 Add an ACS endpoint for your identity provider host.

Endpoint Type	SAML Assertion Consumer
Binding	POST
Index	0
Trusted URL	URL in the following format: `https://<five9_domain>/appsvcs/saml/SSO/alias/<application>` For a list of Five9 domains and application short names, see **Configuration Overview**.

4 Click **OK**.

This figure shows both endpoints in the properties window.



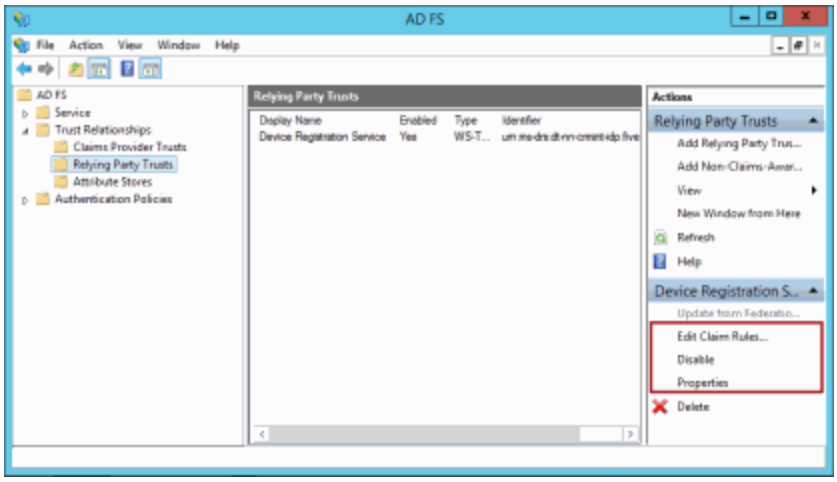
5 To exit the properties, click **OK**.

Configuring a Rule to Set the Federation ID

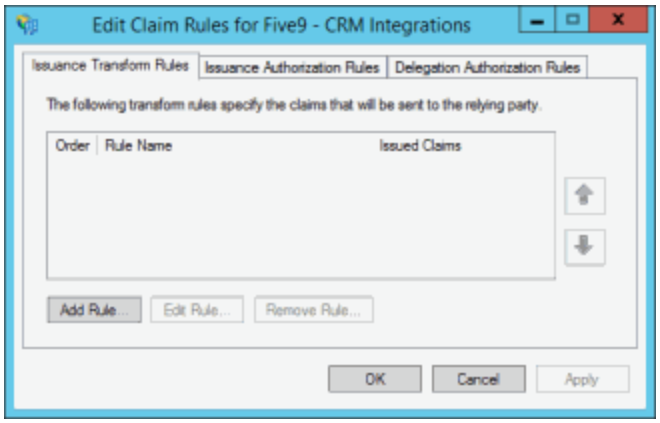
You can use any ID, such as the email address.

1. In the main AD FS window, select a Relying Party Trust in the list.

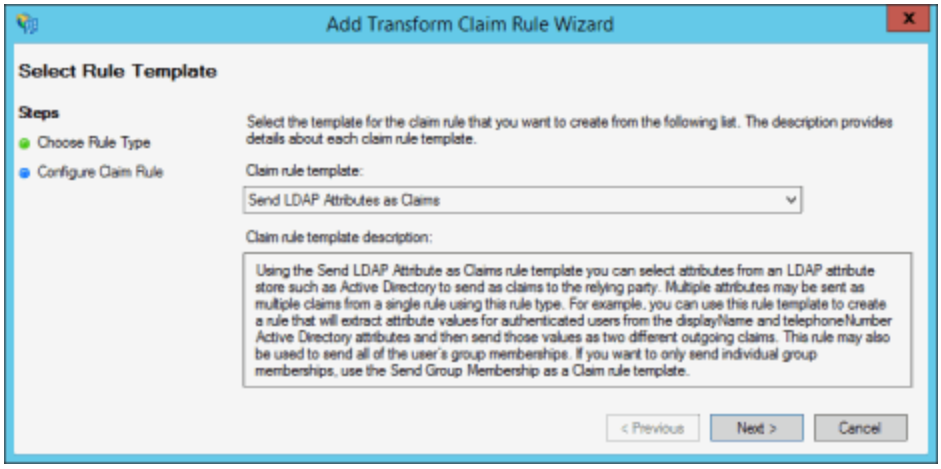
   A section for that trust appears in the Actions navigation pane on the right.



2. Click **Edit Claim Rules**, and then click **Add Rule**.

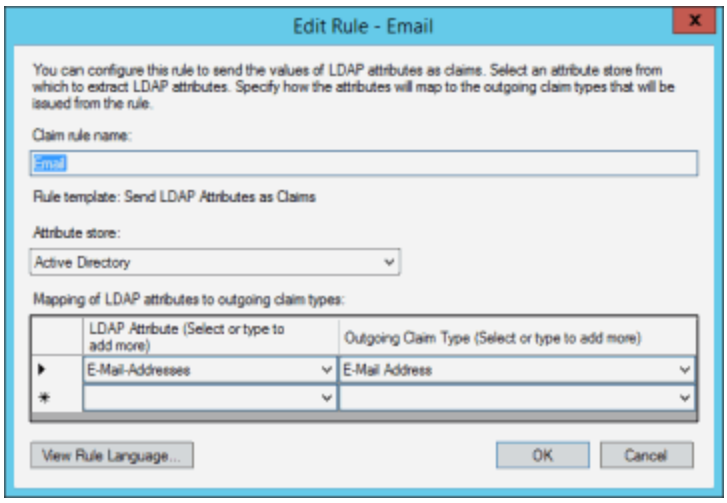


3. Select **Send LDAP Attributes as Claims**, and then click **Next**.



4 Enter or select this information:

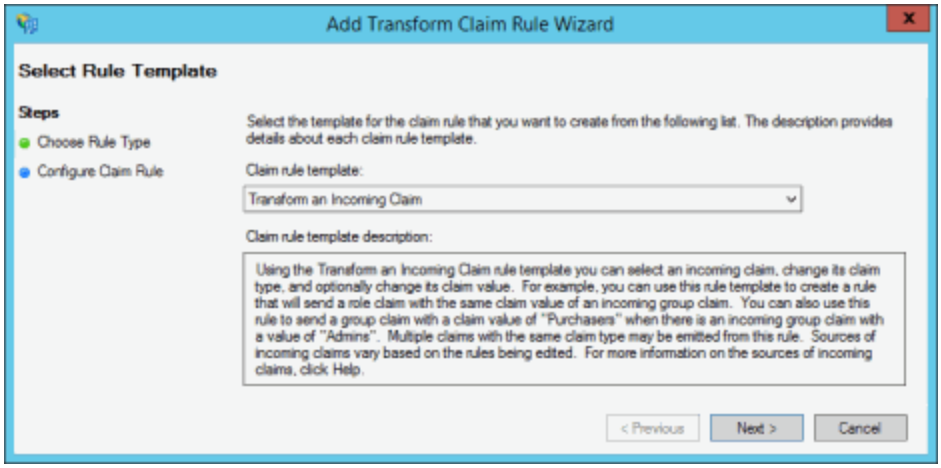
Field	Description
Claim rule name	Email
Attribute store	Active Directory
Mapping of LDAP attributes to outgoing claim types	E-Mail-Addresses >> E-Mail Address



5 Click **OK**.

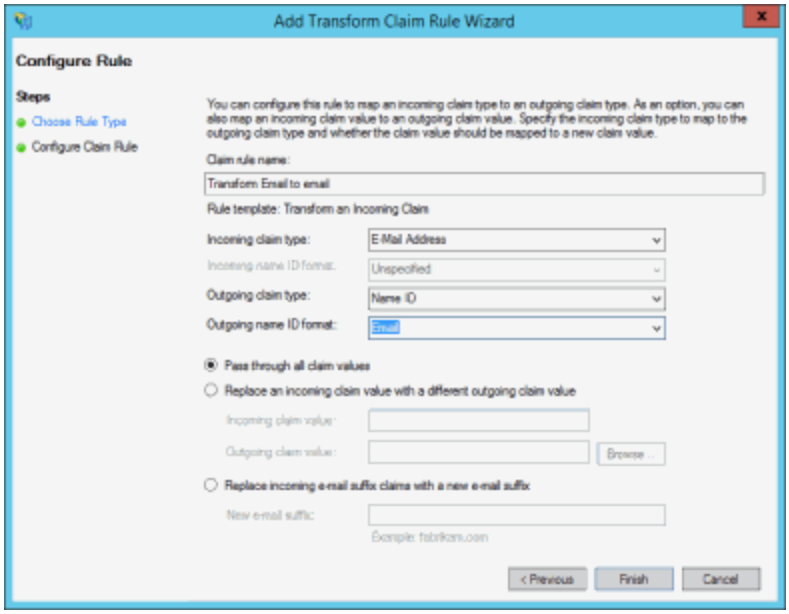
6 Click **Edit Claim Rules** again, and then click **Add Rule**.

7 Select **Transform an Incoming Claim**, and then click **Next.**



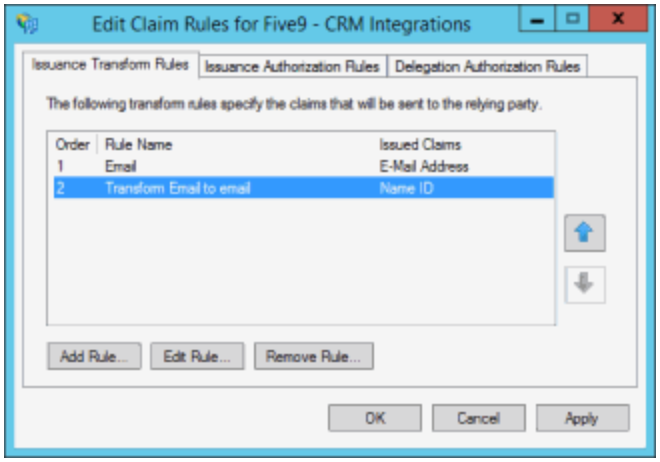
8 Enter or select this information:

Field	Description
Claim rule name	Transform Email to email
Incoming claim type	E-Mail Address
Outgoing claim type	Name ID
Outgoing name ID format	Email



9 Click **Finish**.

10 In the list of claim rules, click **Apply**.



Configuring the VCC Administrator's Application

You need to enable your agents and domain in the VCC Administrator Application.

Obtaining the Metadata
Configuring Your Five9 Domain
Adding a Federation or Persistent ID to Users

Obtaining the Metadata

The information that you will enter in VCC is located in this XML file, which you need to download:

`https://<IdP host>/federationmetadata/2007-06/federationmetadata.xml`

Prepare the X509 certificate that you need to enter in VCC as follows:

1 Copy the hash in the `X509Certificate` element to a file as follows:

```
-----BEGIN CERTIFICATE-----
<hash from X509Certificate>
-----END CERTIFICATE-----
```

2 Save the file with the CER extension.

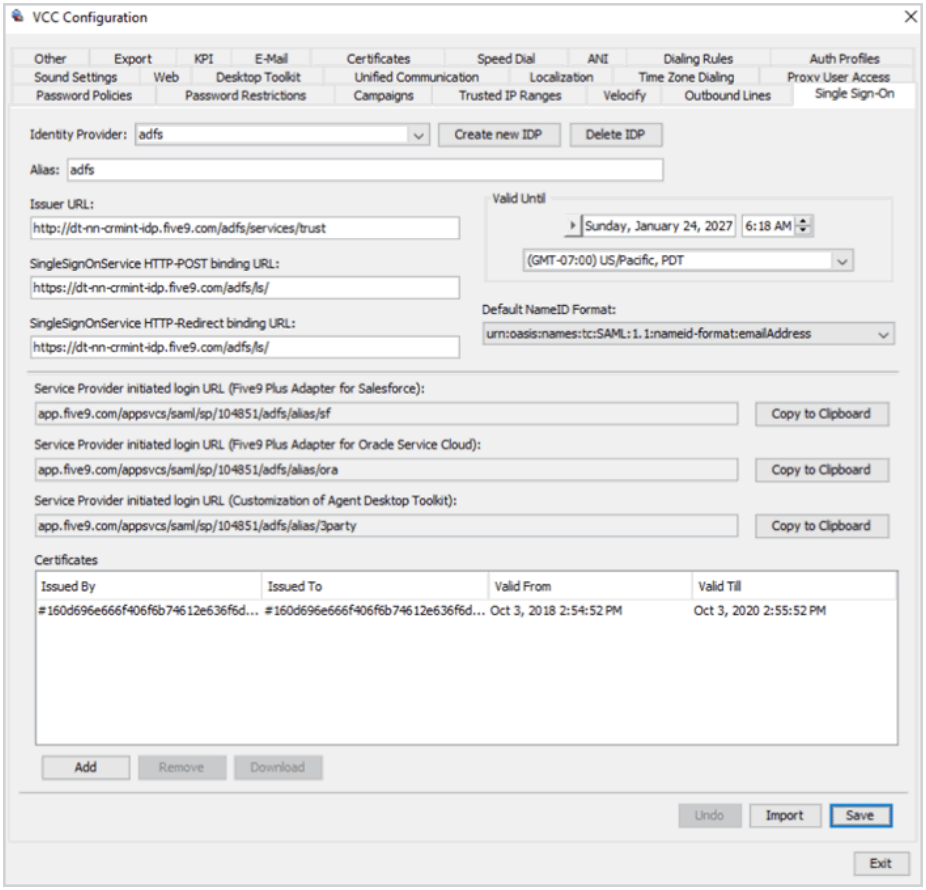
Configuring Your Five9 Domain

To enable single sign-on in your Five9 domain, enter the metadata information.

Note

Configuration changes may take up to 10 minutes to take effect.

1 In the VCC Administrator application, go to **Actions > Configure > Single Sign-On**.



2 Enter metadata information in these fields.

Field	Description
Alias	Enter a descriptive name for this set of metadata. After you save, this name appears on the **Identity Provider** menu just above.
Issuer URL	The ADFS identifier that you copied. URL of the identity provider host, starting with the server name.
Valid Until	Choose an end date for the validity of this set of metadata. This can differ from the end date of the certificates.
Default NameID Format	Format of the Name ID: (default) `urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified`
SingleSignOnService HTTP-POST Binding URL	Not used.
SingleSignOnService HTTP-Redirect Binding URL	Not used.
Service Provider initiated login URL.	Not used.
Table of certificates	Click **Add** to browse to a certificate on your local device. You can have multiple certificates; for example, with different expiration dates or for different applications.
Import	Not used.

3 Click **Save**.

Adding a Federation or Persistent ID to Users

The value in this field is synchronized with the value in your CRM application. The value must persist until the user is deleted.

1. In the Administrator's application, select **Users**.
2. Open a user's name.
3. In the Federation ID field of the General tab, enter the agent's Five9 user name or another name reserved for single sign-on.

   In this figure, the federation ID matches the Five9 user name.
4. Click **Save**.

Performing Application-Specific Configuration Steps

If you use Agent Desktop Plus or ServiceNow, proceed to **Testing Active Directory Single Sign-On**.

Agent Desktop Toolkit and NetSuite

Add the login URL of your identity provider host to the browsers that your agents will use. For instructions, see the browser configuration sections in the Administrator's guide.

Microsoft Dynamics 365

Add your identity provider host to the Five9 integration solution. To do so, enter the URL that you copied in the previous section in the identity provider Login URL field of the Five9 Configuration page of the Microsoft Dynamics 365 application.

Oracle Service Cloud

During the installation of the Five9 Plus adapter, add the login URL of the identity provider. For example: `https://<IdPhost>/adfs/ls/IdpInitiatedSignOn.aspx`. `<IdPhost>` is the location of AD FS.

Due to a browser limitation with the Five9 adapter in Oracle Service Cloud, cookies obtained during a previous authentication with the identity provider are not available when the identity provider-initiated link is executed inside Oracle Service Cloud. This forces agents to enter their identity provider credentials every time they log in to Five9. Therefore, Five9 recommends that you configure Microsoft Integrated Windows Authentication (IWA) to avoid this issue.

You can test single sign-on only after you have added the identity provider login URL to the Server Configuration Properties in the Add-In Manager page of your Oracle Service Cloud interface. For more information, see the section *Editing the Properties of Your Add-In* in the Administrator's guide.

Zendesk

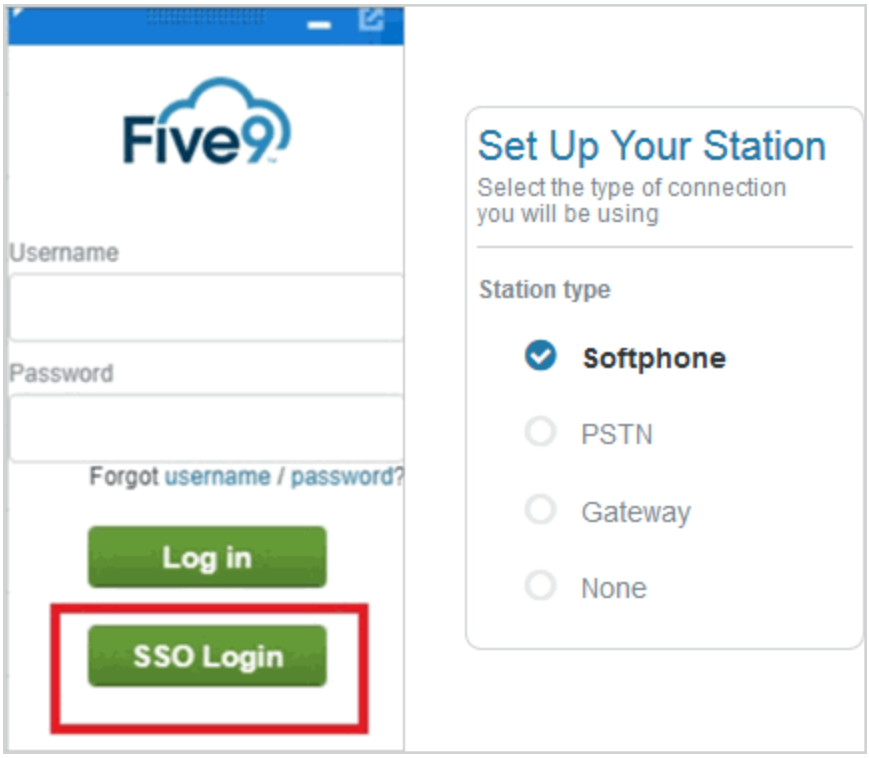
During the installation of the Five9 Plus adapter, add the login URL of the identity provider. For example: `https://<IdPhost>/adfs/ls/IdpInitiatedSignOn.aspx`. `<IdPhost>` is the location of AD FS.

Testing Active Directory Single Sign-On

When single sign-on is configured, an additional login button labeled **SSO Login** is displayed below the standard login button in the agents' softphone.

1. Log out of the adapter and your CRM application.
2. Log in to your CRM application with the user name that you configured for single sign-on.

   Depending on your configuration, you see the login or the station setup window:



3 Click **SSO Login** or set up your station.

Okta

This chapter describes how to configure single sign-on in Zendesk, Microsoft Dynamics, Agent Desktop Toolkit, Agent Desktop Plus, Salesforce, and ServiceNow.

> **Note**
> The images in this chapter are specific to Agent Desktop Toolkit. Therefore, use them as examples only.

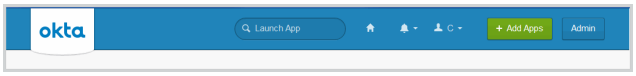
Contact your Five9 support representative to request that your Five9 domain be enabled for the Plus applications.

Configuring Okta
Configuring the VCC Administrator's Application
Testing Okta Single Sign-On

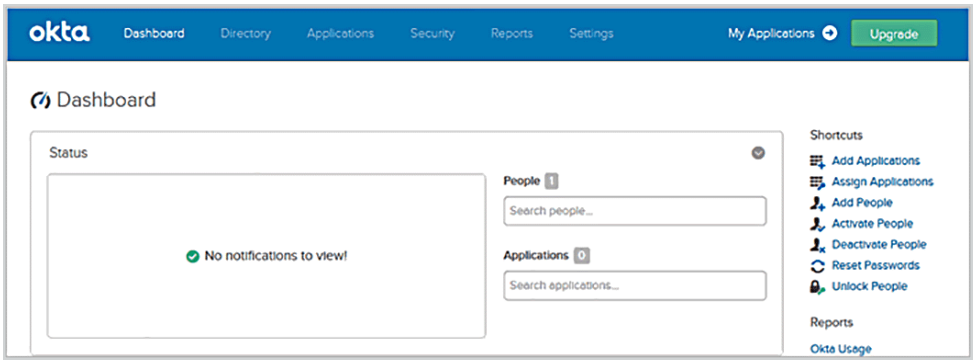
Configuring Okta

You can configure Okta in the Five9 data centers.

1. Log into Okta.



2. Click **Admin**.
3. Click **Add Applications**.

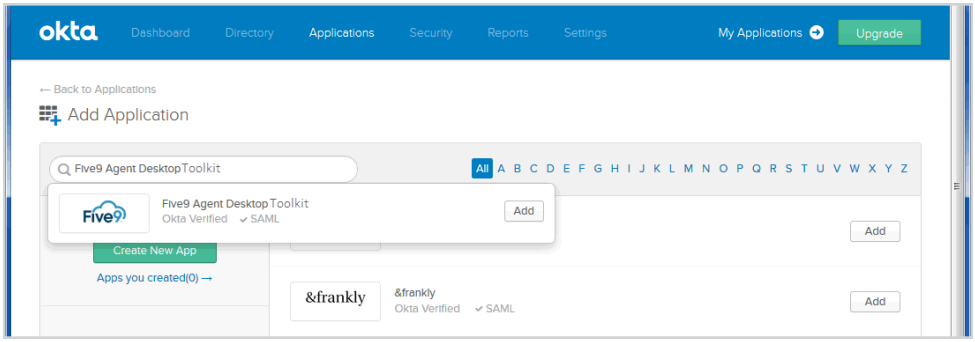


4 In the search field, enter your application's name, such as **Five9 Agent Desktop Toolkit**.

5 In the overlay, click **Add**.

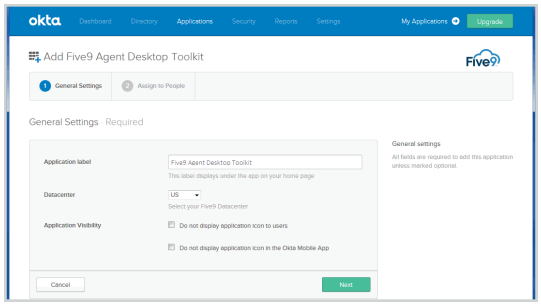
Five9 applications for Okta are:

- Five9 Agent Desktop Plus
- Five9 Plus Adapter for Agent Desktop Toolkit
- Five9 Plus Adapter for Salesforce
- Five9 Plus Adapter for ServiceNow
- Five9 Plus Adapter for Zendesk



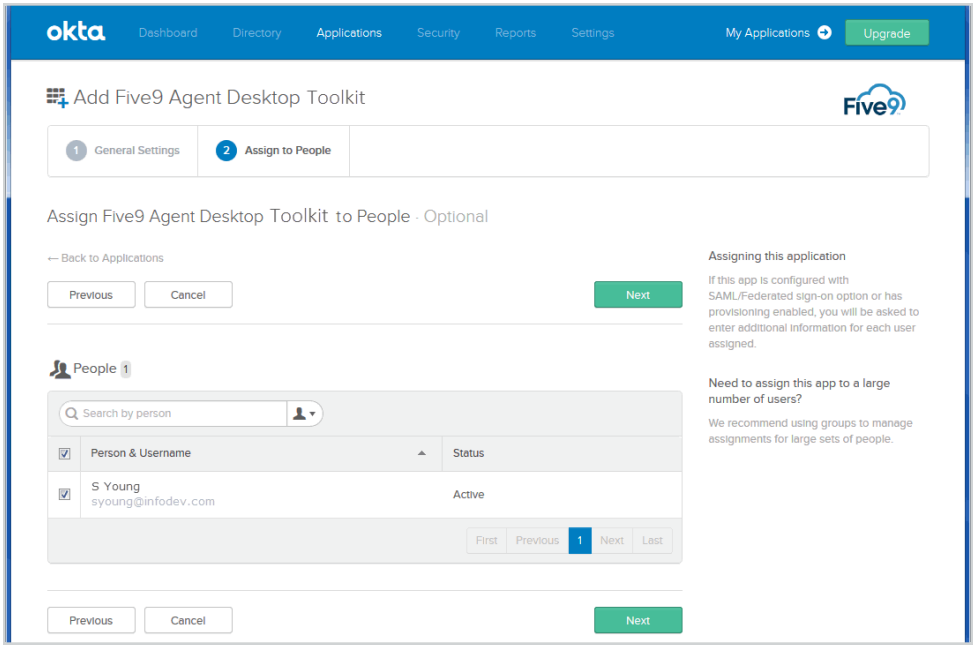
6 In **General Settings**, select the following fields:

- Data center
- Salesforce interface: Lightning or Classic



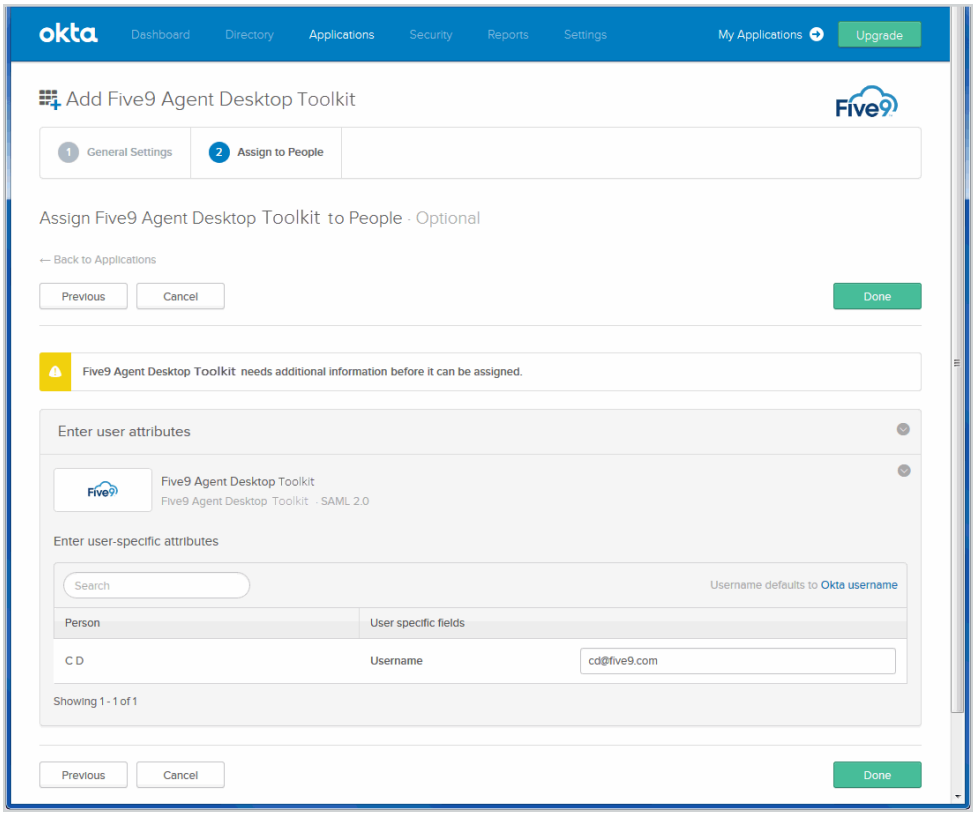
7 Click **Next**.

8 In **Assign to People**, enter user names or user groups in the search field, and then click **Next**.

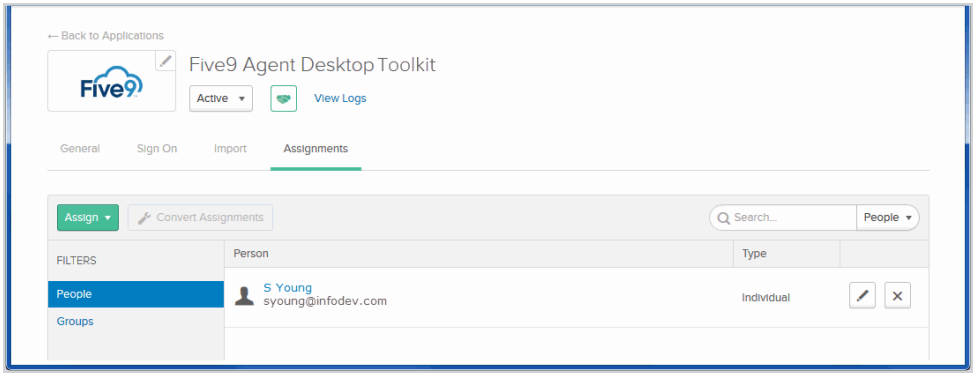


9 Enter the user name that you plan to use as Federation ID in the user's properties in the VCC Administrator application, and then click **Done**.

The value, such as an email address, must be the same in both applications and must persist until the user is deleted.



10 In the user's page, click the **Sign On** tab.



11 To obtain the identity provider metadata and instructions for importing this data into your Five9 domain, go to the **Sign On** section of the SAML application.

If you are using Salesforce, click **View Setup Instructions** to go to a page of detailed configuration instructions provided by Okta, How to Configure SAML 2.0 for Five9 Plus Adapter for Salesforce.

If you are logged in to Okta, the page provides the Sign On URL, Issuer URL (entityID), and link to the X.509 certificate that are required for your account. You can also obtain the entityID by clicking **Identity Provider metadata** on the **Sign On** tab. This takes you to an XML file that contains the entity ID.

12 To download the X.509 certificate, click **Identity Provider metadata**, and then save the XML file.

Configuring the VCC Administrator's Application

The Okta/Five9 Plus Adapter with SAML integration supports identity provider-initiated single sign-on (SSO).

You need to enable your agents and your domain in the VCC Administrator application.

Configuring Your Five9 Domain
Configuring SSO Federation IDs for Users
Next Steps
Troubleshooting

Configuring Your Five9 Domain

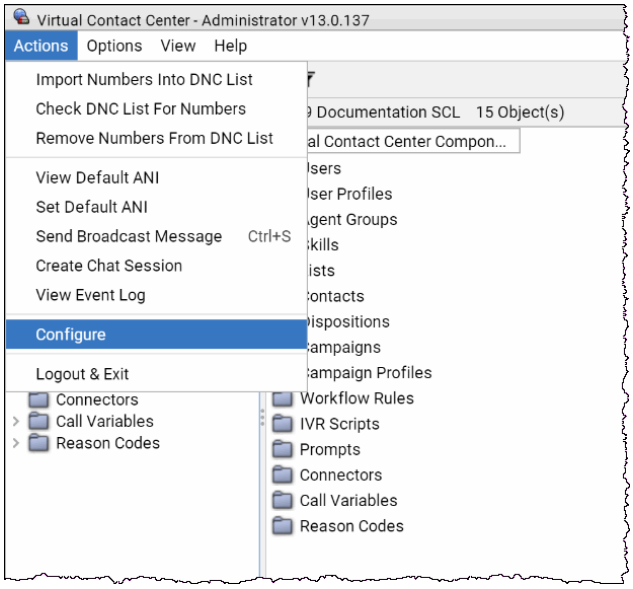
Add the information from the metadata file.

Note

Configuration changes may take up to 10 minutes to take effect.

1 Open the VCC Administrator application (VCC Admin).

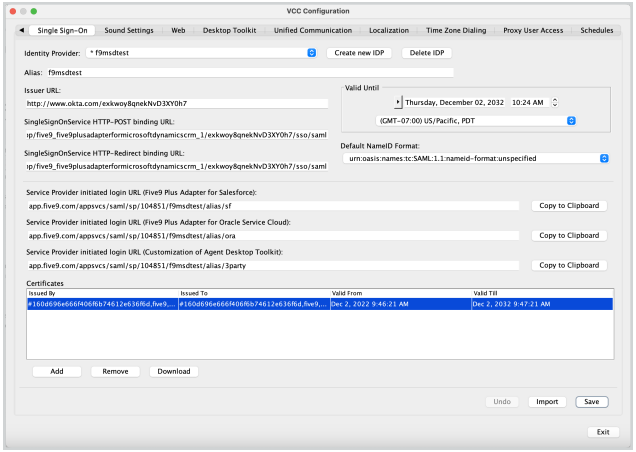
2 From the **Actions** menu, select **Configure**.



3 Select the **Single Sign-On** tab.

4 Click **Create new IDP**.

5 Enter the metadata by copying and pasting from the **Sign On** settings in the adapter configuration, or use the values in the metadata file.



Field	Description
Alias	Enter your Five9 IdP alias.
Issuer URL	URL of the identity provider host, starting with the server name.

Field	Description
	Copy the **Issuer** URL from the **Sign On** settings in the adapter, or use the value located in the `entityId` attribute of the `EntityDescriptor` element in the metadata file.
SingleSignOnService HTTP-POST Binding URL	The main login address for your domain, starting with the identity provider host name. Copy the **Sign On URL** from the **Sign On** settings in the adapter, or use the value in the `location` attribute of the `SingleSignOnService` element in the metadata file.
SingleSignOnService HTTP-Redirect Binding URL	The alternate login address for your domain, starting with the identity provider host name. Copy the **Sign On URL** from the **Sign On** settings in the adapter, or use the value in the `location` attribute of the `SingleSignOnService` element in the metadata file.
Valid Until	Specify the expiration date and time of the certificate in the specified time zone. **Important:** The **Valid Until** field indicates how long this certificate is considered valid and will be reused without being requested. Once the certificate expires per the Valid Until date, the certificate will be requested with each SSO authentication but still be considered valid.
Default NameID Format	Select the format of the Name ID, for example: `urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress`

6 Under **Certificates**, click **Add** and locate the certificate you downloaded from the **Sign On** settings in the adapter.

7 Click **Save**, and then click **Exit**.

Configuring SSO Federation IDs for Users

1. On the main page in VCC Administrator, select **Users**.
2. Right-click the user, and then click **View Properties of *username***.
3. On the **General** tab, in the Federation ID field, enter a name for the agent. You can use the agent's Five9 username or another name reserved for single sign-on.
4. Click **Apply**, and then click **Save**.

Next Steps

Continue configuring the adapter. Use the **Sign On URL** for the IdpLoginURL parameter according to instructions specific to the CRM adapter.

Troubleshooting

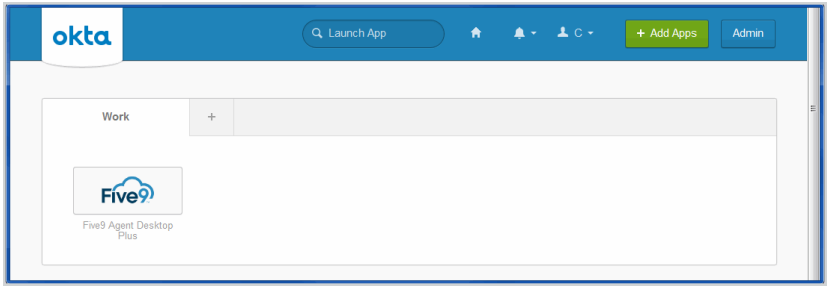
Contact Five9 Support for assistance with troubleshooting the configuration.

Testing Okta Single Sign-On

Follow these steps.

1. Log out and back in.
2. Click the **Five9** tile.

   You are automatically logged into your application.



Microsoft Azure Active Directory

This chapter provides information about configuring single sign-on in your applications.

> **Note**
> In the classic VCC single sign-on configuration, identity providers that do not generate a unique entity ID for each integrated application can only be configured in one Five9 domain at a time. If this is the case and your organization has two domains in the Five9 US infrastructure, you cannot configure Azure/Entra in both.

> **Note**
> If you are using Microsoft Dynamics 365, you must use Microsoft Azure Active Directory server (Azure AD) as identity provider to implement single sign-on in Microsoft Dynamics 365 and all third-party applications for Microsoft Dynamics 365. However, if you are currently using on-premises Active Directory Federation Services (AD FS), you need to synchronize Azure AD with AD FS. For instructions about synchronizing the servers, refer to the Microsoft documentation.

Configuring Azure AD
Configuring the VCC Administrator Application
Performing Application-Specific Configuration Steps
Testing Azure Single Sign-On

Configuring Azure AD

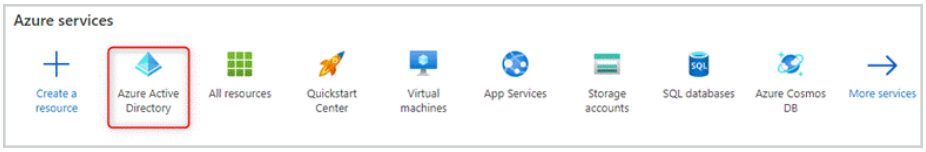
Adding the Five9 Plus Adapter to Azure AD
Configuring Single Sign-On in the Azure Application
Enabling Azure AD Users for Single Sign-On

Adding the Five9 Plus Adapter to Azure AD

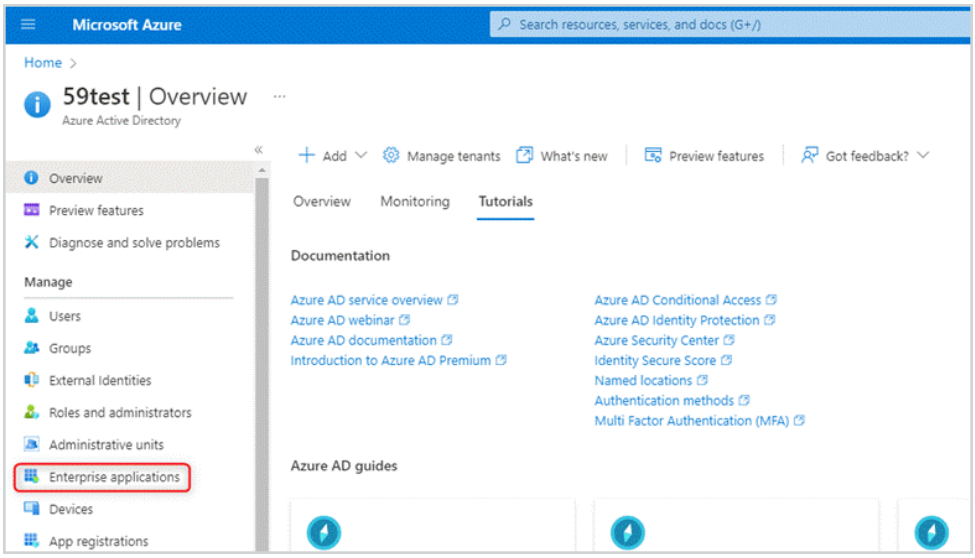
Follow these steps.

1 Log into the Microsoft Azure portal.

2 Select **Azure Active Directory** from the list of services.

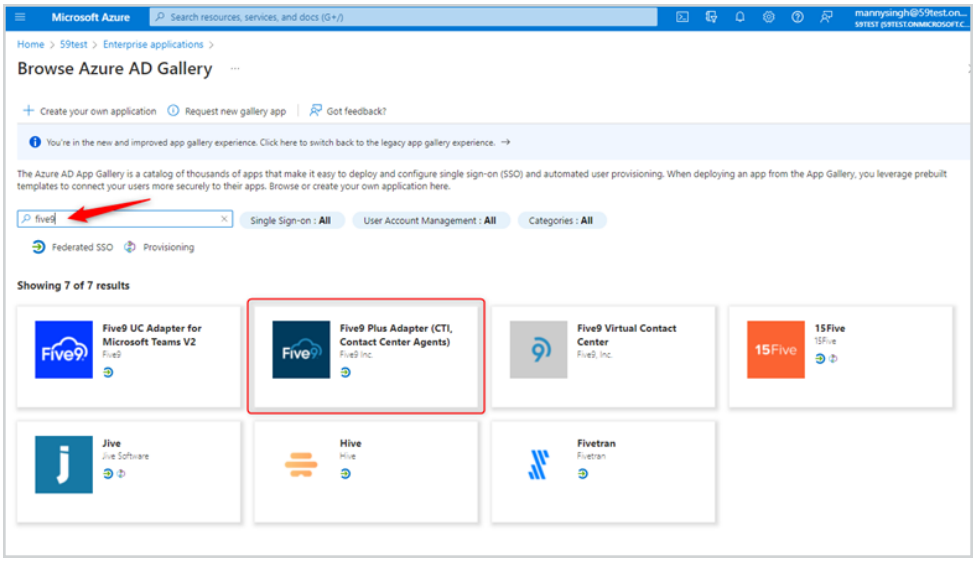


3 In the navigation pane of the dashboard, click **Enterprise Applications**.

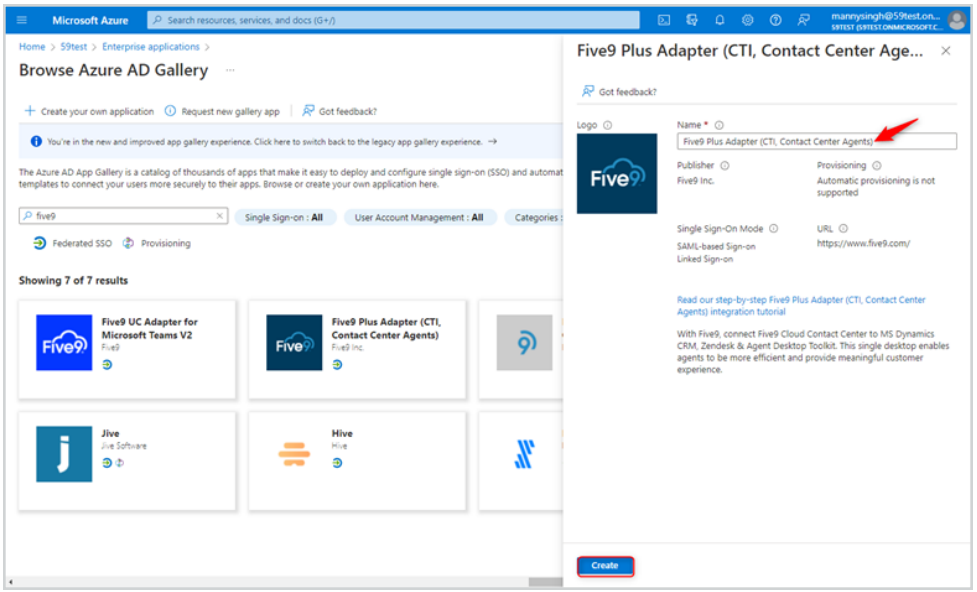


4 At the top, click **New Application**.

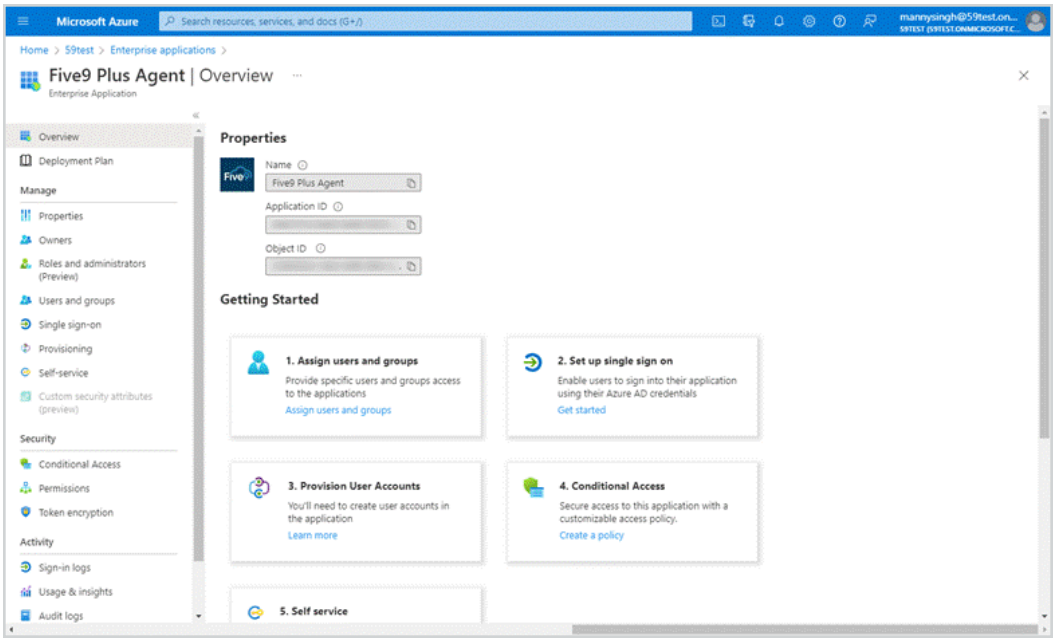
5 Search for "Five9" in the App Gallery, and then select Five9 Plus Adapter (CTI, Contact Center Agents).



6 Edit the name (optional), and then click **Create**.



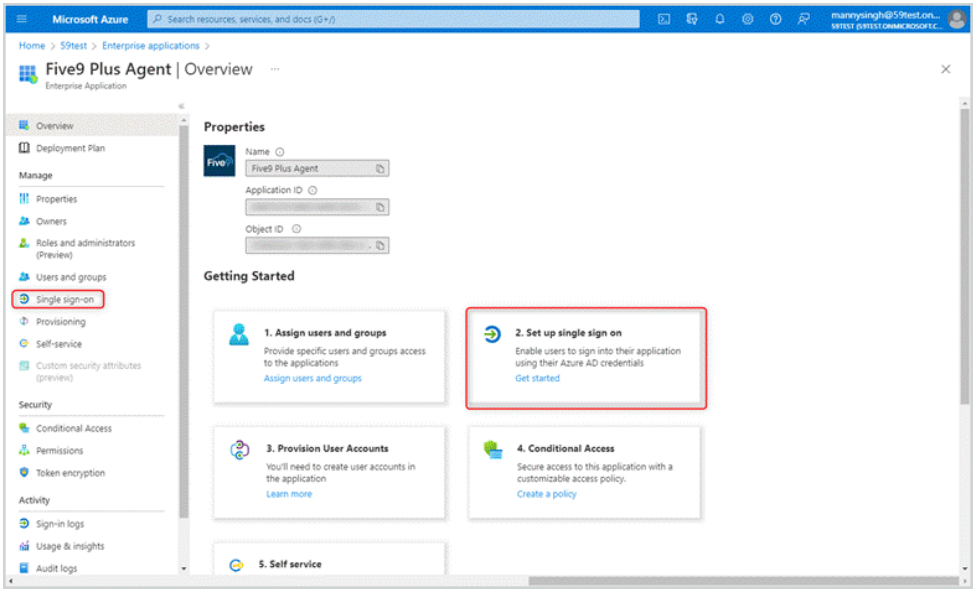
Once the application is added, this page displays:



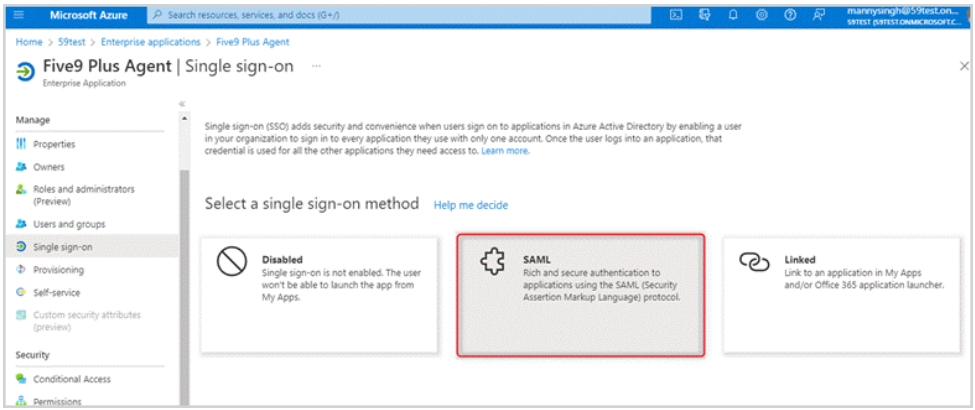
Configuring Single Sign-On in the Azure Application

Follow these steps.

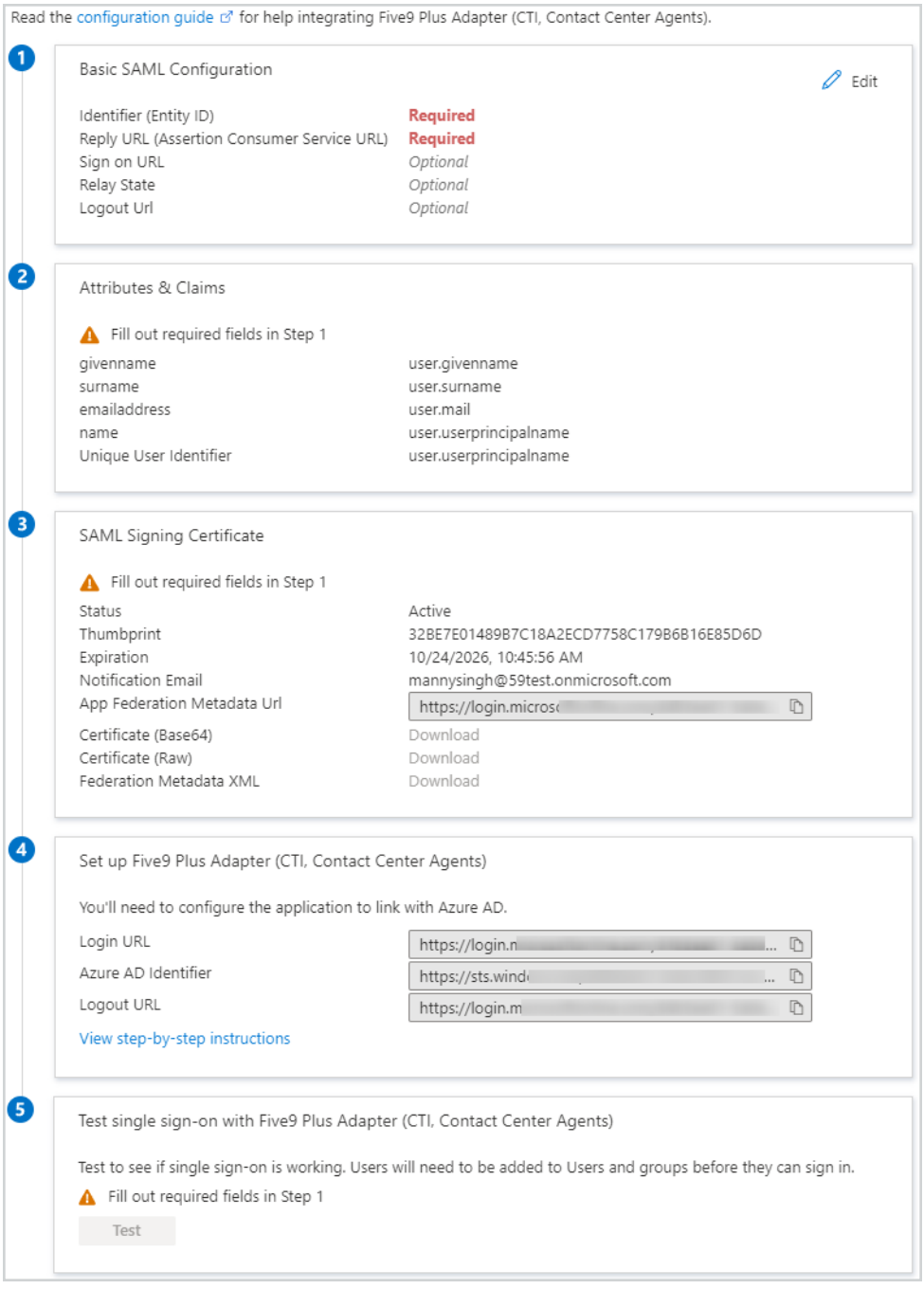
1 In the navigation pane, click **Single sign-on**.



2 Select **SAML**.

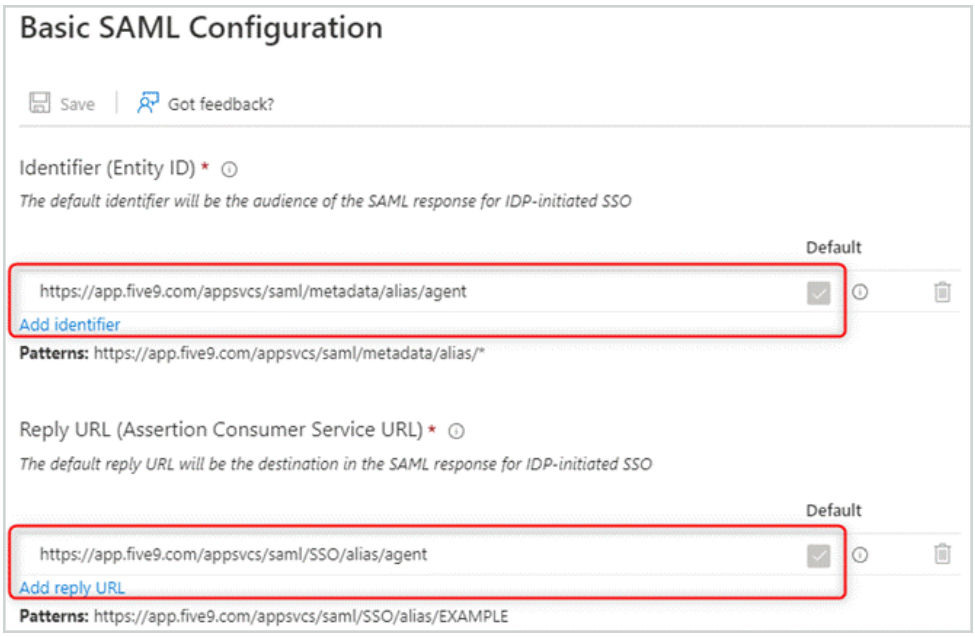


The SAML configuration page displays.



3 Click the pencil icon on the **Set up Single Sign-On with SAML** form and enter the identifier and reply URLs.

- Identifer (Entity ID): Unique identifier for the application configured with Azure AD. This value also appears as the Entity ID in any SAML metadata provided by the application.
- Reply URL (Assertion Consumer Service URL): URL for the SAML token.



Identifier URL options:

Use the following format for the Identifier URL, substituting your Five9 domain and your CRM application short name.

`https://<five9_domain>/appsvcs/saml/metadata/alias/<application>`

For a list of Five9 domains and application short names, see **Configuration Overview**.

Reply URL options:

Use the following format for the Reply URL, substituting your Five9 domain and your CRM application short name.

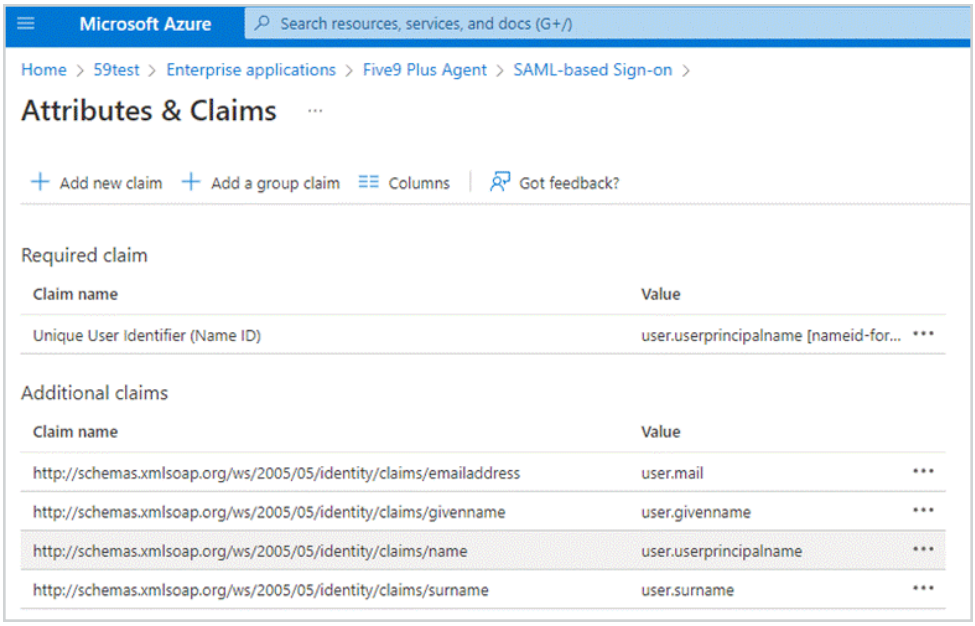
`https://<five9_domain>/appsvcs/saml/SSO/alias/<application>`

For a list of Five9 domains and application short names, see **Configuration Overview**.

4 Click **Save**.

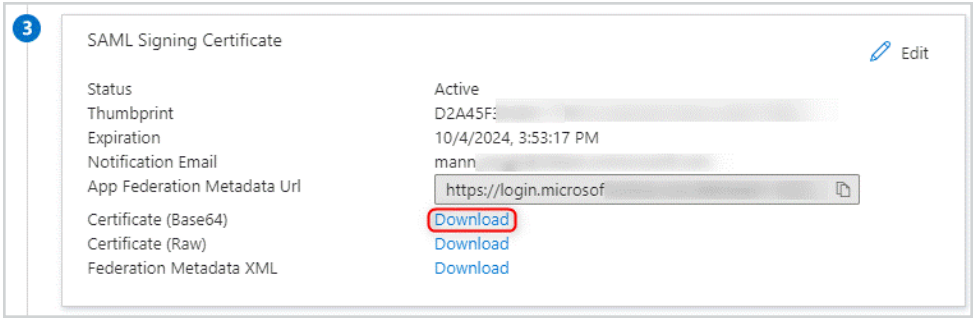
5 Return to the SAML Configuration page and edit the **Attributes and Claims** section, and then confirm that the Unique User Identifier value is `user.userprincipalname`.

The value, such as an email address, must be the same in both applications and must persist until the user is deleted. **It will be used as the Federation ID in the Five9 VCC Administrator application.**

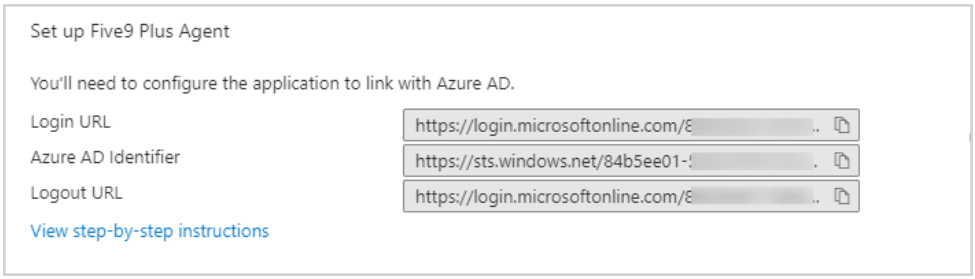


6 Return to the SAML Configuration page and edit the **SAML Signing Certificate** section, and then click **Download** next to **Certificate (Base64)** and save the certificate.

You will later enter the X509 certificate in the VCC Administratorder application.



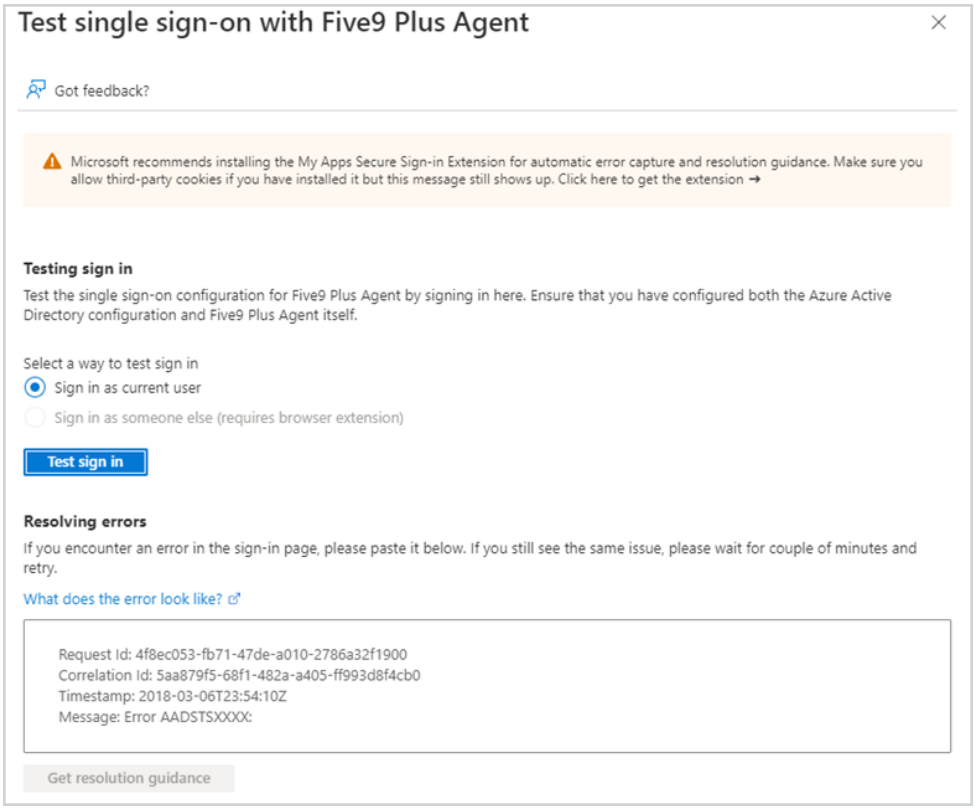
7 Return to the SAML Configuration page and edit the **Set up Five9 Plus Adapter (CTI, Contact Center Agents)** section, and then click the icon next to each URL to copy the URLs to your clipboard.



You will need these values to configure the VCC Administrator application:

- Login URL
- Azure AD Identifier
- Logout URL

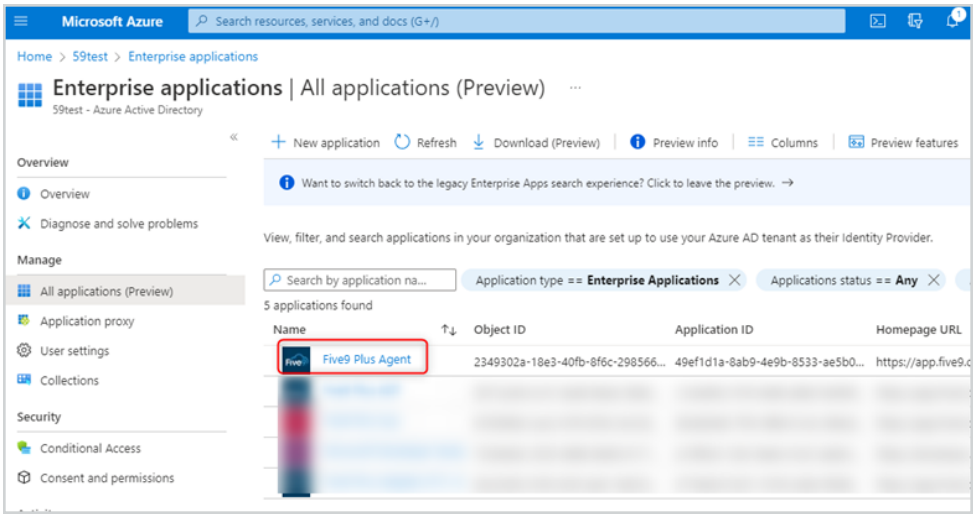
8 Click **Test sign in** to verify your single sign-on configuration.



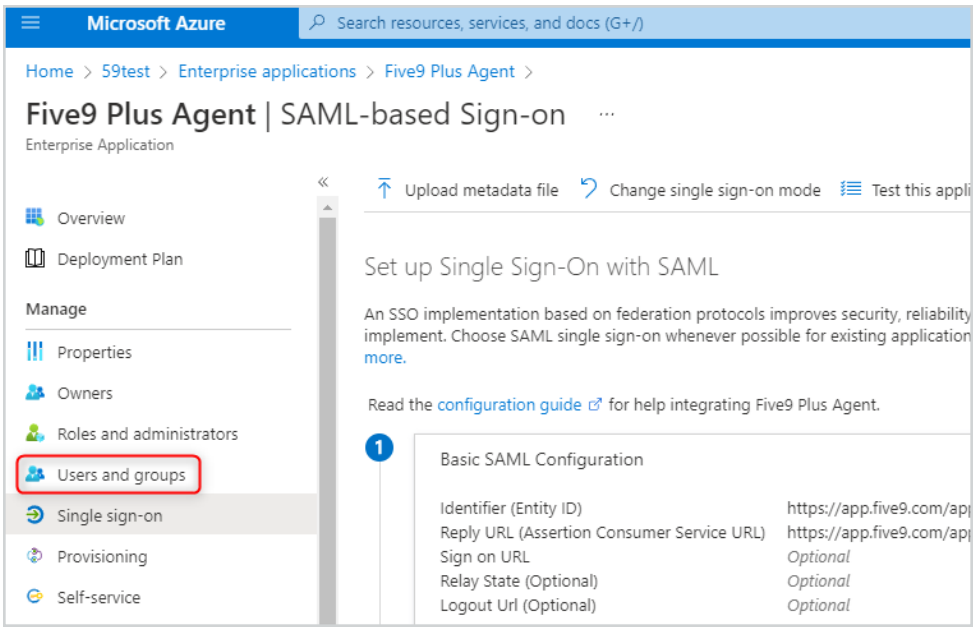
Enabling Azure AD Users for Single Sign-On

You must grant access to Five9 Plus Adapter (CTI, Contact Center Agents).

1. In the Microsoft Azure portal navigation pane, select **Azure Active Directory**.
2. Click **Enterprise applications**, and then click **All applications**.
3. Find and click **Five9 Plus Adapter (CTI, Contact Center Agents)**. If you changed the name when adding the adapter, find and click the new name.

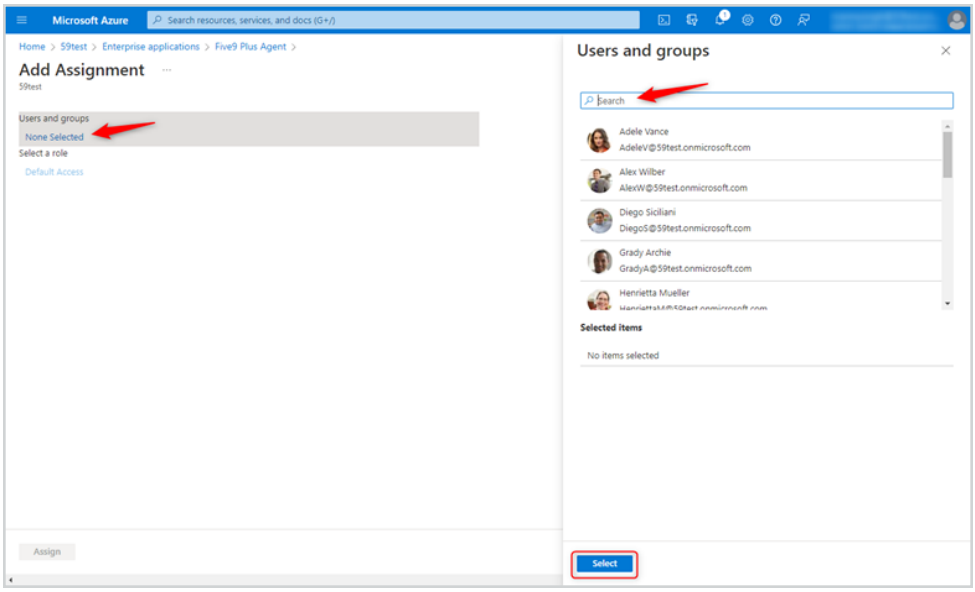


4 In the navigation pane, click **Users and groups**.



5 Click **+Add user/group**.

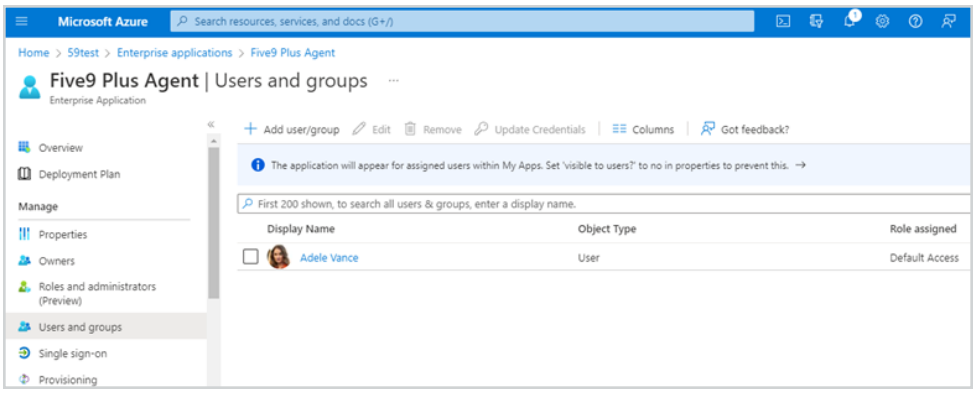
6 On the **Add Assignment** pane, under **Users and groups**, click **None Selected**.



7 Search for and select the user/group you want to assign to the application, and then click **Select**.

8 On the **Add Assignment** pane, click **Assign**.

The users or groups appear in the Users and groups list.



Configuring the VCC Administrator Application

You must enable your agents and your domain in the VCC Administrator Application.

Configuring Your Five9 Domain
Adding a Federation ID to Users
Configuring Multiple Application Contexts

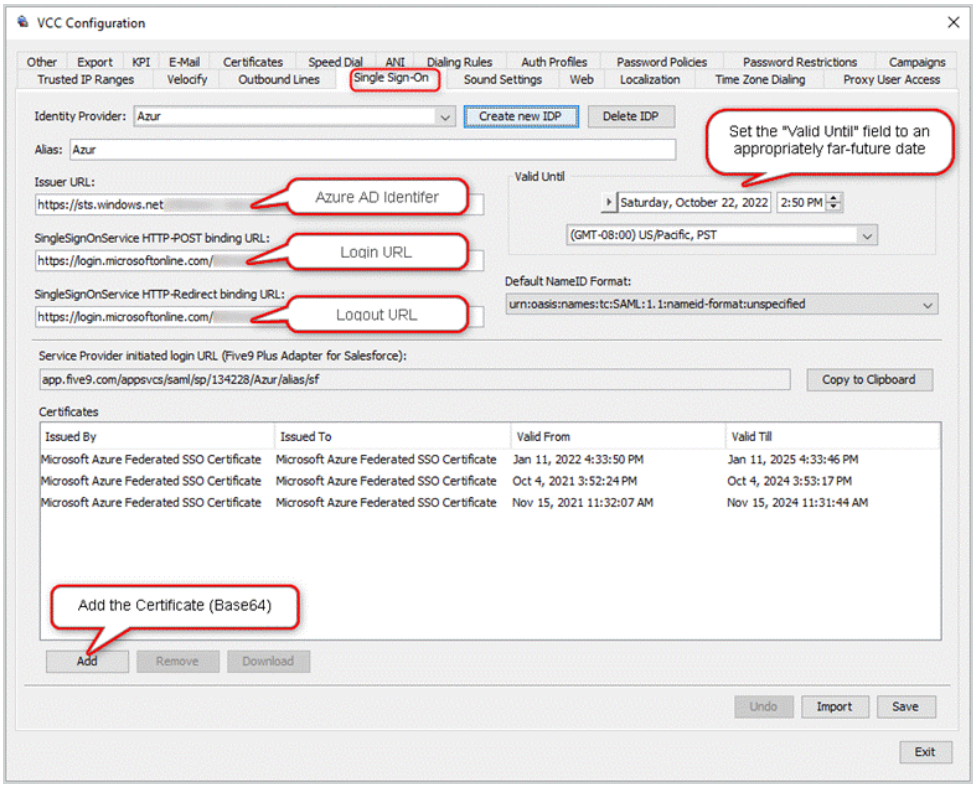
Configuring Your Five9 Domain

To enable single sign-on in your Five9 domain, enter the metadata information.

Note

Configuration changes may take up to 10 minutes to take effect.

1 In the VCC Administrator application, go to **Actions > Configure > Single Sign-On**.



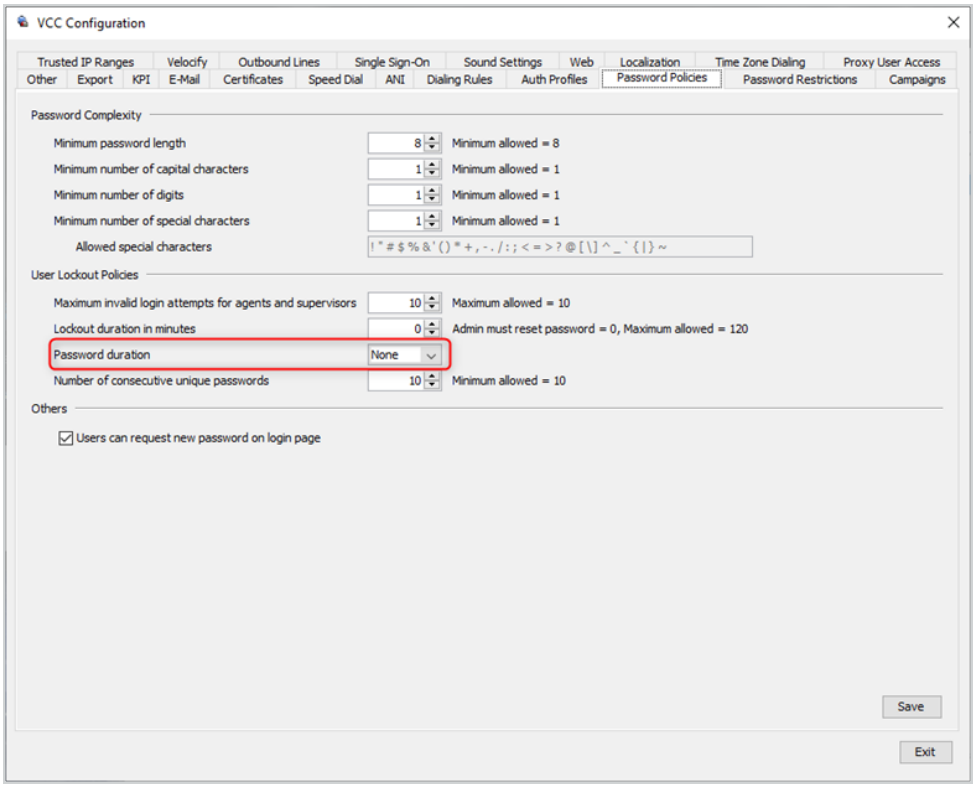
2 Enter metadata information in the fields.

Field	Description
Alias	Enter a descriptive name for this set of metadata. After

Field	Description
	you save, this name appears on the **Identity Provider** menu.
Issuer URL	The Azure AD identifier that you added in the SAML configuration in **Configuring Single Sign-On in the Azure Application** and then copied at the end of that procedure. The URL of the identity provider host, starting with the server name.
Valid Until	Choose an end date for the validity of this set of metadata. This can differ from the end date of the certificate(s).
Default NameID Format	Format of the Name ID: (default) `urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified`
SingleSignOnService HTTP-POST Binding URL	Location of the main login address for your domain, starting with the server name. Not used.
SingleSignOnService HTTP-Redirect Binding URL	Location of the alternate login address for your domain, starting with the server name. Not used.
Service Provider initiated login URL	Enables your users to use single sign-on credentials managed by a third-party identity provider. Not used.
Table of certificates	Click **Add** to browse to a certificate on your local device. You can have multiple certificates, for example, with different expiration dates or for different applications.
Import	Not used

3 Click **Save**.

4 On the **Password Policies** tab, set the password duration to None.



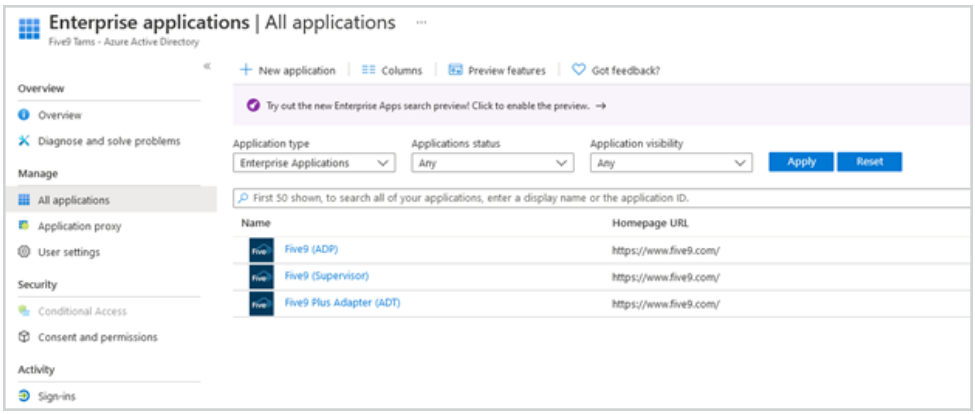
Adding a Federation ID to Users

The value in this field is synchronized with the value in your system.

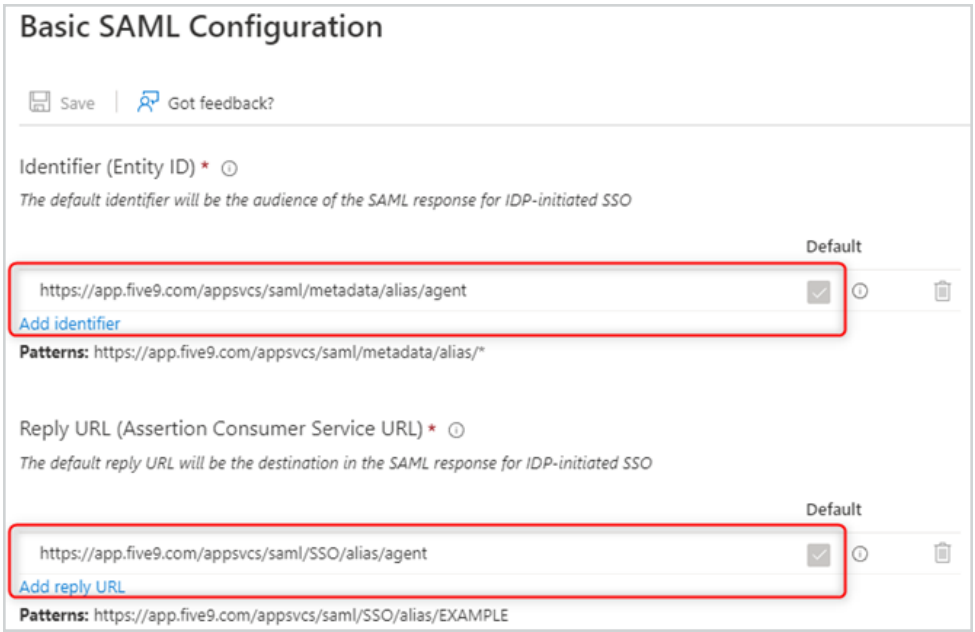
1. In the VCC Administrator application, edit a user.
2. On the **General** tab, enter the Federation ID that matches the user's **User Principal Name** in the Azure profile.
3. For users who will not be admins, clear the **User can change password** checkbox.
4. Click **Save**.

Configuring Multiple Application Contexts

1 If agents are using a combination of ADP, ADT, and other integrations/adapters, add one Five9 Enterprise Application instance in Azure for each application, editing the names to help identify them.

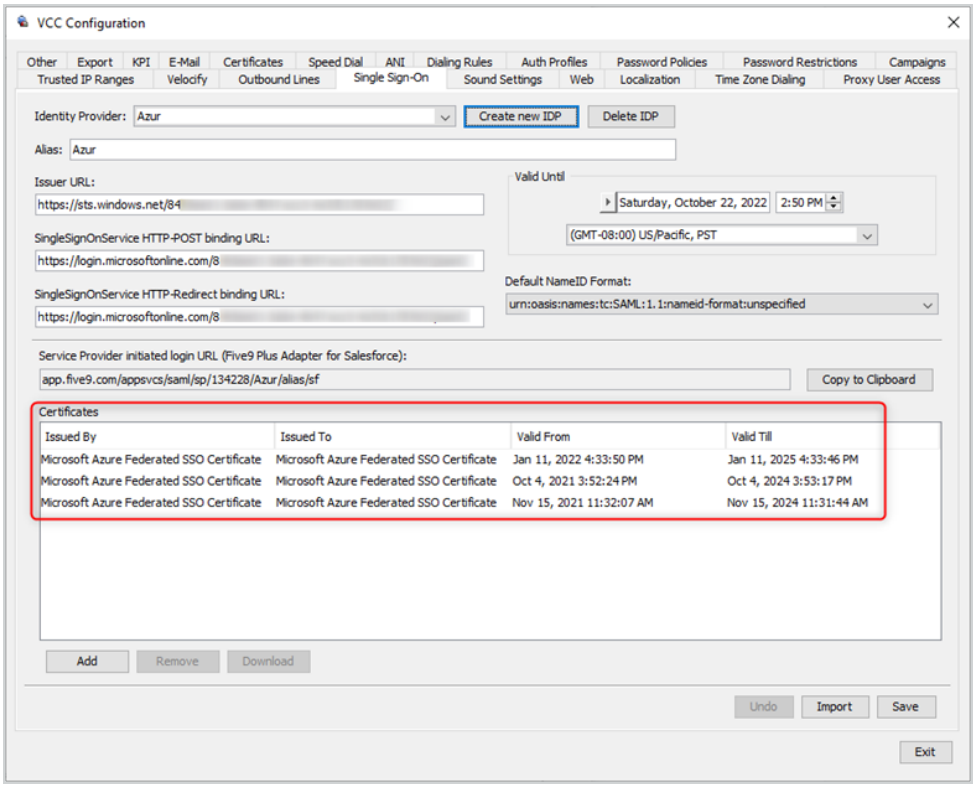


2 Configure the Azure App identifier and Reply URL with the appropriate Five9 application alias for each application.



3 Add the Base64 certificate file for the configured applications to the VCC Admin

on the Azure IdP. The URLs are the same for all the applications.



Performing Application-Specific Configuration Steps

Depending on the application that you are using, perform the appropriate steps.

ADT Single Sign-On Browser Configuration
Microsoft Dynamics 365 Single Sign-on CTI Configuration
Oracle Service Cloud
Salesforce
Zendesk

ADT Single Sign-On Browser Configuration

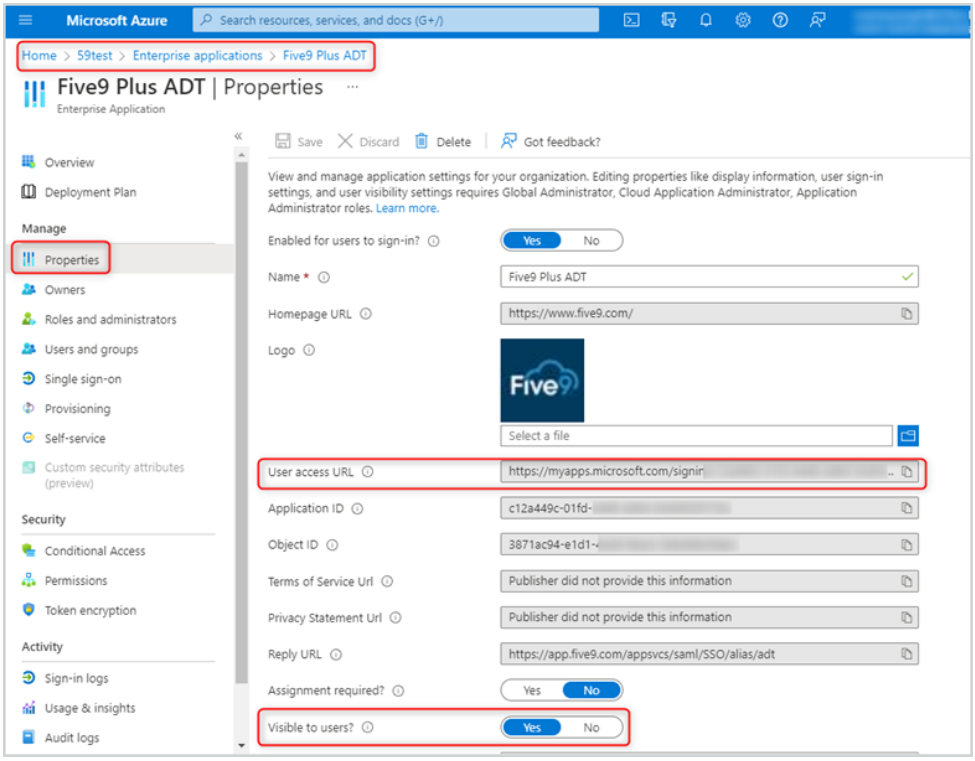
Follow these steps:

1 In the Microsoft Azure portal navigation pane, select **Azure Active Directory**.

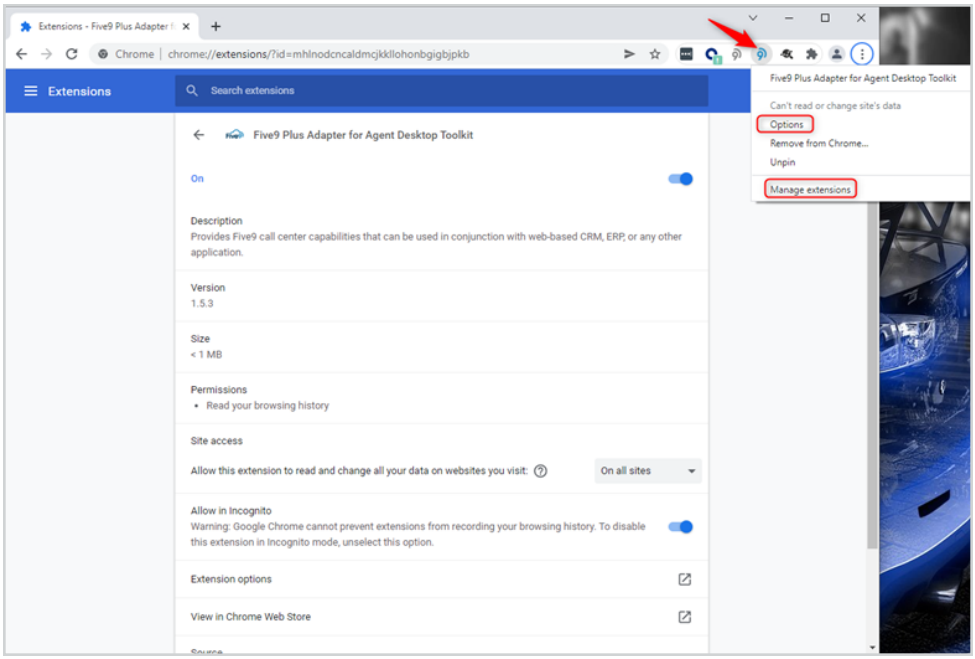
2 Click **Enterprise applications**, and then click **All applications**.

3 Select the appropriate application, and then click **Properties**.

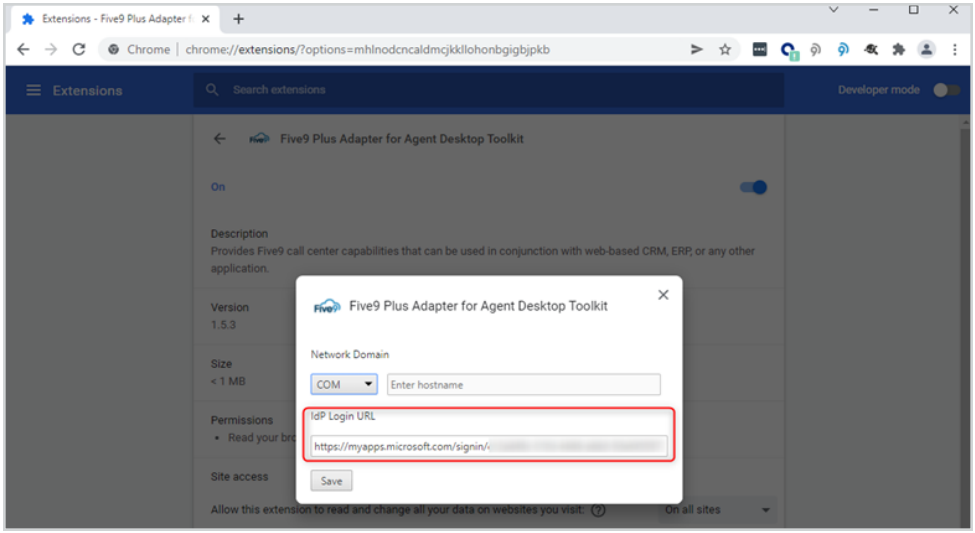
4 Copy the user access URL and enable the **Visible to users** option.



5 In your browser, select the ADT extension, and then choose **Options**.

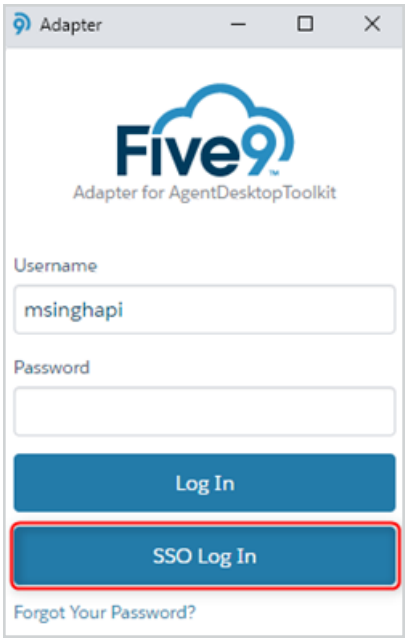


6 In the **IdP Login URL** field, paste the user access URL you copied earlier from Azure.



7 Click **Save**.

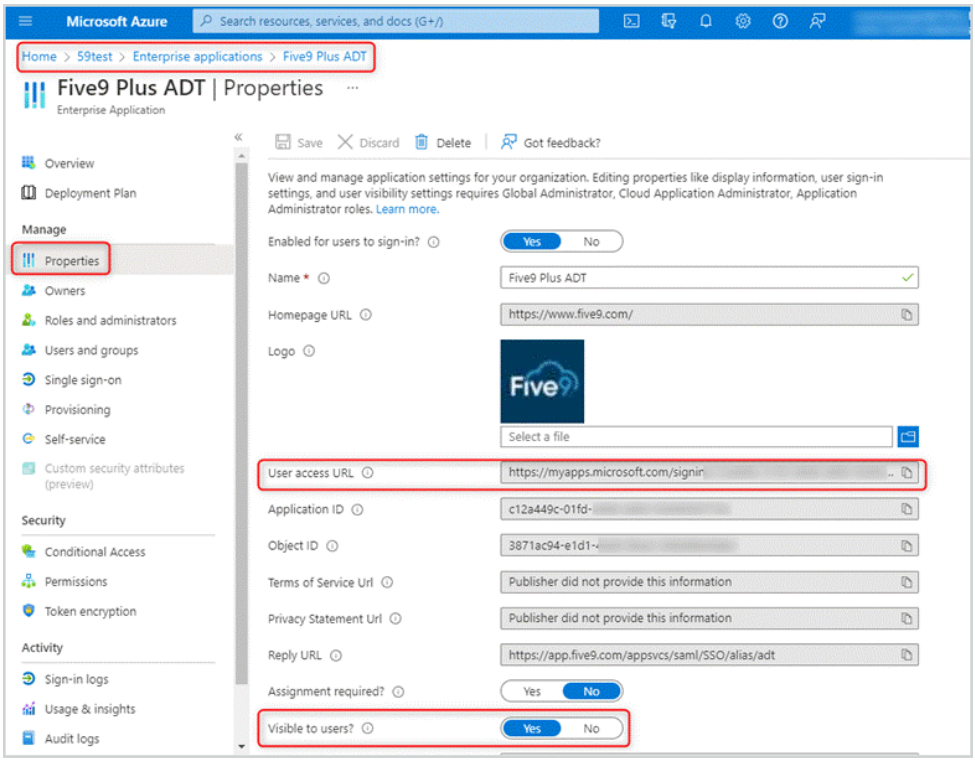
The ADP adapter now includes the **SSO Log In** option.



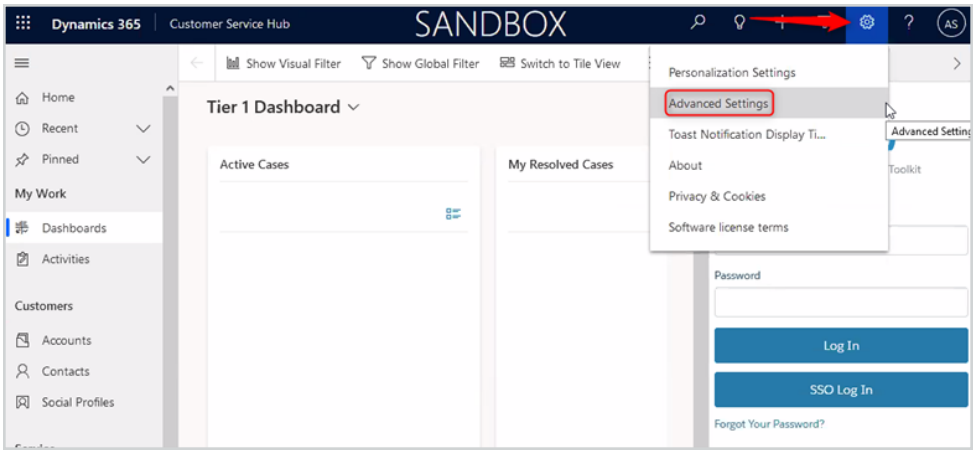
Microsoft Dynamics 365 Single Sign-on CTI Configuration

Follow these steps:

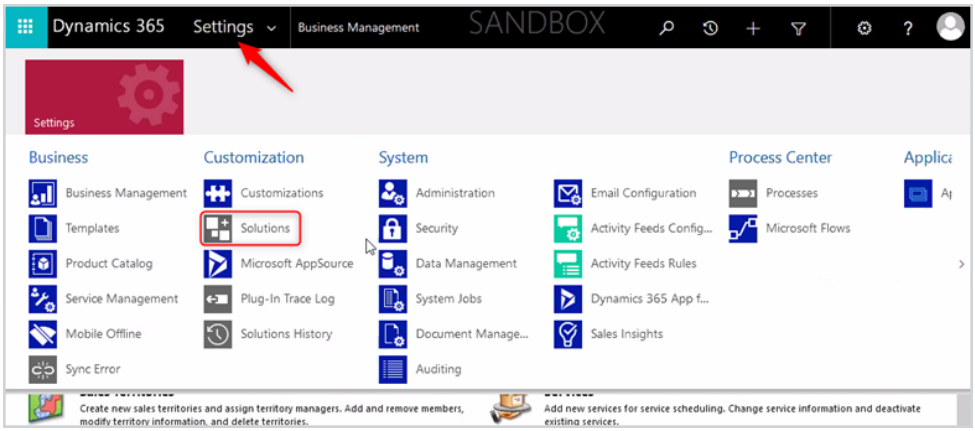
1. In the Microsoft Azure portal navigation pane, select **Azure Active Directory**.
2. Click **Enterprise applications**, and then click **All applications**.
3. Select the appropriate application, and then click **Properties**.
4. Copy the user access URL and enable the **Visible to users** option.



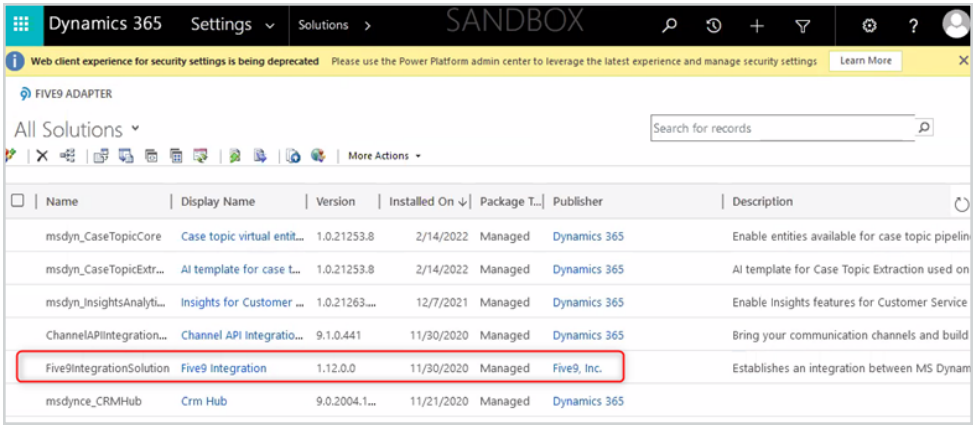
5 In Microsoft Dynamics 365, open **Advanced Settings**.



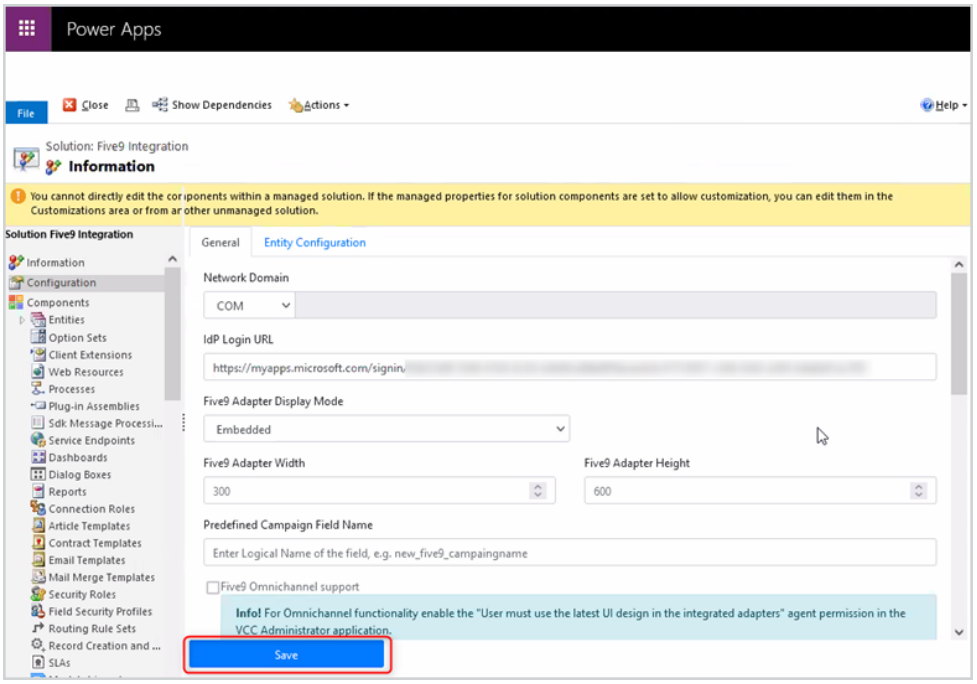
6 Click **Settings**, and then click **Solutions**.



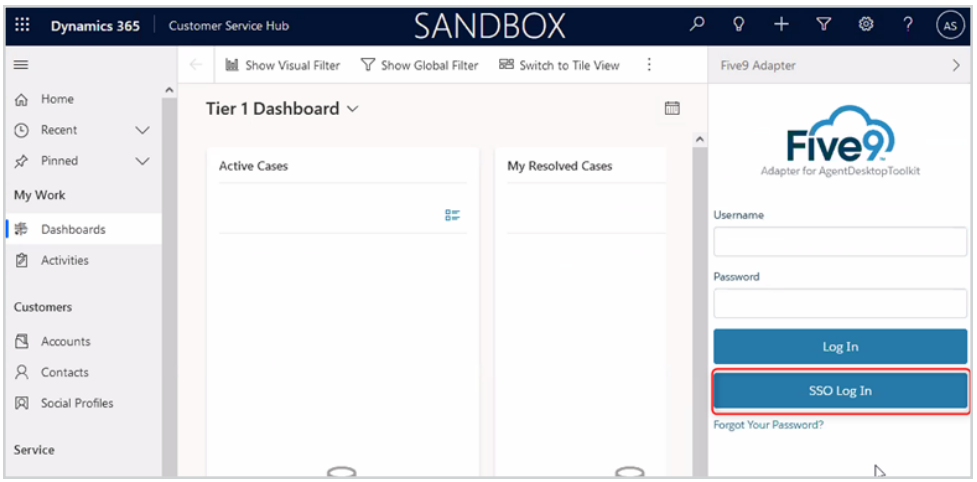
7 In the **All Solutions** list, click the Five9 integration solution display name.



8 On the CTI Information page, in the **IdP Login URL** field, paste the user access URL you copied earlier from Azure, and then click **Save**.



The Microsoft Dynamics sidebar adapter now contains the Five9 SSO log in option.



Oracle Service Cloud

Add the login URL of your identity provider host to the browsers that your agents will use, for example: `https://<IdPhost>/adfs/ls/IdpInitiatedSignOn.aspx`. `<IdPhost>` is your Five9 host: `app.five9.com` or `app.five9.eu`.

Salesforce

When you install the Five9 Plus adapter, obtain the user access URL parameter, which you will use to populate the IdpLoginURL parameter of the call center definition file.

Zendesk

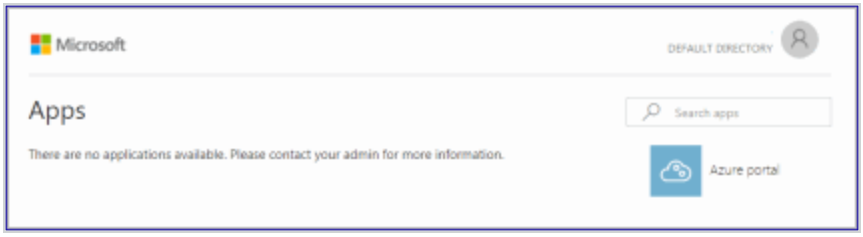
When you install the Five9 Plus adapter, add the login URL of the host. For more information, see `idpLoginUrl` in the Administrator's guide.

Testing Azure Single Sign-On

Follow these steps:

1. To test your Azure AD single sign-on configuration, go to the Access Panel.
2. If you customized your login page, append your domain to the URL as follows: `http://myapps.microsoft.com/<your domain>.com`.

   You can use any active or verified domain name configured in your Azure AD portal.



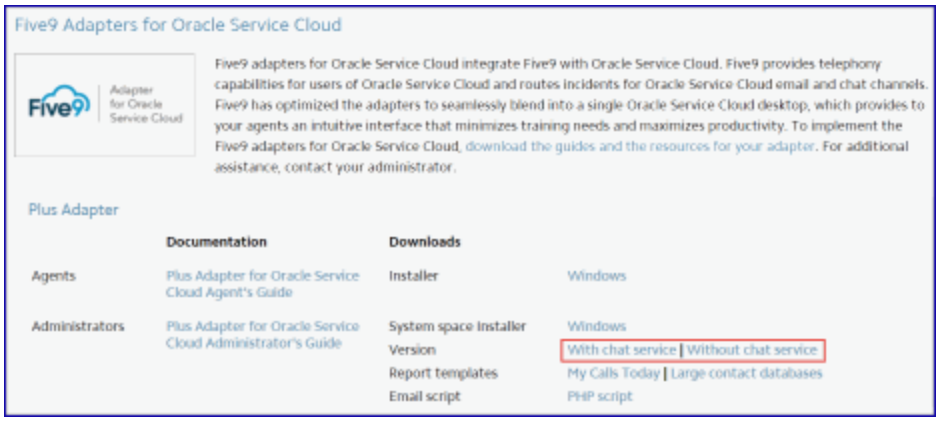
3. Click the **Five9 Plus Adapter (CTI, Contact Center Agents)** tile.

   You are automatically logged into your Five9 Plus Adapter (CTI, Contact Center Agents) application.

Oracle Service Cloud

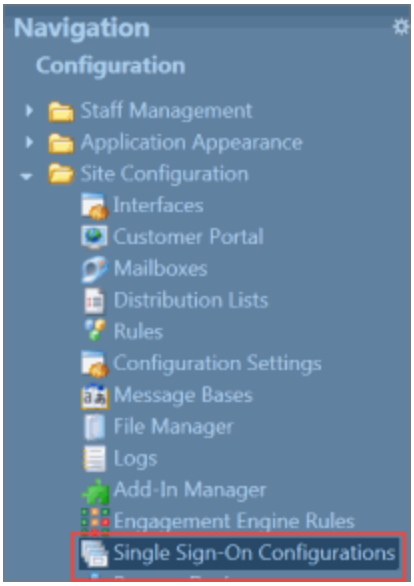
To configure the Oracle Service Cloud identity provider for single sign-on, perform these steps:

1. To download the file `Five9.RightNow.Freedom.Installer.zip`, browse to **Five9 CRM Integrations > Five9 Adapters for Oracle Service Cloud > Plus Adapter** and click either **With chat service** or **Without chat service**.

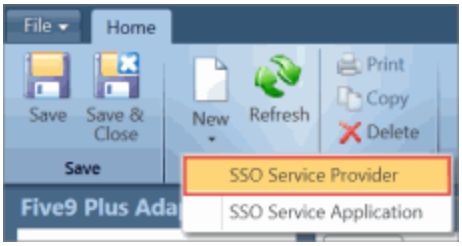


2. Open the Oracle Service Cloud Right Now administrator application.

3. Open the **Site Configuration > Single Sign-On Configurations** section.



4 Click **New > SSO Service Provider**.



5 Configure the service provider.

> **Note**
>
> The following steps require you to specify your Five9 domain and your application short name. For a list of domains and short names, see **Configuration Overview**.

a Specify the **Provider Entity ID** in the following format:

```
https://<five9_
domain>/appsvcs/saml/metadata/alias/<application>
```

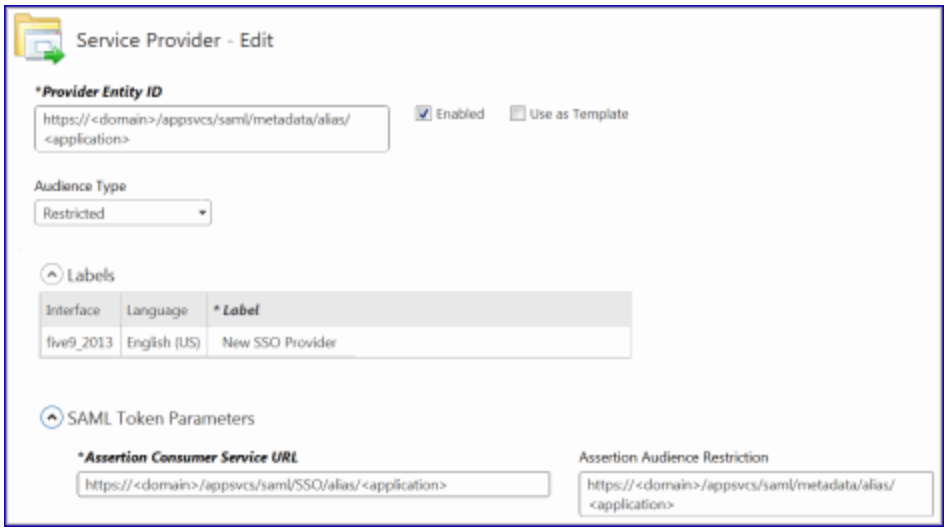
b Set the **Audience Type** to **Restricted**.

c Set a **Label**.

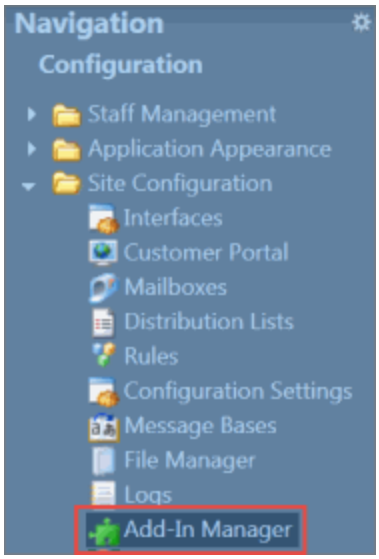
d Specify the **Assertion Consumer Service URL** in the format:
`https://<five9_domain>/appsvcs/saml/SSO/alias/<application>`

e Specify the **Assertion Restriction URL** in the format:
`https://<five9_domain>/appsvcs/saml/metadata/alias/<application>`

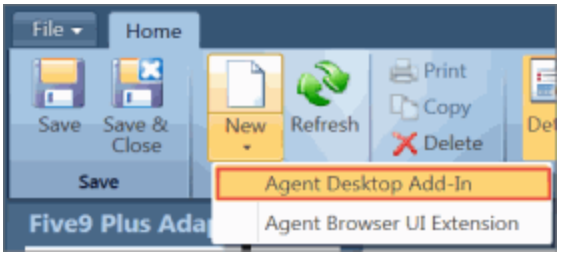
f Keep the default parameters for the **Logout Parameters**, **Certificates**, and **Signing Parameters** sections.



6 Open the **Site Configuration > Add-In Manager** section.



7 Click **New > Agent Desktop Add-In**.



8 Select the `Five9.RightNow.Freedom.Installer.zip` file that you downloaded.

9 Click **Profile Access**.

10 Select a profile.

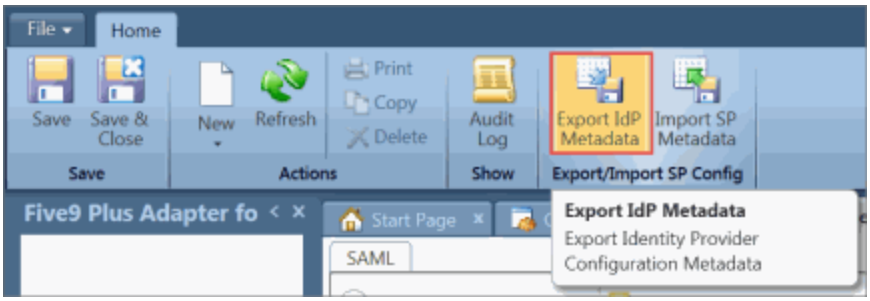
11 Scroll down to the **Network Domain** field.



12 Specify the **Value** for the **Network Domain** property in the format:
`https://<five9_domain>/appsvcs/saml/sp/<domainId>/alias/ora`

13 Click **Single Sign-On Configurations** and select your new service provider.

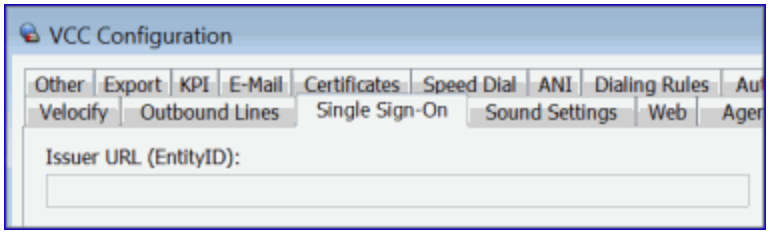
14 Click **Export IdP Metadata**.



15 Export the metadata.

16 In the VCC Administrator application, go to the **Single Sign-On** tab in the **VCC Configuration** dialog.

17 Set the **Issuer URL**, which is the `entityID` parameter in the metadata.



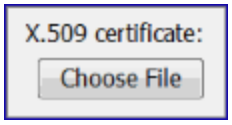
18 Set the **SingleSignOnService HTTP-Post binding URL**, which is the `SingleSignOnService Location` parameter in the metadata.



19 Create a certificate file with the extension.`crt`.

Use the `X509Certificate` parameter in the metadata.

20 Click **Choose File** and upload the certificate.



21 Ensure that the **Default NameID Format** is set to the default `unspecified` value.



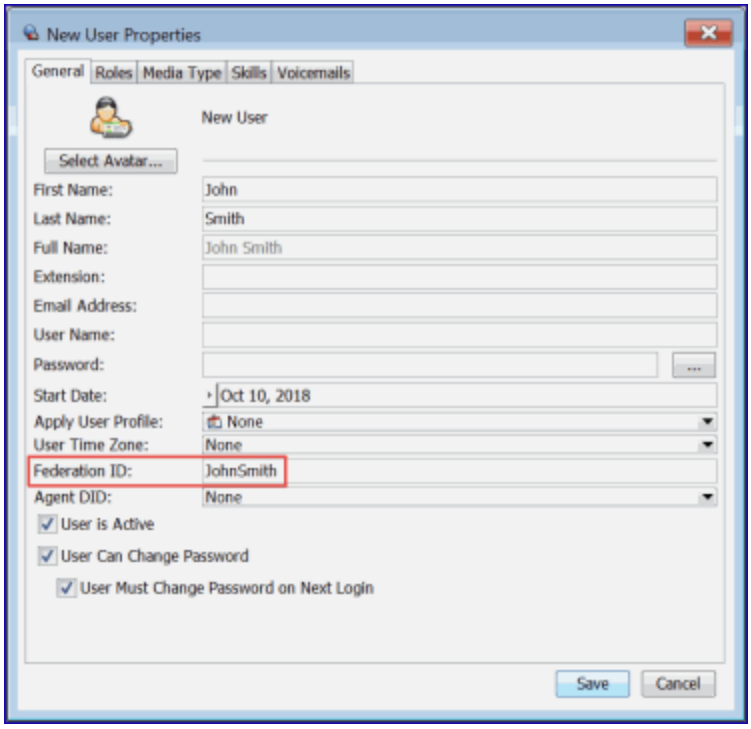
22 Click **Save**.

23 Set the **Federation ID** for the Five9 user.

a In the VCC Administrator application, open the Five9 user that will use single sign-on.

b Set the **Federation ID** for the Five9 user to the Oracle Service Now user name.

The **Federation ID** is set in the **General** tab.



24 Click **Save**.

Salesforce

Before configuring single sign-on, download the call center definition file. To better understand single sign-on, refer to the Salesforce guide Identity Implementation Guide.

> **Note**
> For information about configuring single sign-on in the Salesforce call center definition file and passing an identity provider login URL (IdpLoginURL parameter), see Modifying the Call Center Definition for SSO in the Plus Adapter for Salesforce Administrator's Guide.

Preparing to Implement Single Sign-On
Enabling Access to External Domains
Enabling Your Agents and Domain
Testing Salesforce Single Sign-On

Preparing to Implement Single Sign-On

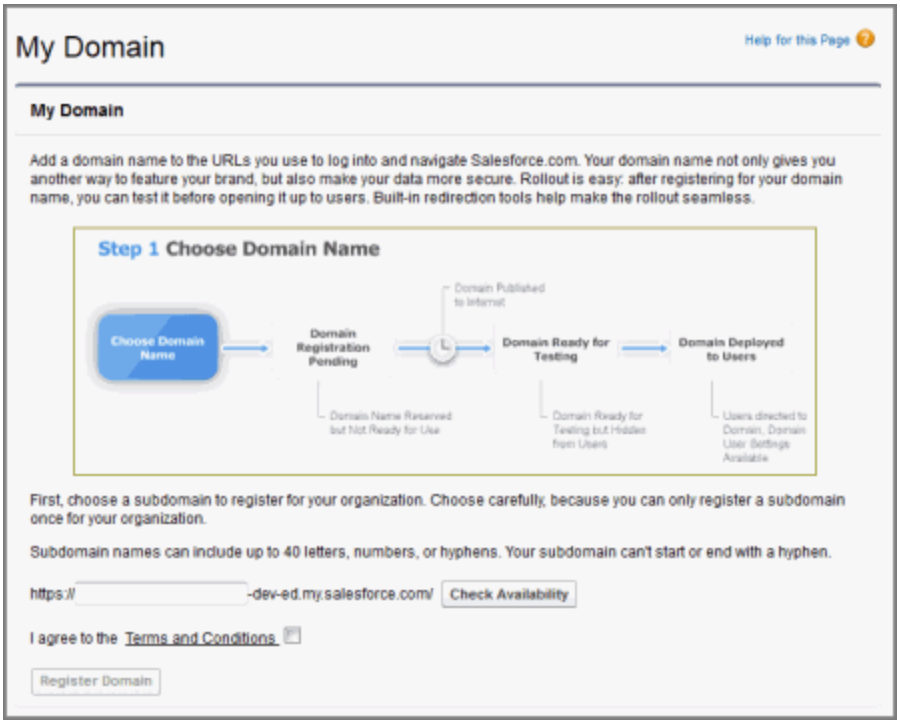
Follow each section in the order in which it is listed:

Creating a Domain Name
Enabling Salesforce as an Identity Provider
Enabling Single Sign-On
Authorizing Users to Use Connected Applications
Editing the User's Profile for Single Sign-On

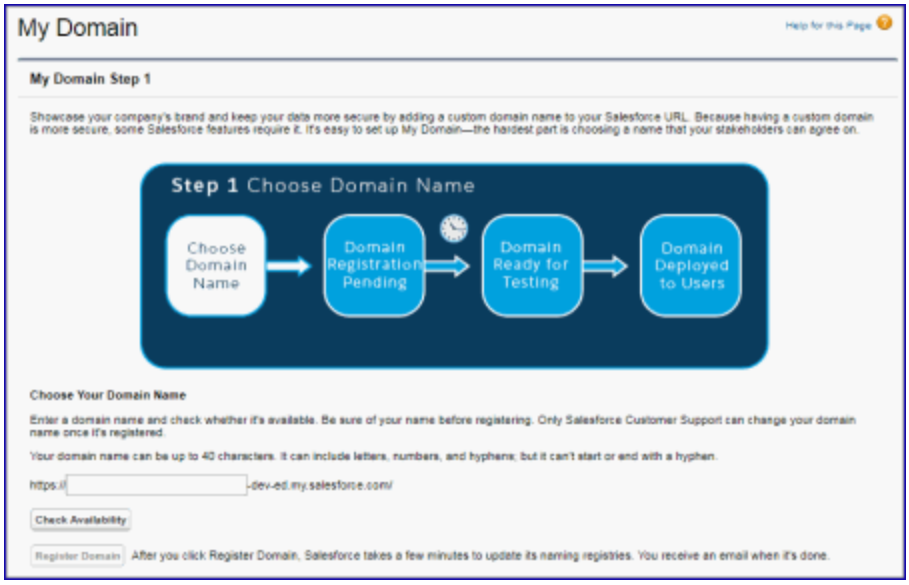
Creating a Domain Name

This section describes how to create a Salesforce domain if you do not already have one. You may use any domain name that you currently have in Salesforce, or you can create a domain name now. This domain name is not related to your Five9 domain name. When single sign-on is configured, your users can log into the domain.

1. Locate **My Domain**.
2. In the field, enter a domain name.
3. Click **Check Availability**, and modify your domain name until the name is available.
4. Classic, read and agree to the terms and conditions.



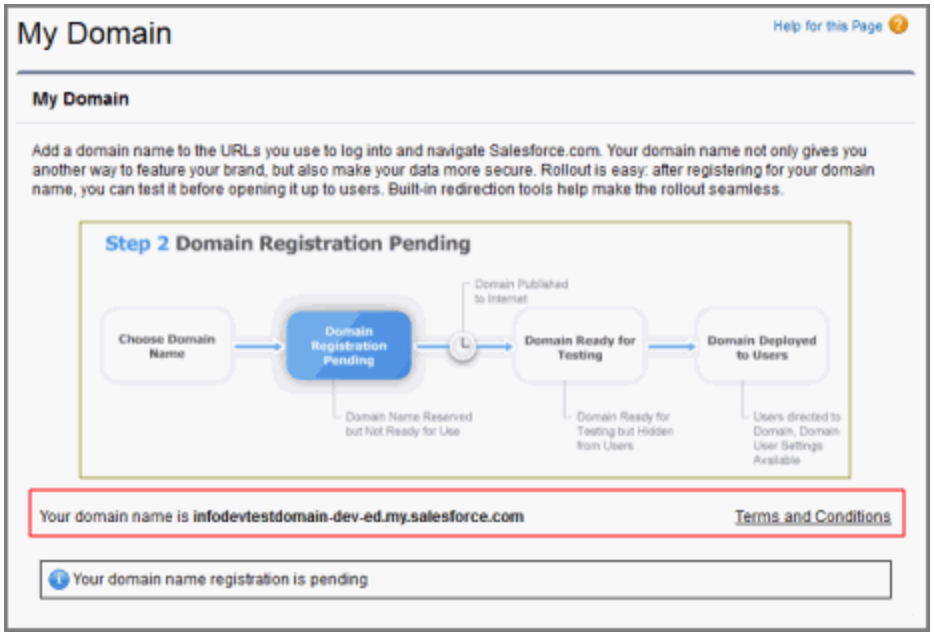
The Lightning interface is shown below.



5 Enter your domain name.

6 Click **Check Availability**.

7 Click **Register Domain**.



When the domain name is accepted, you receive an email from Salesforce. In Salesforce, instead of **Step 2 Domain Registration Pending**, you now see **Step 3 Domain Ready for Testing**.

All your application URLs, including those of Visualforce pages, change to the new URL. Therefore, be sure to update any application URLS that were created before you created this domain name.

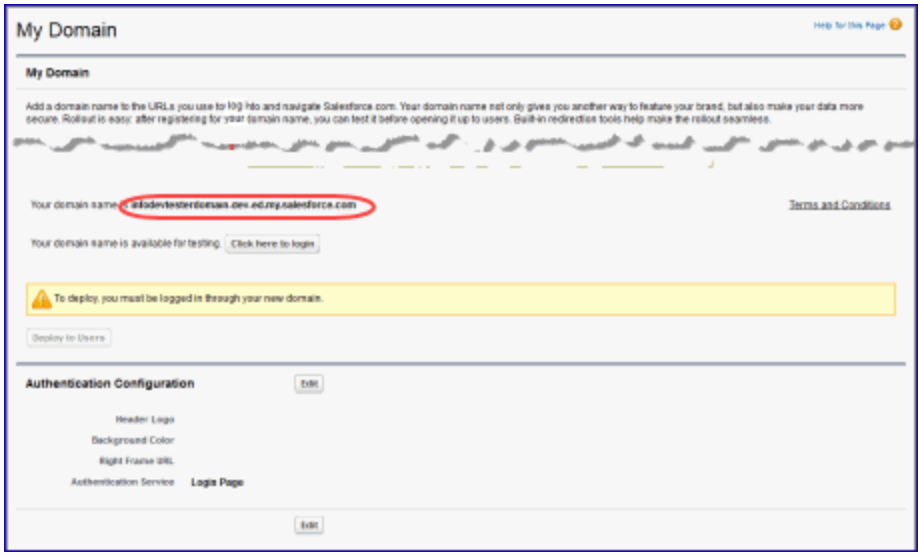
The login URL for the new domain is in this format: `https://<subdomain>.my.salesforce.com/domainname/DomainName.apexp`

For Classic, the example login URL for the domain is `https://infodevtestdomain-dev-ed.my.salesforce.com/domainname/DomainName.apexp`.

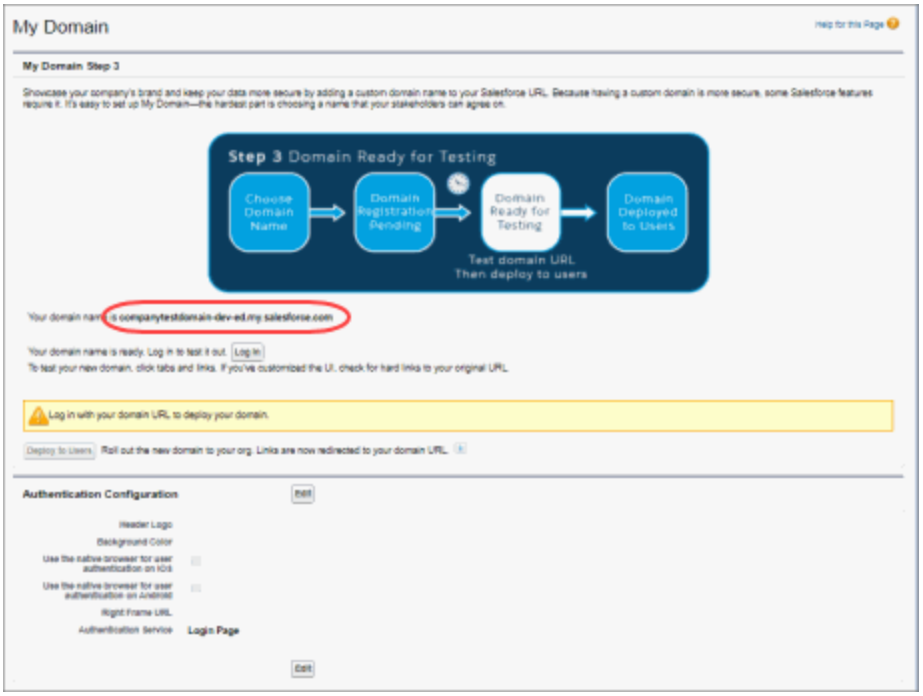
For Lightning, the example login URL for the domain is `https://companytestdomain-dev-ed.my.salesforce.com/domainname/DomainName.apexp`.

8 After you have received the email, if necessary, refresh the Salesforce page to see Step 3.

The domain name for the Classic example is shown below.



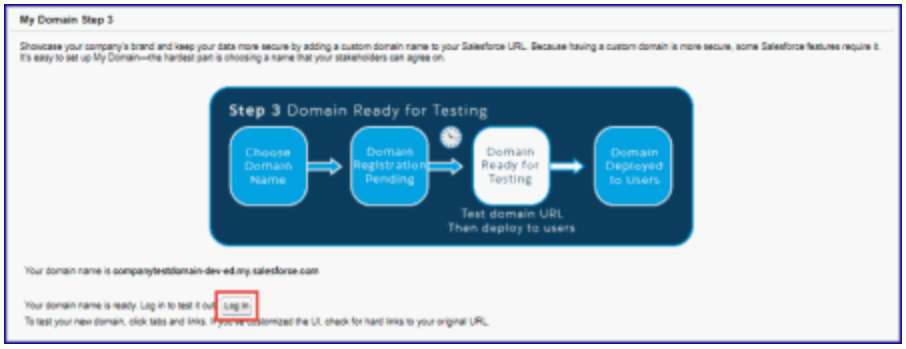
The domain name for the Lightning example is shown below.



9 For Classic, click **Click here to login**.



For Lightning, click **Log in**.

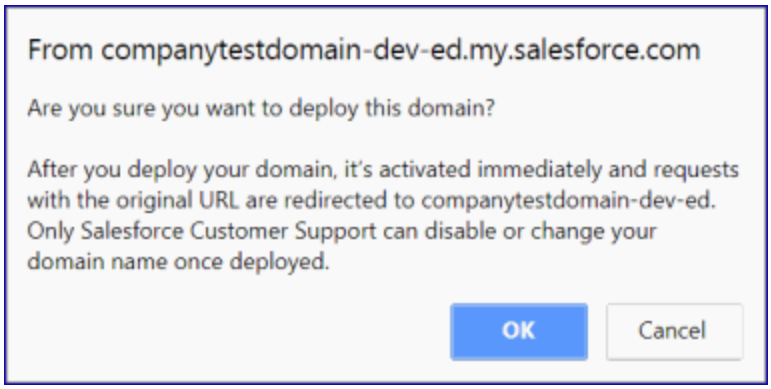


10 Click **Deploy to Users**.

The confirmation for Classic is shown below.



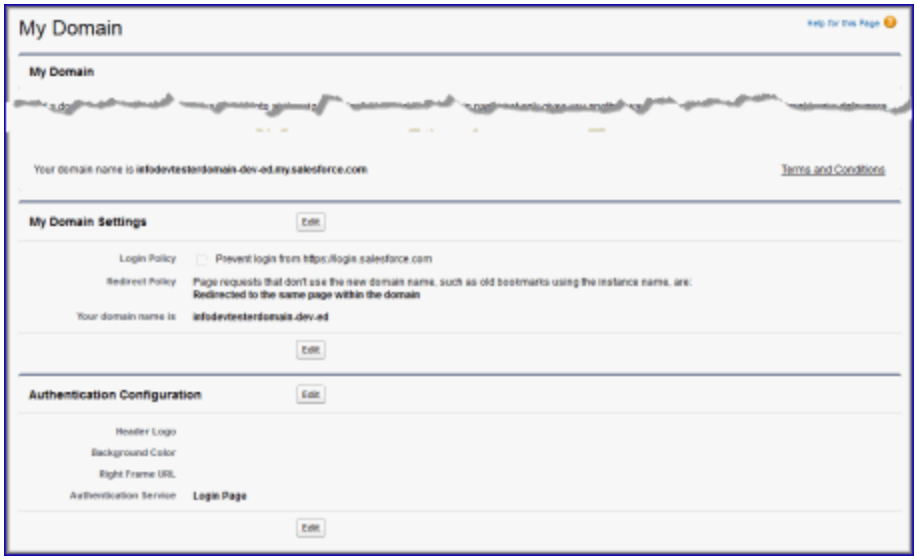
The confirmation for Lightning is shown below.



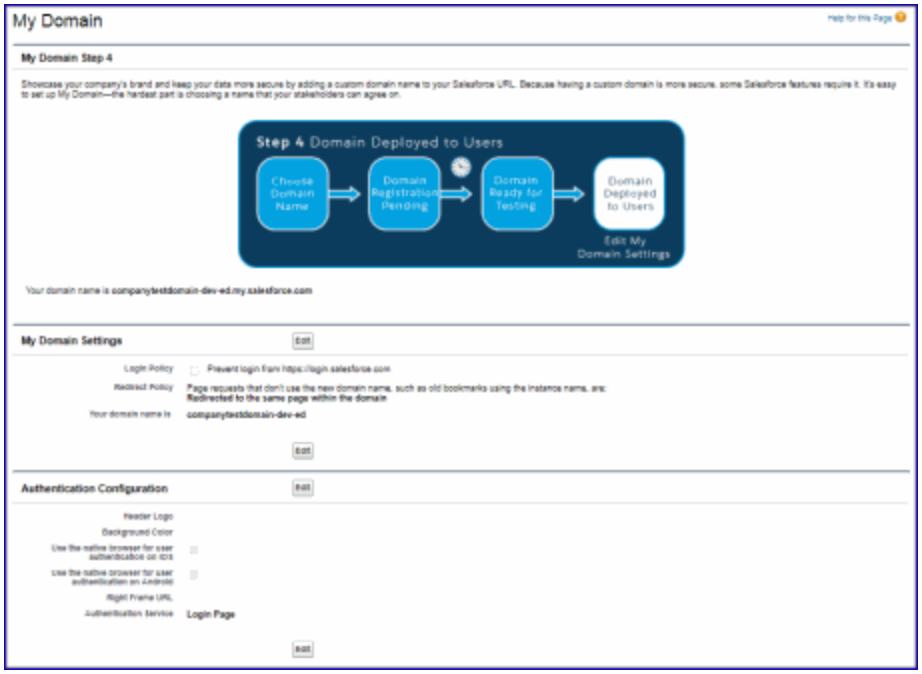
11 Click **OK**.

Your domain is ready to use. You may change now or later the default settings and the appearance of the login page that your users see.

The settings for Classic are shown below.



The settings for Lightning are shown below.



Enabling Salesforce as an Identity Provider

Select the certificate to use to communicate securely with other services.

1 Locate **Identity Provider**.



2 Click **Download Metadata**, and save the file.

This XML file contains the URLs, certificate, and format that you will later import in your VCC Administrator application to configure single sign-on in Five9. The file name is similar to this one: `SAMLIdP-00D61000000Y5Eo.xml`.

Enabling Single Sign-On

Enabling single sign-on in your domain is the first configuration step. If you later decide to use standard login, you may do so by disabling this option. No other change would be needed.

1 Locate the **Single Sign-On Settings** menu.



2 Click **Edit**.



3 Check **SAML Enabled**.

4 Click **Save**.

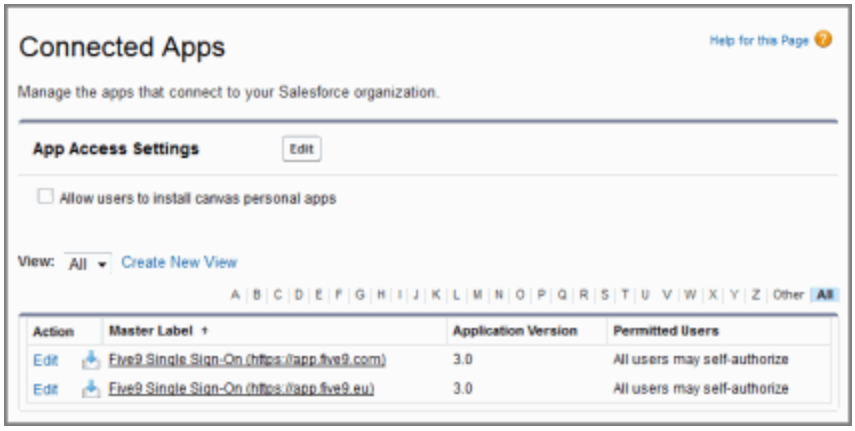
Authorizing Users to Use Connected Applications

In this section, you select the profiles of users who may access the configuration of connected applications.

1 Go to the **Connected Apps** menu.

You see all the connected apps that apply to your organization. All applications provided by Five9 start with **Five9**.

The Classic connected apps are shown below.



The Classic and Lightning connected apps are shown below.



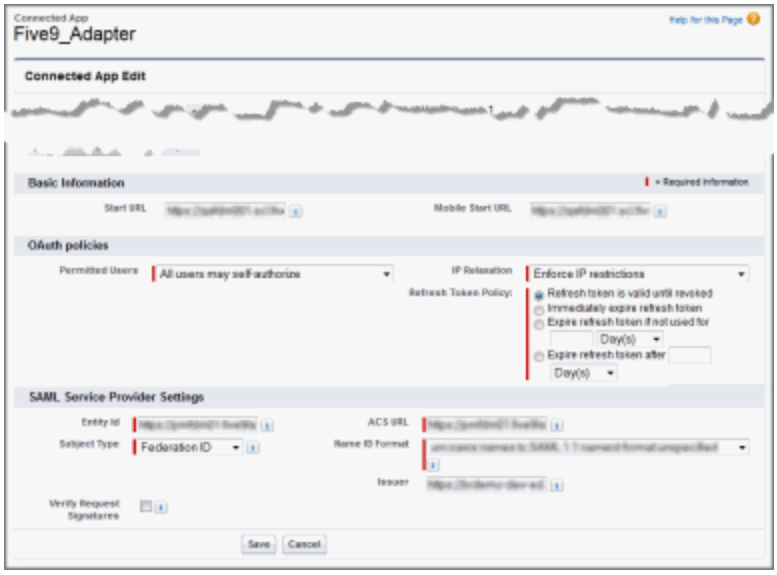
The images shown in this chapter are specific to Salesforce.

2 For Classic, click **Edit** next to **Five9 Single Sign-On (https://app.five9.com)**. For Lightning, click **Edit** next to **Five9 Single Sign-On Lightning (https://app.five9.com)**.

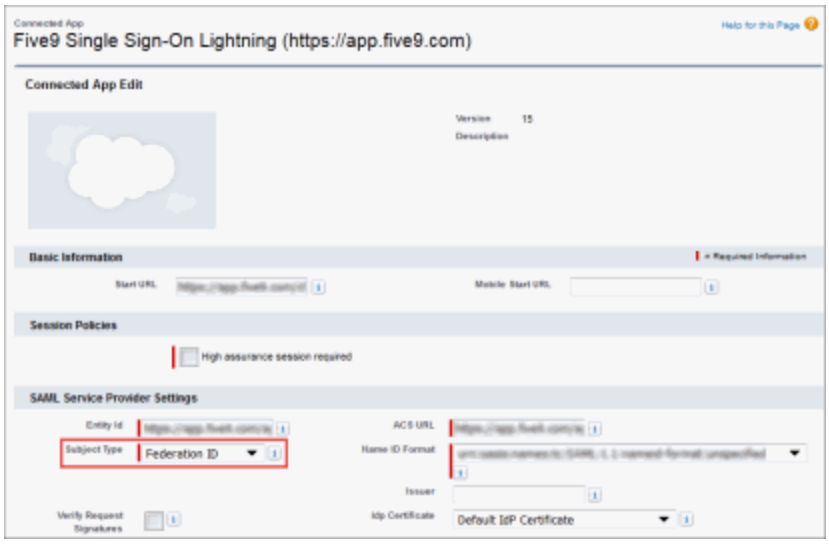
Most fields were populated when you installed the managed package.

The default Start URL in the Basic Information section is `https://app.five9.com/clients/integrations/sf.main.html?appKey=SF`.

The following image shows the Classic settings.

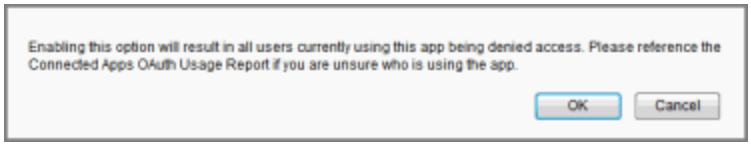


The following image shows the Lightning settings.



3 Select these options.

- *Permitted Users*: For Classic only, select **Admin approved users are pre-authorized**. When you do so, a warning message appears. Click **OK**.



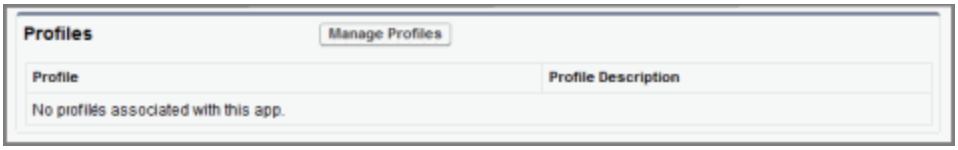
- *Subject Type*: Type of unique ID that agents will use to log into Salesforce and Five9. The value, such as an email address, must be the same in both applications and must persist until the user is deleted. Five9 recommends that you select Federation ID. However, you may need to select another type of ID to conform to your current Salesforce implementation. For more information, see **Adding a Federation or Other Persistent ID to Users VCC Properties**.

4 Click **Save**.

The list of connected apps reappears.

5 For Classic, click **Five9 Single Sign-On (https://app.five9.com)**. For Lightning, click **Five9 Single Sign-On Lightning (https://app.five9.com)**.

6 In the details page, scroll down to the Profiles section, and click **Manage Profiles**.



7 On the profile assignment page, select the profiles that you want to allow access to Five9 with single sign-on.



8 Click **Save**.

The list of connected apps reappears.

9 Use one of the following options:

- For Classic, repeat step 2 to step 8 for **Five9 Single Sign-On (https://app.five9.eu)**.
- For Lightning, repeat step 2 to step 8 **Five9 Single Sign-On Lightning (https://app.five9.eu)**.

Editing the User's Profile for Single Sign-On

You need to assign the user to the domain enabled for single sign-on and possibly add a value to the Federation ID field.

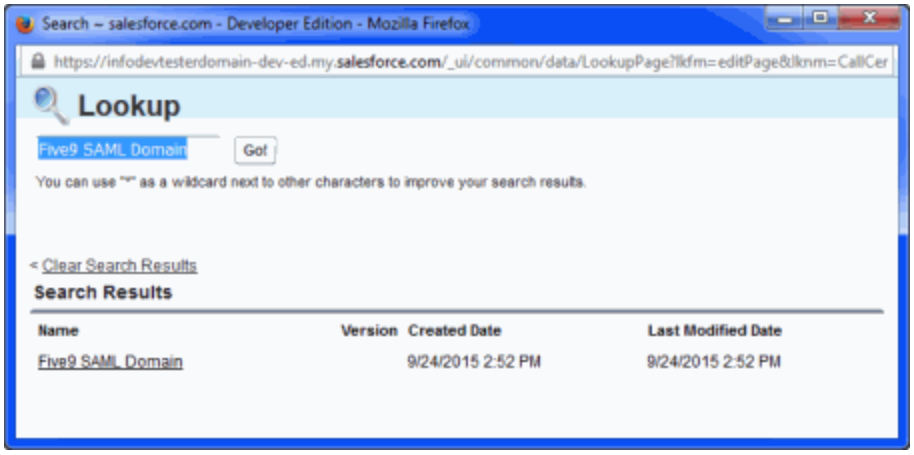
1 Locate **Manage Users > Users**.

2 Click **Edit** next to the user's name.

3 Scroll down to the Call Center field on the right, and click the magnifier.

4 Select your Five9 Single Sign-On Call Center.

The default name for Classic is **Five9 SAML Domain**.



The default name for Lightning is **Five9 Domain Lightning**.



5 Enter information in the **Single Sign On Information** section if appropriate:



- If you selected Federation ID as subject type, enter a name for the agent. You may use the agent's Five9 user name or another name reserved for single sign-on.
- If you selected another ID as subject type, leave the field empty.

6 Click **Save**.

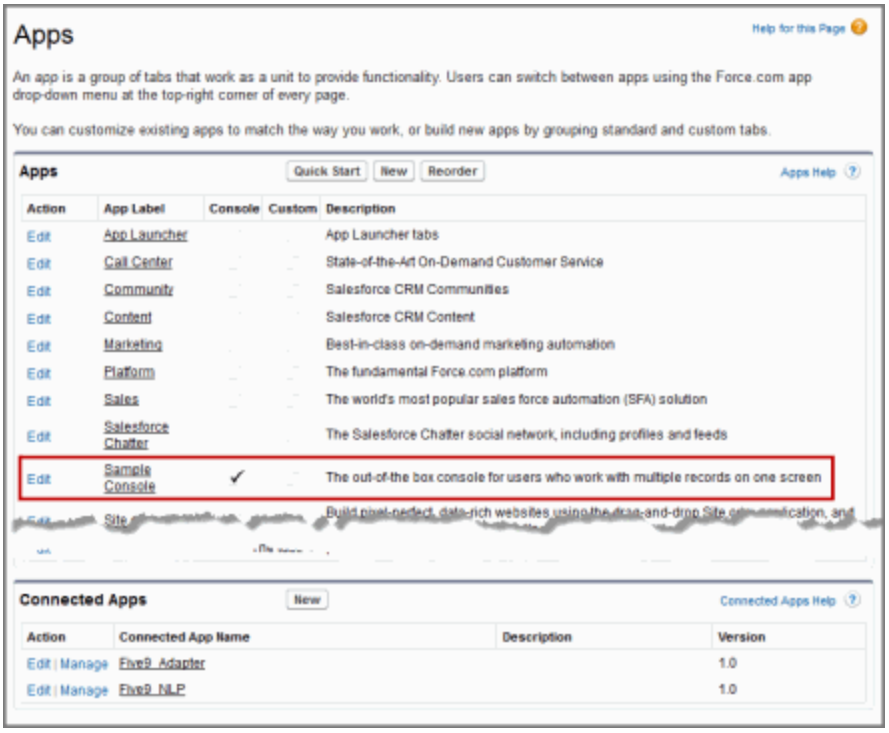
Enabling Access to External Domains

This section is for Salesforce Classic only. If you are using Salesforce Lightning Experience, skip this section.

If you use the console view in Salesforce Classic, you must enable the domains external to Salesforce that your users can access. These instructions use the sample console as an example. Apply the same procedure to your custom console. You can also use the console details page to configure the layout of the tabs and other elements available to your agents when they use the console view.

1 Locate **Create > Apps**.

2 Click **Edit** next to your console.



3 In the **Whitelist Domains** section, enter a comma-separated list of the domains that you want your users to access, without `http://` or `https://`:

`app.five9.com`, `app.five9.eu`, `app.eu.five9.com`, or `app.ca.five9.com`



4 Click **Save**.

Enabling Your Agents and Domain

You need to enable your agents and your domain in the VCC Administrator application.

Configuring Your Domain
Adding a Federation or Other Persistent ID to Users VCC Properties

Configuring Your Domain

To enable single sign-on, import the Salesforce metadata file that you downloaded earlier in the Identity Provider menu.

Note

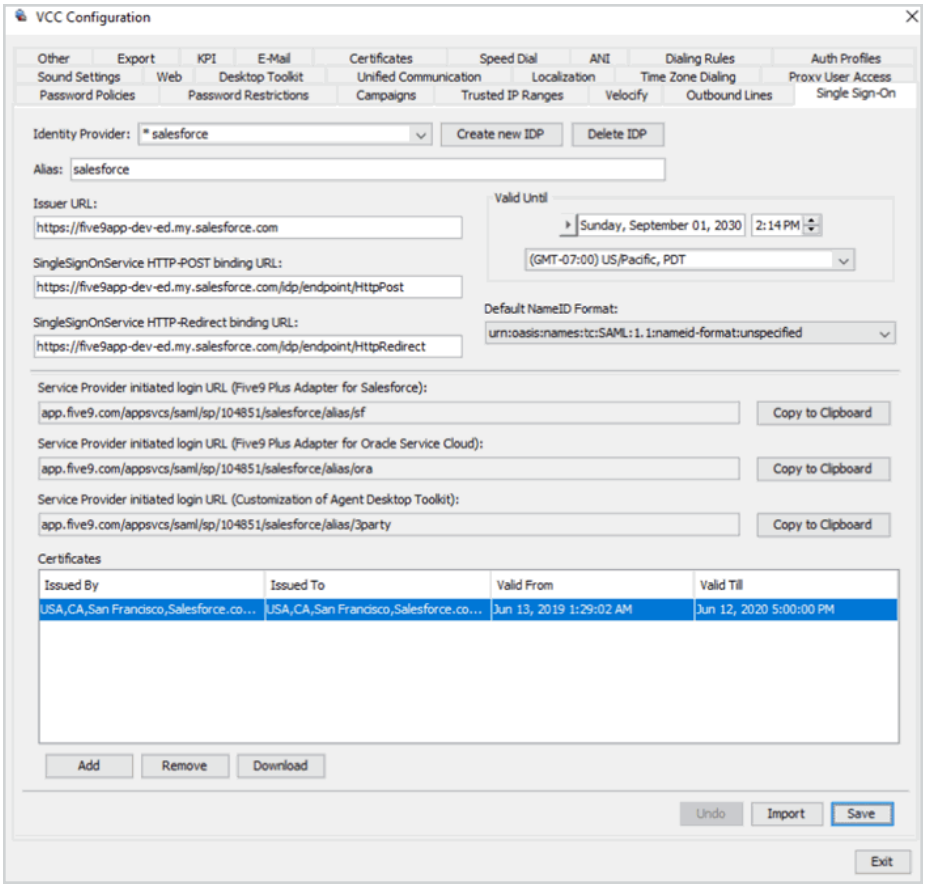
Configuration changes may take up to 10 minutes to take effect.

1 Log into the VCC Administrator application.

2 Select **Actions > Configure > Single Sign-On**.

3 To enter the information from a metadata file, click **Import** and locate your file.

All the fields are completed.



Not all of the fields can be imported or changed. You cannot import or change the **Service Provider initiated login URL** fields, which are set when your Five9 domain is created. Those fields contain the URLs used by the adapters for single sign-on.

This table describes the single sign-on fields that you can import and change.

Field	Description
Alias	Enter a descriptive name for this set of metadata. After you save, this name appears on the Identity Provider menu just above.
Issuer URL	URL of the identity provider, starting with the server name from the metadata file loaded from Salesforce identity provider settings.
Valid Until	Choose an end date for the validity of this set of metadata. This can differ from the end date of the certificates.

Field	Description
Default NameID Format	Format of the Name ID: (default) `urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified`
SingleSignOnService HTTP-POST Binding URL	Location of the main login address for your domain, starting with the server name.
SingleSignOnService HTTP-Redirect Binding URL	Location of the alternate login address for your domain, starting with the server name.
Service Provider initiated login URL (Five9 Plus Adapter for Salesforce)	Not used.

4 Click **Save**.

Adding a Federation or Other Persistent ID to Users VCC Properties

This value in this field is synchronized with the subject type that you selected in the Connected Apps menu in Salesforce.

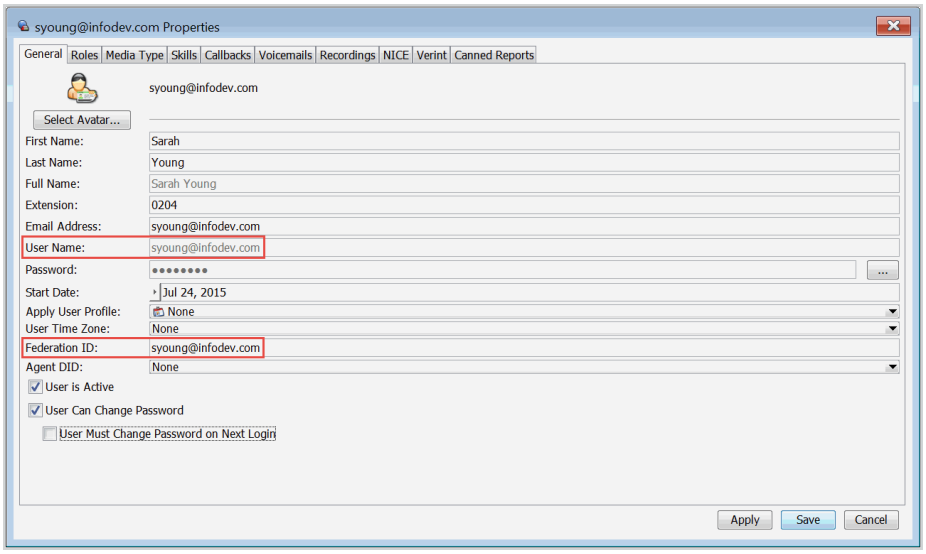
1 In the VCC Administrator application, open **Users**.

2 Open a user's name.

3 In the Federation ID field of the General tab, enter a value:

- If you selected Federation ID as subject type, enter a name for the agent. You may use the agent's Five9 user name or another name reserved for single sign-on.
- If you selected another ID as subject type, enter the value of that ID, for example: if you selected **Username** as subject type, enter the user's Salesforce Username.

In this figure, the Federation ID matches the Five9 user name.



4 Click **Save**.

Testing Salesforce Single Sign-On

To verify that single sign-on is working as expected, follow these steps.

1 Log out of the adapter and your Salesforce domain.

2 Log in to your Salesforce domain with the user name that you configured for single sign-on.

Troubleshooting

This chapter provides troubleshooting help to resolve issues.

Troubleshooting Errors
Troubleshooting Tips

Troubleshooting Errors

Use this table to resolve errors in the VCC Administrator application:

Issue Type	Resolution
Authentication	Verify these settings in the **User Properties > General** tab of the VCC Administrator application: • Your credentials are not expired. • The federation ID is case sensitive. Be sure to enter it correctly.
	Verify these settings in the **Actions > Configure > Single Sign-On** tab of the VCC Administrator application: • If SAML certificate sent by the identity provider and the SAML certificate stored in the VCC Administrator application do not match, upload the correct SAML certificate. • If the digital certificate has expired, upload a renewed one. • If the metadata date is incorrect, ensure that a future date is entered in the **Valid Until Date** field. • If the entity ID is incorrect, ensure that the URL entered in the **Issuer URL** field matches the identity provider's entity ID. If the identity provider's entity ID has a slash at the end, the issuer URL in the Five9 configuration includes it. Both should use the same HTTPS protocol.
HTTP 4XX or 5XX errors	Verify these settings in the **Actions > Configure > Single Sign-On** tab of the VCC Administrator application: • Enter the POST URL and redirect binding correctly.

Issue Type	Resolution
	• Set the reply URL in your identity provider to the correct Five9 reply URL.

Troubleshooting Tips

Use this table to troubleshoot common issues:

Issue Type	Resolution
Login	If you are prompted to enter your user name and password when you are logged out of the Salesforce Plus adapter, refresh the page to initiate the single sign-on session.
Single sign-on expiration	When the single sign-on token is older than seven days, you must log out of the identity provider and log back in.
Configuring an identity provider for multiple domains	In the classic VCC single sign-on configuration, identity providers that do not generate a unique entity ID for each integrated application can only be configured in one Five9 domain at a time. If this is the case and your organization has two domains in the Five9 US infrastructure, you cannot configure Azure/Entra in both.

Five9
The Intelligent Cloud Contact Center

UC Adapters

Administrator's Guide

October 2025

Learn how to implement Unified Communications (UC) adapters in your domain.

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About Five9

Five9 is the leading provider of cloud contact center software, bringing the power of the cloud to thousands of customers and facilitating more than three billion customer interactions annually. Since 2001, Five9 has led the cloud revolution in contact centers, delivering software to help organizations of every size transition from premise-based software to the cloud. With its extensive expertise, technology, and ecosystem of partners, Five9 delivers secure, reliable, scalable cloud contact center software to help businesses create exceptional customer experiences, increase agent productivity and deliver tangible results. For more information visit www.five9.com.

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What's New

Release	Change	Topic
Oct 2025	Added images to show extension number requirement.	Support for Extension Number Dialing
Sep 2025	Added content for phone number extension dialing.	Support for Extension Number Dialing
	Added phone number extension requirements and import order.	About Teams Contacts and Groups
July 2025	Updated the Microsoft Teams group filter content to reflect new filtering options.	Enabling and Configuring Microsoft Teams in Admin Console About Teams Contacts and Groups Using Teams Resource Accounts for Call Queues and Auto Attendants
Mar 2025	Updated instructions for mapping Five9 agent presence to the agent presence in Zoom.	Enabling and Configuring Zoom Phone in Admin Console
	Updated instructions for mapping Five9 agent presence to the agent presence in Microsoft Teams.	Enabling and Configuring Microsoft Teams in Admin Console
Nov 2024	Updated the Microsoft Permissions Requested image and instructions.	Registering the Five9 UC Adapter for Microsoft Teams
	Added content for the bi-directional agent presence feature in Microsoft Teams.	Enabling and Configuring Microsoft Teams in Admin Console
	Updated the administrator role requirement for Microsoft Teams.	Licensing Requirements

Release	Change	Topic
	Removed the topic from the Microsoft Teams section.	Creating a User as a Service Account
Jul 2024	Added options for grouping Microsoft Teams contacts in the address book.	**Enabling and Configuring Microsoft Teams in Admin Console**
	Added content about contact limitations and group filters.	**About Teams Contacts and Groups**
	Added licensing requirements for Microsoft Teams.	**Licensing Requirements**
Apr 2024	Added content about support for Microsoft Teams resource accounts.	**Using Teams Resource Accounts for Call Queues and Auto Attendants**

Zoom Phone

This section describes how to prepare your implementation to use the Five9 UC Adapter for Zoom.

Requirements
Creating a User as a Service Account
Installing the Application from Zoom App Marketplace
Enabling and Configuring Zoom Phone in Admin Console
Enabling the Zoom Adapter in Multiple Five9 Domains
Enabling Support for Zoom Phone Contacts with Extensions Only (no DID)
Managing Zoom Extension Dialing Support for Third-Party Transfers
Updating the Application for Existing Integrations

Requirements

- Request that your domain be enabled for this UC Adapter. For more information, contact your Five9 representative.
- Before starting, obtain the Zoom administrator credentials that apply to your implementation.
- Obtain or configure a Five9 Administrator Console administrator user with at least the **uc.uc.Access UC Panel** permission.

Creating a User as a Service Account

Currently, a Zoom administrator can install or add the Zoom UC adapter from the Zoom App Marketplace. However, issues arise when the admin changes their password, enables multifactor authentication, or no longer has the admin role. These issues result in an invalid grant or invalid access token.

To avoid the issue, you can create a dedicated Zoom user as a service account for authorizing the adapter.

> **Note**
>
> Creating a user as a service account is optional. You can use a regular admin user to grant consent for the Five9 UC adapter app and it does not affect the integration capabilities and features. However, when there is a change to the regular admin user, you need to register the Five9 UC adapter again to fix the token error. The error should display for the adapter's status in Admin Console when it occurs.

To create a new role and a new user in Zoom Phone for the Zoom UC adapter:

1. In Zoom Phone, go to **User Management** > **Roles** and add a new role. For example, use the role name *AdminUC* and the description *For authorizing Five9 Adapter*.

2. Go to **Role Settings** and enable the following settings for the newly added role:

Setting	Set to
User and Permission Management > **Users**	View and Edit
User and Permission Management > **Contacts**	View
Advanced Features > **Marketplace**	View and Edit
Zoom Phone > **Phone Management**	View

3. Click **Save**.

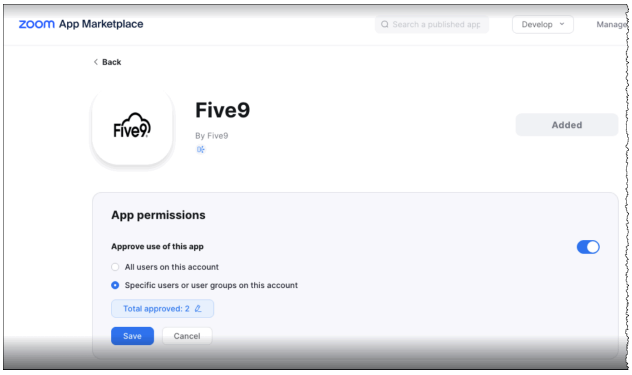
4. Create a new Zoom user, following your company password guidelines. The user should not belong to any group or department so that it won't appear in the Five9 address book. It's best to set the user password to never expire and not to enable multifactor authentication for the user.

5. Add the newly created user as a member of the newly added role.

6. Activate the user as instructed in the activation email, and use the new user account to log in to Zoom App Marketplace. Add the Five9 adapter as described in **Installing the Application from Zoom App Marketplace**.

7. If the **Add** button is unavailable, add the user to the list of users who can add the

Five9 adapter.



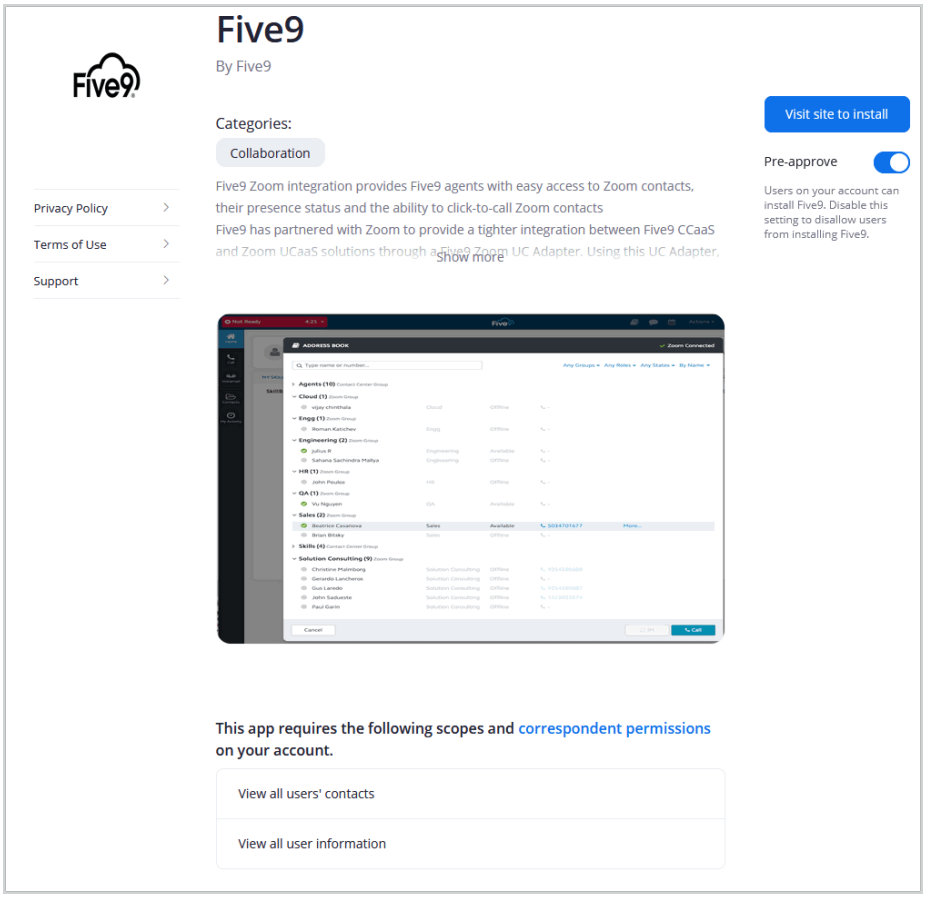
Installing the Application from Zoom App Marketplace

You must install a Five9 app located in the Zoom App Marketplace. This app enables Five9 to gather the authentication data required to enable the adapter.

1. Obtain a Zoom administrator account.
2. Log into the Zoom App Marketplace.
3. Locate and click **Five9 App** for your geographic region: Five9 for U.S., Five9-EU for EU, Five9-UK for UK, or Five9-CA for Canada.



4. In the **Five9 App** for the selected region, enable **Pre-approve**, and then click **Visit site to install**.



5 In the Five9 landing page, log in with your Admin Console account credentials, which are the same as your VCC Administrator account credentials.



6 Follow the steps and click **Authorize**.

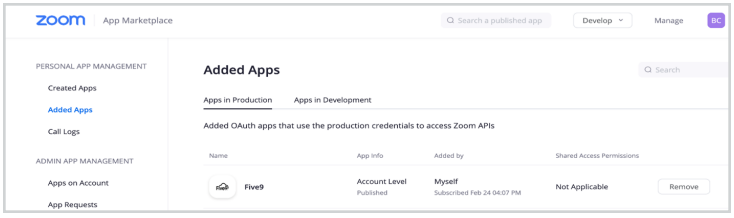
The **Authorization Successful** message displays.

Uninstalling the Application from Zoom App Marketplace

These instructions explain how to remove the app in a US domain. Ensure that you log in to the Zoom Marketplace domain where you installed the app.

To locate the app in the Zoom App Marketplace and remove it from the Zoom account:

1. Log in to https://marketplace.zoom.us/ using an admin account.
2. Click **Manage**.
3. Select the **Added Apps** tab in the left panel.
4. Select the **Apps in Production** tab.
5. Select the Five9 app, and then click **Remove**



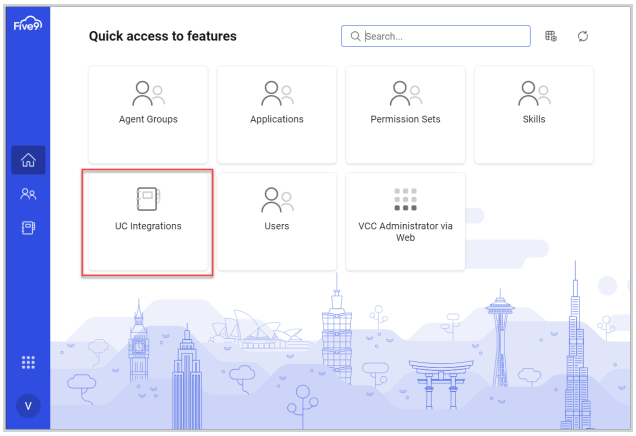
This removes the Five9 app from the Zoom account and all account-related data from the Five9 server.

Enabling and Configuring Zoom Phone in Admin Console

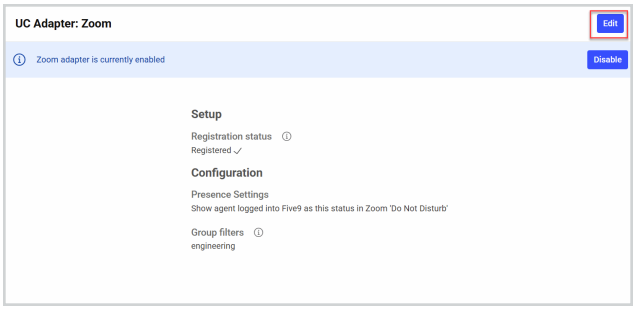
Once you connect Five9 to your Zoom account, configure and enable the adapter in the Five9 Administrator Console application.

1. Log in to Five9 Admin Console at https://admin.us.five9.net or your regionalized login URL.

2 Select the **UC Integrations** card on the Admin Console home page.



The **UC Adapter: Zoom** page displays. This page displays the current configuration settings.

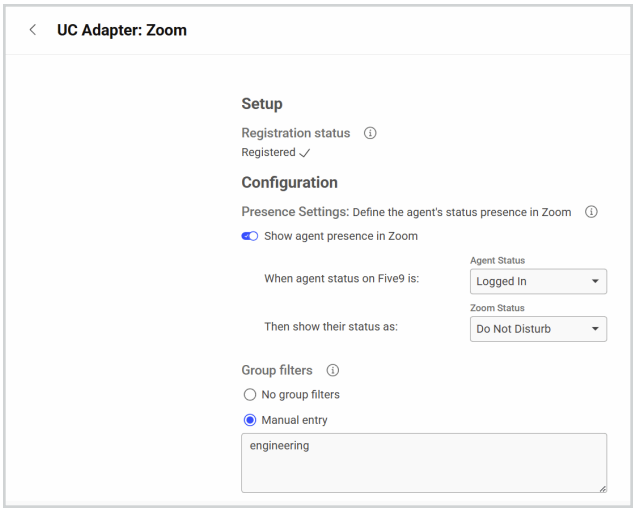


3 To enable or disable the adapter, click the **Enable** or **Disable** button.

> **Note**
>
> You can enable or disable the adapter in Admin Console at any time after the initial configuration. To access the setting, select the Unified Communications card on the Admin Console home page. Use the toggle in the upper-right corner to enable or disable the adapter.

4 To configure the Zoom settings, click **Edit**.

The **Setup** page appears.



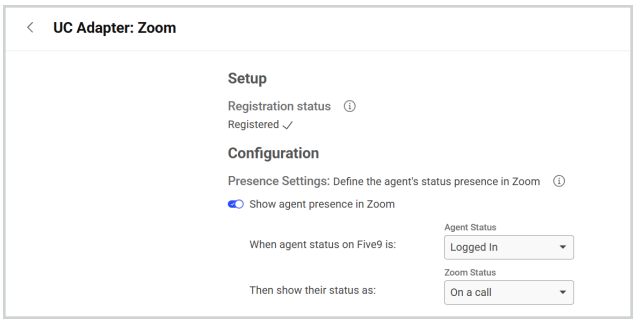
Refer to the following sections to configure Zoom agent presence and group filters.

> **Note**
>
> You must complete the Zoom App Marketplace procedure described in **Installing the Application from Zoom App Marketplace** before you can configure any settings. If you have not successfully completed that procedure, you will see a **Registration Failed** error in Admin Console.

Configuring Zoom Agent Presence

The Zoom agent presence feature enables an agent's status in Zoom to change based on their Five9 status. You can configure how agent presence works for your organization.

1 On the **Setup** page described above, click **Edit**.



2. To enable the display of agents' Five9 presence status in Zoom, under **Configuration** > **Presence Settings**, toggle on **Show agent presence in Zoom**. To disable the Five9 presence status in Zoom, toggle it off.

3. If you enabled agent presence in Zoom, do the following to indicate how you want the Five9 status to appear in Zoom. For example, you could map the Five9 **Logged In** status to **Do Not Disturb** so an agent who is logged in to Five9 appears as **Do Not Disturb** in Zoom. Or, for example, you could map an agent on a call in Five9 as **On a call** in Zoom.

    a. Next to **When agent status on Five9 is**, select the Five9 agent status that you want to map to a Zoom status.

    b. Next to **Then show their status as**, select the Zoom status to display.

    Note

    Do Not Disturb automatically sends Zoom calls coming into Zoom Phone to voicemail without notifying the agent.

4. Click **Save** and confirm your changes.

Note

The setting becomes active the next time agents handle a Five9 call or log in.

Configuring the Group Filter

The group filter feature lets you import a comma-separated list of Zoom departments (such as Engineering, Finance, Product Management) into the Five9 address book.

It is important to note that:

- Names must exactly match the department names as they appear in the Zoom directory.
- Entries are not case-sensitive.
- If this field is left blank, all departments are imported.
- Making changes to the Group Filter list in large directories may take a few minutes to take effect.

1. Open the **UC Adapter: Zoom Setup** page as described above.
2. Under **Group filters**, select either **No group filters** or **Manual entry**.
3. If you selected manual entry, enter a list of Zoom department names.
4. Click **Save** and confirm your changes.

Enabling the Zoom Adapter in Multiple Five9 Domains

This section describes enabling the adapter for each Five9 domain for a single Zoom account (known as Zoom Tenant).

- Enabling domains

  Use a separate Zoom admin credential and Five9 Administrator Console credential for each Zoom authorization step. Only use Zoom admin credentials for one Five9 domain. For example, to enable two Five9 domains on a single Zoom account, use your Zoom-admin1 account and Zoom-admin1 credentials for the first Five9 domain, and Zoom-admin2 account and Zoom- admin2 credentials for the second Five9 domain. Use this method for all Five9 domains in your environment.

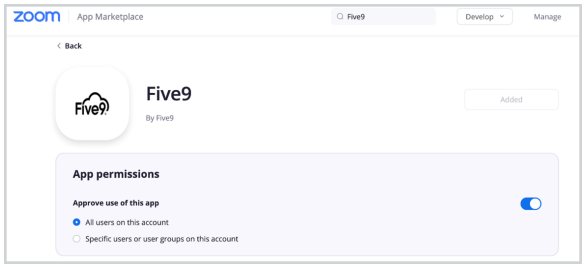
- Admin Console changes for the adapter
  - Configure Admin Console parameters for each Five9 domain separately.
  - Each Five9 domain Admin Console configuration can use a different group filter setting.

    For example, in Five9 Domain1 you can choose to only display Zoom contacts in the agent address book for Zoom departments Dept1 and Dept2, and in Five9 Domain2 only display Zoom contacts for Zoom departments Dept3 and Dept4.

- Capacity
  - The maximum number of UC contacts you can import into the Five9 address book is 22,000 for each Five9 domain.

- Use the group filter setting to limit the number of contacts in the address book.

- Zoom app permissions for admins
  - Select **All users on this account** when setting up the app in the Zoom App Marketplace to ensure that all Zoom admins can enable the Five9 adapter.



  - Select **Specific users or user groups on this account** and complete the *Add users* form to restrict who can enable the Five9 adapter.

> **Note**
> You must have groups defined in your Zoom account to add user groups.

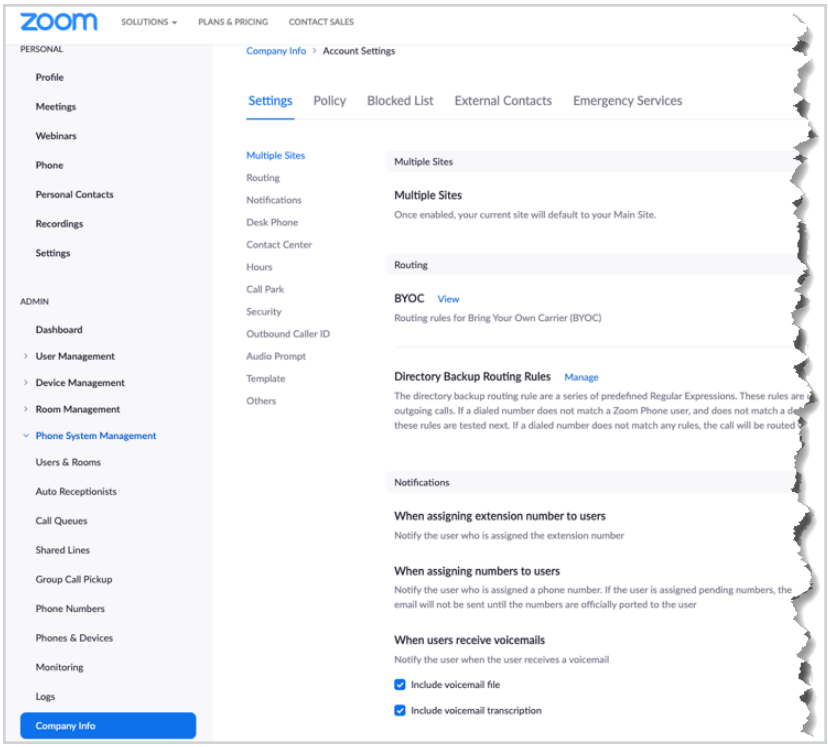
Enabling Support for Zoom Phone Contacts with Extensions Only (no DID)

This describes how to enable the capability for agents to transfer calls to Zoom Phone contacts that have an extension number but no DID.

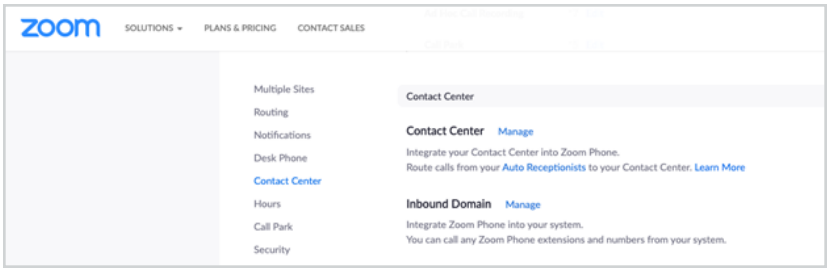
> **Note**
> This feature is only available in environments deploying Five9 Telephony Connect (SIP Trunk).

Adding the Inbound Domain

1 In Zoom, navigate to **Admin** > **Phone System Management** > **Company Info**.



2 Go to **Account Settings** > **Contact Center**.



> **Note**
>
> If you do not see the Contact Center option, contact your Zoom representative.

3 Click the Inbound Domain **Manage** link.

The Add Inbound Domain window displays.



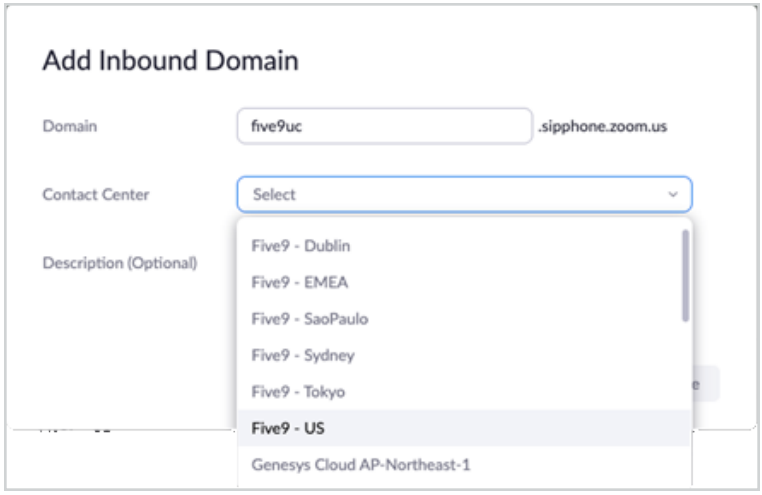
4 Click **Add** and complete the following fields:

- **Domain:** Enter your SIP domain name in the following format:

  *<yourcompanyname>*uc.sipphone.zoom.us

  For example, five9uc.sipphone.zoom.us

- **Contact Center:** Select a Five9 contact center for the region of your domain.



Note

This change takes effect in the Five9 address book on the following day.

Deleting the Inbound Domain

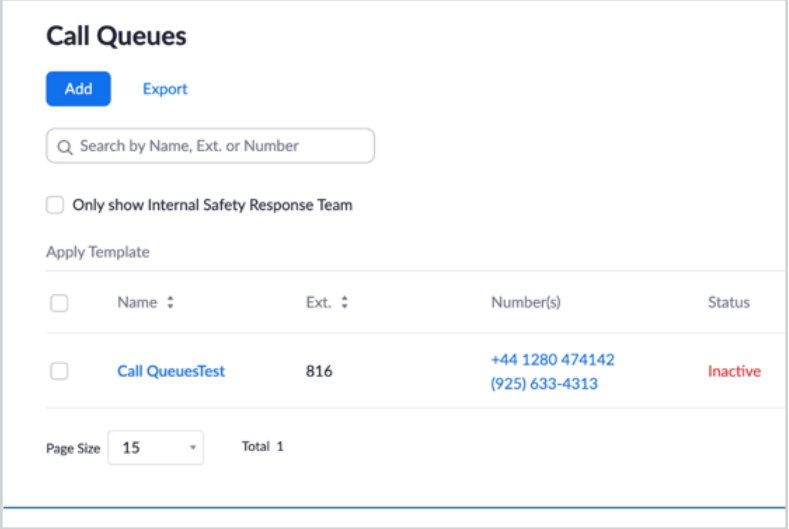
To revert to only importing Zoom Phone contacts that have DID numbers, click the Delete button for the desired inbound domain.

Zoom Call Queues, Auto-Receptionists, and Common Area Phones

By default, the Five9 address book can import Zoom call queues, auto-receptionists, and common area phones. These options display under the group headings, *Call Queues*, *Auto-Receptionists*, *Common Area Phones*.

If you do not want Zoom Call Queues, Auto-Receptionists, and Common Area Phones to appear in the address book, use the Group Filter parameter in Admin Console. This displays only the Zoom departments listed in the Group Filter in the address book.

In Zoom, set Call Queues to the Inactive state.

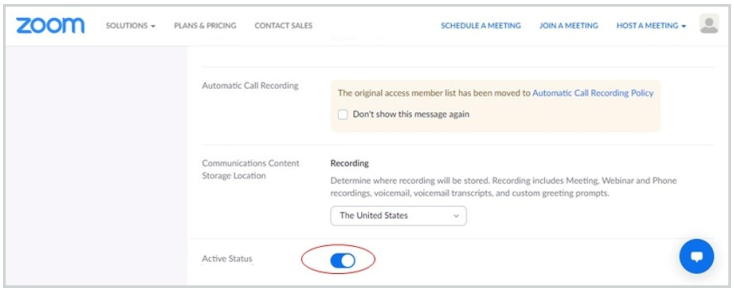


> **Note**
>
> Set Call Queues to **Active Status** to display call queues in the address book. Inactive call queues are not in the address book.

To change a Call Queues group to Active Status:

1. Log in to Zoom as administrator.
2. Navigate to **Phone System Management** > **Call Queues** and select the desired entry.

3 Scroll to the **Active Status** section and enable the option.



Managing Zoom Extension Dialing Support for Third-Party Transfers

In interactive voice response (IVR) workflow, inbound calls can be routed to Zoom via Zoom extension numbers. You must configure settings in Zoom and VCC Admin to activate this feature. You will configure call variables, configure an IVR workflow, and create pseudo numbers in VCC Admin.

> **Note:** Add inbound domain and Zoom Telephony Connect (SIP Trunk) before configuring the Zoom extension in IVR. See **Enabling Support for Zoom Phone Contacts with Extensions Only (no DID)**

Configuring Zoom Call Variables

1 In the left pane of VCC Admin, right-click **Call variables**, and then select **Add call variable group**.

The **New Call Variable Group Properties** window displays.

2 In the **General** field, remove **New Call Variable Group**, insert **zoom**, and then select **Save**.

3 Create the **ext_dialing** variable:

a Right-click the **zoom** call variable group, and then select **Add call variable**.

b In the first field of the **General** tab, delete **New call variable**, and then type **ext_dialing** for the variable name.

c In the **Description** field, type **Zoom Extension Dialing feature flag**.

d In the **Data type** menu, select **String**.

e In the **Default value** menu, select **Value**, type **Disabled**, and then select **Save**.

4 Create the **ext_number** variable:

a Right-click the **zoom** call variable group, and then select **Add call variable**.

b In the first field of the **General** tab, delete **New call variable**, and then type **ext_number** for the variable name.

c In the **Description** field, type **Dial-able pseudo phone number for Zoom extension**.

d In the **Data type** menu, select **String**.

e In the **Default value** menu, select **Undefined**, and then select **Save**.

5 Create the **inbound_domain** variable:

a Right-click the **zoom** call variable group, and then select **Add call variable**.

b In the first field of the **General** tab, delete **New call variable**, and then type **inbound_domain** for the variable name.

c In the **Description** field, type **Zoom SIPphone domain**.

d In the **Data type** menu, select **String**, and then select **Save**.

e In the **Default value** menu, select **Value**, enter the Zoom SIP domain name link, and then select **Save**.

> **Important:** You must use the same Zoom SIP domain link that you developed in **Enabling Support for Zoom Phone Contacts with Extensions Only (no DID)**

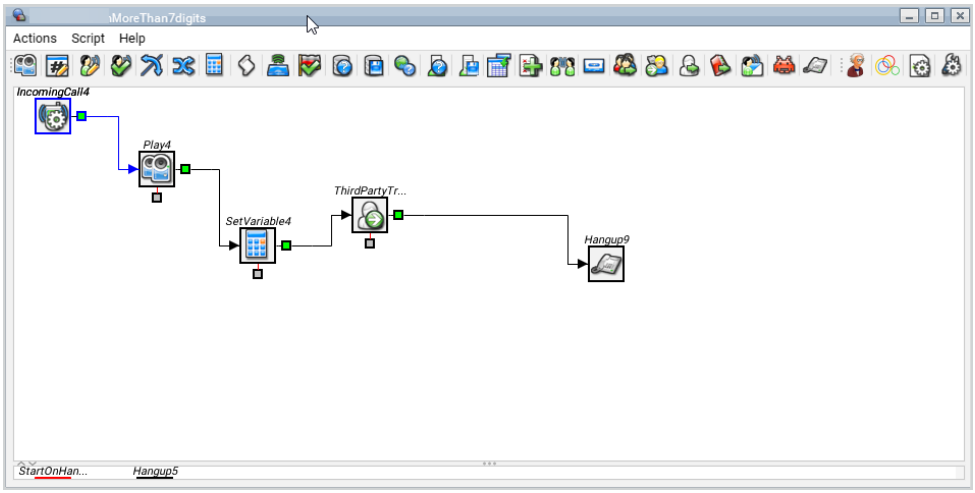
Configuring the IVR Workflow

1 In the left pane, select **IVR Scripts**, and then select the IVR workflow for the Zoom extension.

The IVR workflow must contain a **ThirdPartyTransfer** module.

> **Note:** If your IVR workflow is not available, see the Basic Configuration Administrator's Guide.

A new workflow window opens.



2 Select the **zoom.ext_dialing** variable, and then select **Edit**.

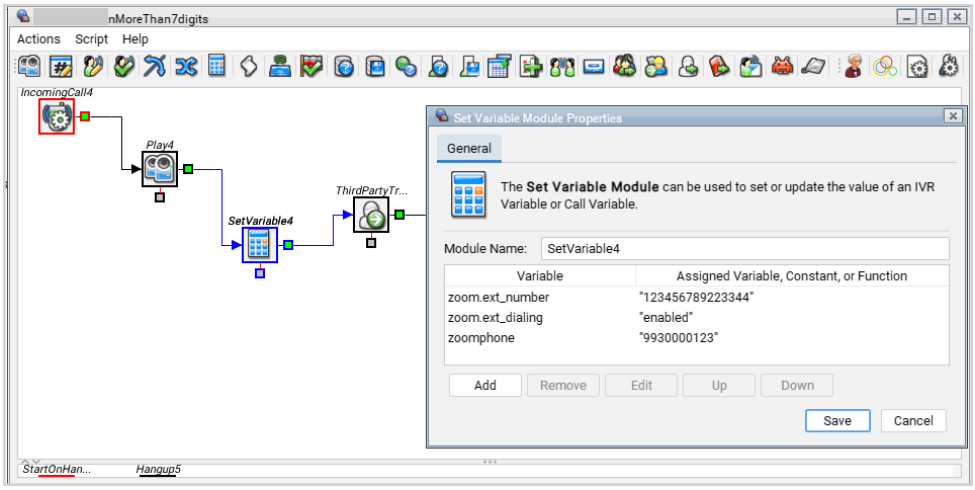
The **Assignment** window opens.

3 In the **Assigned Value** field, select **Constant**, enter **enabled**, and then select **OK**.

4 Select the **SetVariable** icon that immediately precedes the **ThirdPartyTransfer** icon.

> **Note:** If the **SetVariable** icon is not in your workflow, you can drag and drop the **SetVariable** icon into your workflow from the toolbar.

The **Set Variable Module Properties** window opens.



5 Select **Save** in the **Set Variable Module Properties** window.

Developing Pseudo Phone Numbers

Use the Zoom extension to create a 10-digit pseudo phone number. Based on the length of your zoom extension, follow instructions for **zoom extensions with three and seven digits** or **zoom extensions with greater than seven digits**.

> **Note:** Locate Zoom extension numbers in Zoom: **Admin** > **Phone systems management** > **Phone numbers** > **Assigned**

Digits	Domain	Country Code	Zoom Extension	Sample Pseudo Number
Phone numbers with 1-7 digits	E164	+1 (US) +44 (EU/UK)	1235	+19940001235 +449940001235
Phone numbers with 1-7 digits	non-E164		1235	9940001235
Phone numbers with more than 7	E164	+1 (US) +44 (EU/UK)	123456789223344 123456789223344	+19930000123 +449930000123

Digits	Domain	Country Code	Zoom Extension	Sample Pseudo Number
digits				
Phone numbers with more than 7 digits	non-E164		123456789223344	9930000123

Zoom Extensions with Three to Seven Digits

1. Select the **zoom.ext_number** variable, and then select **Edit**.

   The **Assignment** window opens.

2. In the **Assigned Value** field, select **Constant**, enter a 10-digit pseudo phone number, and then select **OK**.

   Important: A pseudo number format must match the domain format. For E164 domains, insert “+1” for US or “+44” for EU/UK in front of the 10-digit number. For non-E164 domains, use a 10-digit number.

   Note: To create a 10-digit pseudo phone number, insert additional zeros in front of the zoom extension number using following format: 99 + <length of extension number> + <padding zeros> + <extension number>. If a domain requires a country code, insert the county code in front of the 10-digit pseudo phone number.

3. Select **Save** in the **Set Variable Module Properties** window.

4. Open the **ThirdPartyTransfer** Module.

5. In the **General** tab, in the **Third Party Number** field, select **Variable** > **zoom.ext_number**, and then select **Save**.

Zoom Extensions with More than Seven Digits

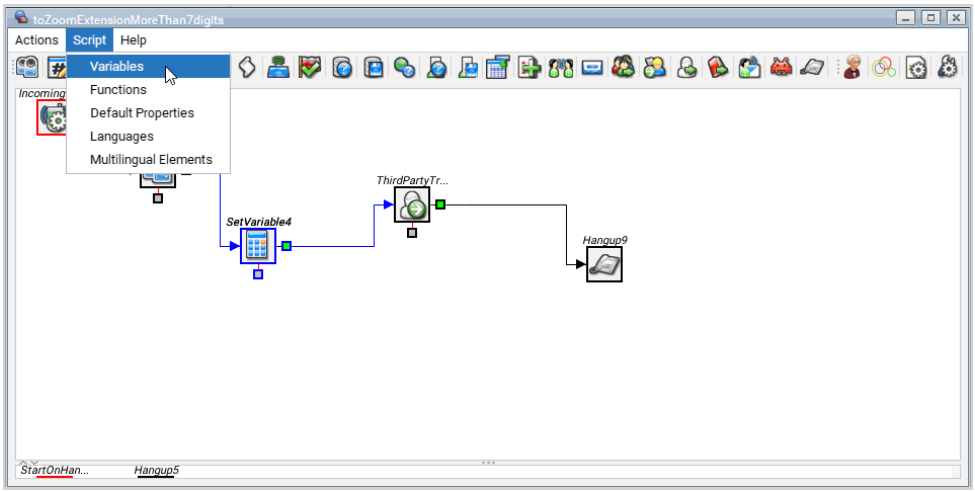
1. Select the **zoom.ext_number** variable, and then select **Edit**.

   The **Assignment** window opens.

2. In the **Assigned Value** field, select **Constant**, enter the zoom extension number, and then select **OK**.

3 In the **Set Variable Module Properties** window, select **Save**.

4 In the IVR workflow, select **Script** > **Variable**.



A new window opens.

5 Select **Add**.

The **Variable** window opens.

6 Enter **zoomphone** in the Name field, select **OK**, and then select **OK** again.

7 Open the **Set Variable Properties** window, and then select **Add**.

The **Assignment** window opens.

8 In the **Variable** field, select **zoomphone**.

9 In the **Assigned Value** field, select **Constant**, enter a pseudo phone number, and then select **OK**.

> **Important:** A pseudo number format must match the domain format. For E164 domains, insert “+1” for US or “+44” for EU/UK in front of the 10-digit number. For non-E164 domains, use a 10-digit number.

10 In the **Set Variable Module Properties** window, select **Save**.

11 Select **Save** in the **Set Variable Module Properties** window.

12 Open the **ThirdPartyTransfer** module.

13 In the **General** tab, in the **Third Party Number** field, select **Variable** > **zoomphone**, and then select **Save**.

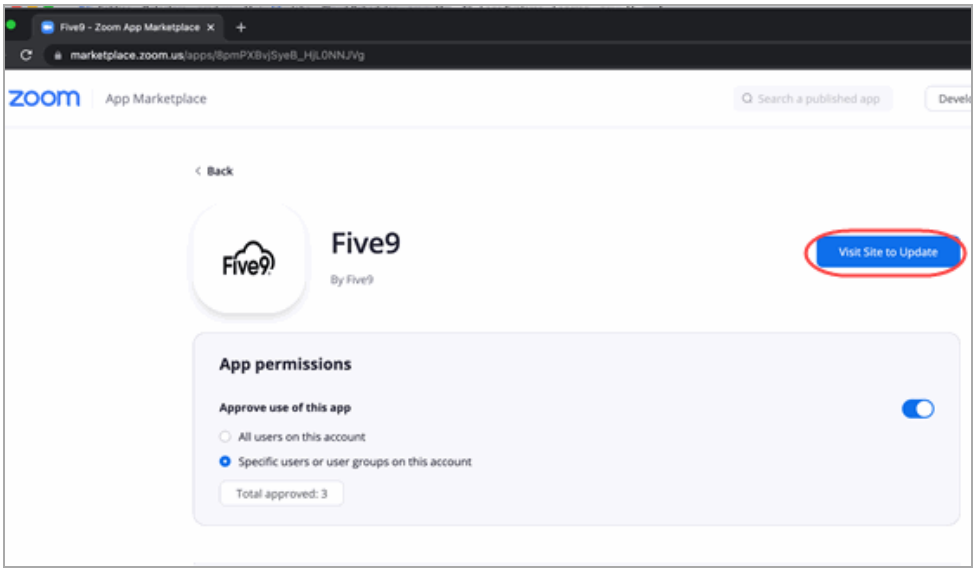
> **Note:** After completing these steps, contact Five9 Professional Services or the implementation team to create routing rules for Zoom extension calls.

Updating the Application for Existing Integrations

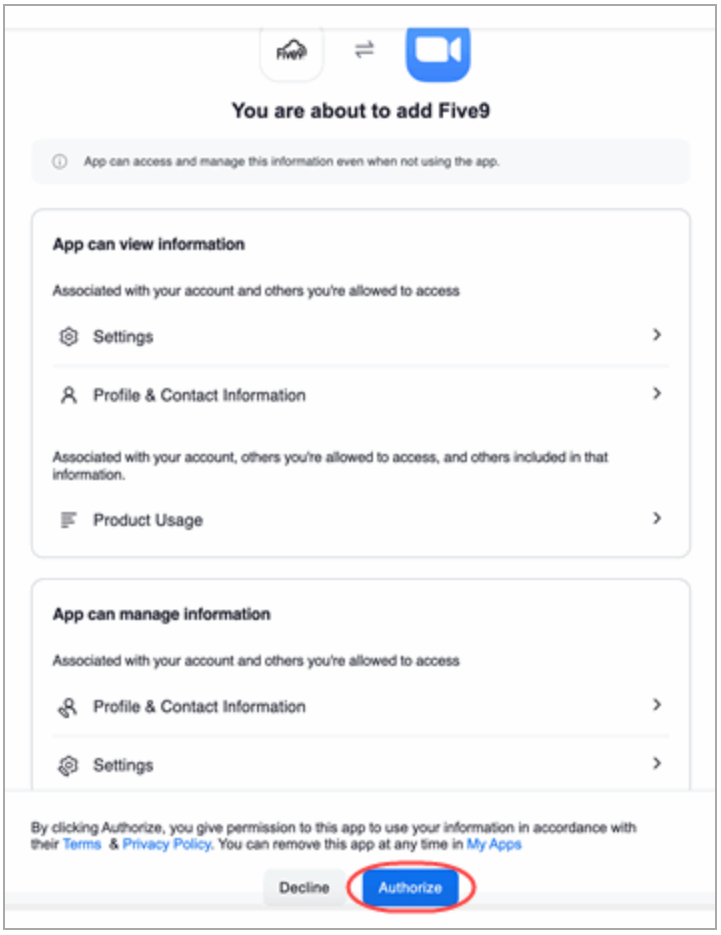
To activate the Agent Presence feature, existing Five9 integrations must update the API permissions for the adapter from the Zoom App Marketplace. New users enabling the adapter for the first time will get the needed API permissions and do not need to go through this process. For existing users, follow these steps to update the API permissions for the Zoom adapter application:

1 Go to Zoom App Marketplace and search for the Five9 app.

2 Click **Visit Site to Update.**



3 Click **Authorize**.



Microsoft Teams

This section describes how to prepare your implementation to use the Five9 UC Adapter for Microsoft Teams so that Five9 agents can see the presence of Microsoft Teams contacts and call them.

Before starting, ensure that you have your Microsoft Teams credentials and the domain provided by your Microsoft vendor (such as, example.com).

Licensing Requirements
Registering the Five9 UC Adapter for Microsoft Teams
Enabling and Configuring Microsoft Teams in Admin Console
About Teams Contacts and Groups
Using Teams Resource Accounts for Call Queues and Auto Attendants
Enabling the Adapter in Multiple Five9 Domains
Configuring SIP Trunk for Microsoft Teams
Support for Extension Number Dialing

Licensing Requirements

The Five9 Teams adapter only imports Microsoft Teams users with assigned Microsoft 365 licenses, such as E1, E3, or E5. The adapter filters out users without one of the licenses.

If you plan to enable the Teams Telephony Connect option or Direct Routing for the adapter, the Microsoft Phone System license is also required for the Teams users who need to be imported into the Five9 address book.

Note

You can purchase the Microsoft Phone System license as an add-on if it is not included in the Microsoft 365 license bundle.

Other Requirements

- Request that your domain be enabled for this UC adapter. For more information, contact your Five9 representative.
- Obtain or configure an Admin Console administrator account with at least the **uc.uc.Access UC Panel** permission.

Group	Subset	Permission	Description
uc	uc	Access	Access Unified Communications in Admin Console.

- The admin in your organization (not Five9 personnel) must register the app. The admin must have a Microsoft Teams account with the Global Administrator role for granting consent for the Five9 UC adapter.

Registering the Five9 UC Adapter for Microsoft Teams

This content describes how to use a global administrator role to register the Five9 UC adapter application in Microsoft Entra ID (formerly Microsoft Azure Active Directory).

Note

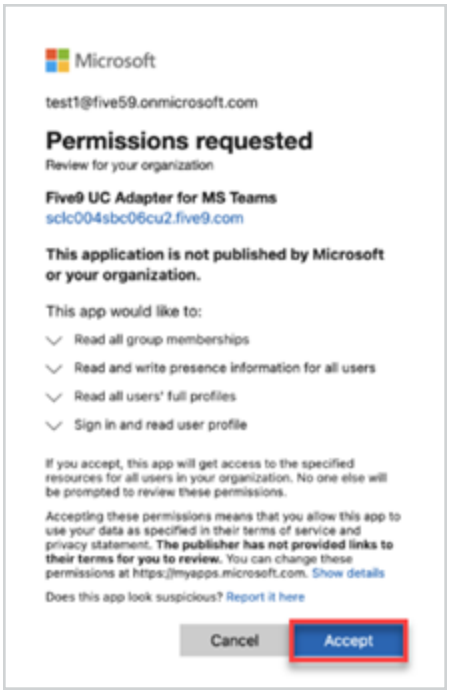
A global MS Teams administrator in your organization must perform this step. Five9 can't perform this step for you.

1. To initiate the Microsoft app registration process, navigate to https://uc.five9.net/?vendor=msteams.
2. When prompted to authenticate access to your Five9 administrator application, enter your Five9 administrator credentials.

   If your domain is Europe (EU or UK) or Canada, click the appropriate link in the lower portion of the login page.



3 On the Microsoft **Permissions Requested** page, review the permissions and then click **Accept**.



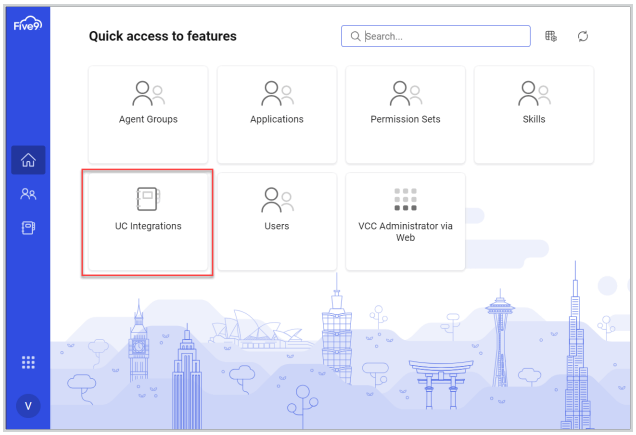
Authorization is confirmed when the **Authorization Successful** message appears.

Enabling and Configuring Microsoft Teams in Admin Console

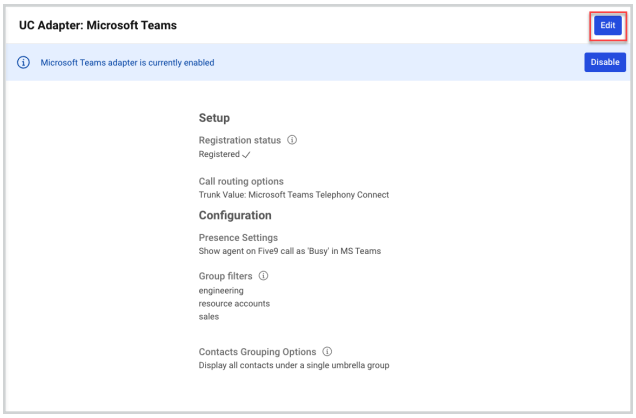
Once you connect Five9 to your Teams account, configure and enable the adapter in the Five9 Administrator Console application.

> **Note**
>
> Before you configure the Teams adapter, make sure there are no groups with the character $ in their name. This character can't be part of a Teams group name because it has a special meaning in the Five9 adapter.

1. Log in to Five9 Admin Console at https://admin.us.five9.net or your regionalized login URL.
2. Select the **UC Integrations** card to display the **UC Adapter: Microsoft Teams** page.



The **UC Adapter: Microsoft Teams** page displays the current configuration settings.

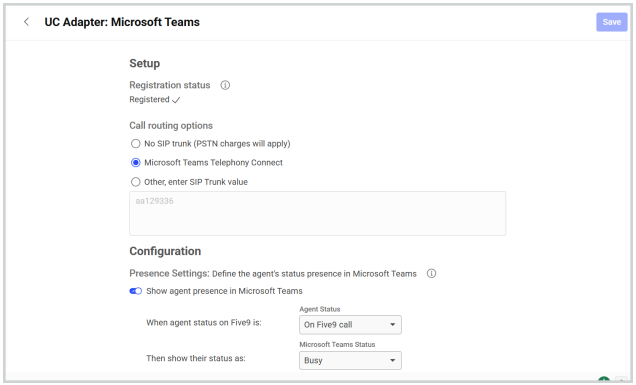


3 To enable or disable the adapter, click the **Enable** or **Disable** button.

> **Note**
>
> You can enable or disable the adapter in Admin Console at any time after the initial configuration. To access the setting, select the **UC Integrations** card on the Admin Console home page.

4 To configure the Teams settings, click **Edit**.

The **Setup** page appears.



Refer to the following sections to configure Microsoft Teams call routing options, agent presence, and group filters.

Configuring Call Routing Options

Configuring Teams Agent Presence

Configuring the Group Filters

> **Note**
>
> You must complete the procedure described in Registering the Five9 UC Adapter for Microsoft Teams before you can configure any settings. If you have not completed that procedure, you will see a **Registration Failed** error in Admin Console.

Configuring Call Routing Options

The Routing Options feature allows you to select how calls from agents to Teams contacts should be routed. The options are:

- **No SIP trunk (PSTN charges will apply)**
- **Microsoft Teams Telephony Connect**
- **Other, enter SIP Trunk value**

The options are described below. Contact your Five9 representative to configure Microsoft Teams Telephony Connect and the "Other, enter SIP Trunk value" option.

No SIP Trunk Option

If you select the **No SIP Trunk** value under **Call routing options**, calls are routed over PSTN and toll charges will apply.

> **Note**
>
> Do not change this value in existing Teams adapter integrations.

Microsoft Teams Telephony Connect Option

If you select the **Microsoft Teams Telephony Connect** option under **Call routing options**, use **aa129336** as the SIP trunk value.

Other Option

If you select the **Other** option under **Call routing options**, enter the SIP trunk value.

Option	SIP Trunk Value
Netrix SIP Trunk for Teams transfers (Five9 Netrix/Tetra Connector)	a115167
CallTower SIP Trunk for Teams transfers (Five9 CallTower Connector)	a123838
Nuwave SIP Trunk for Teams transfers (Five9 SIP to PBX with Nuwave)	a133131

If you are using a private SIP trunk to a Microsoft Direct Routing partner, enter that SIP trunk value.

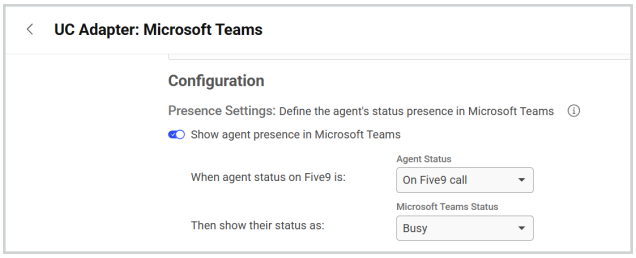
If none of the above options apply to your configuration, select **No SIP Trunk** or contact your Five9 implementation team.

Configuring Teams Agent Presence

Five9 agents can view the presence status of MS Teams users, and with the MS Teams agent presence feature enabled, MS Teams users can view the presence status of Five9 agents. An MS Teams user, for example, might want to see if an agent is busy or available.

The feature is disabled by default. You can enable it in Admin Console.

1. In Admin Console, select the **UC Integrations** card on the home page to display the **UC Adapter: Microsoft Teams** page.
2. Select **Edit** and then scroll down to **Configuration**.



3 To enable the display of agents' Five9 presence status in Teams, under **Configuration** > **Presence Settings**, toggle on **Show agent presence in Teams**. To disable Five9 agent presence status, toggle it off.

4 If you enabled Five9 agent presence in Teams, do the following to indicate how you want the Five9 status to appear in Teams. For example, you could map the Five9 **Logged In** status to **Busy** so agents logged in to Five9 appear as busy in Teams. Or, for example, you could map the Five9 **On a call** status to **Do not disturb** in Teams.

   a Next to **When agent status on Five9 is**, select the Five9 agent status that you want to map to a Teams status.

   b Next to **Then show their status as**, select the Teams status to display.

> **Note**
>
> The setting becomes active the next time agents handle a Five9 call or log in.

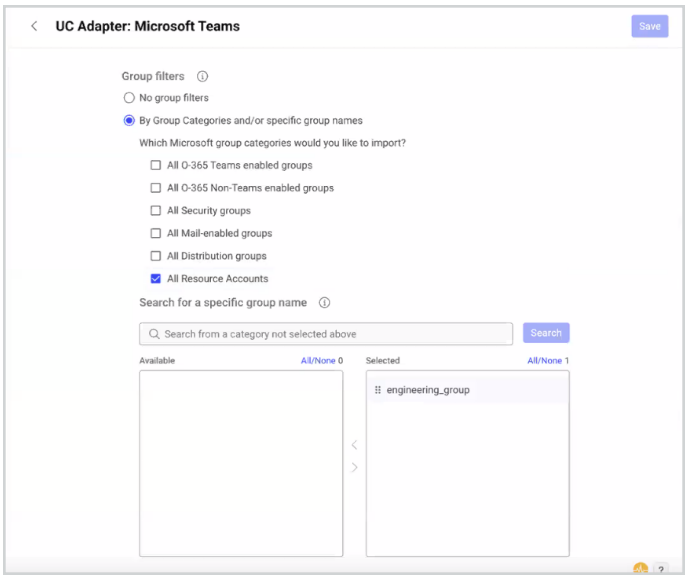
5 Click **Save** and confirm your changes.

> **Note**
>
> If your Teams adapter was registered before the release of this bi-directional presence feature, you must re-register it the first time you need to use this feature in order to grant the appropriate API permissions. To register the adapter, see **Registering the Five9 UC Adapter for Microsoft Teams** .

Configuring the Group Filters

The group filter lets you import contacts from custom groups (such as Engineering and Sales) and categories of Microsoft Entra ID groups (such as Resource Accounts and Microsoft 365) into the Five9 address book and specify how to arrange them.

For more information about using group filters, see **About Teams Contacts and Groups**.



Note

Making changes to the Group Filter list in large directories may take a few minutes to take effect.

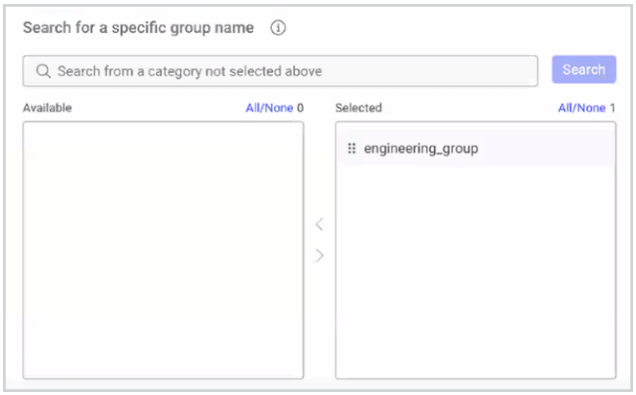
1. On the **UC Adapter: Microsoft Teams Setup** page, under **Group filters**, select either **No group filters** or **By Group Categories and/or specific group names**.

   If you select **No group filters**, all Teams-enabled groups are imported when you click **Save**.

2. If you selected to import by group category and/or group name, select any of the Microsoft group categories you want to import.



3 Under **Search for a specific group name**, use the search field to find the custom groups you want to import. The search results appear in the **Available** box.



4 When a group you want to import appears in the **Available** list, select the right arrow to move it to the **Selected** list. The groups in the **Selected** list are the ones to import. If you have several groups to move, use the **All/None** link at the top of the list.

Likewise, remove any groups you don't want to import from the **Selected** list by selecting the groups and using the left arrow or using the **All/None** link at the top of the list.

5 Under **How would you like to organize your Teams contacts in the Address Book**, select to organize by group names, department names, or include all contacts in a single MS Teams Contacts group.

> **Note**
>
> This grouping option is only for configuring how to group and display contacts in the address book. It doesn't affect the process of importing contacts.

6 Click **Save** and confirm your changes.

> **Note**
>
> For large enterprises with thousands of contacts, changes to the Group filter may take up to 20 minutes to process. Until the changes are fully processed, the address book will not reflect the changes.

About Teams Contacts and Groups

The Five9 Teams UC adapter uses Microsoft Graph APIs to retrieve customer Teams user data and is limited by the kind and rate of data provided by the APIs. The Five9 adapter applies certain filters and limitations before displaying the contact information in the Five9 address book.

For more information about setting the options described here, see **Enabling and Configuring Microsoft Teams in Admin Console**.

Number of Contacts Supported

The maximum number of contacts supported in the Five9 address book is 22,000. Customers with a larger number of contacts that meet the criteria must use the Group Filter parameter of the adapter configuration to bring the number of contacts in the Five9 address book down to 22,000. Therefore, support of a Microsoft tenant with total number of Teams contacts greater than 22,000 is only possible using a group filter.

> **Note**
> If the number of imported contacts exceeds 22,000, you may experience degraded system performance, connection issues, and other anomalies.

This table describes the various group filters options in Admin Console and explains what does and doesn't count toward the 22,000 contacts limit.

Group filters option	What counts toward the 22,000 contacts limit	What doesn't count toward the 22,000 contacts limit
No group filters	Contact belongs to at least one Teams group of type Office365 with **Teams Status** enabled.	Contact only belongs to non-Teams-enabled groups, like Distribution or Security groups.
Custom categories or group names	If group names are specified or categories are selected, contacts belong to one of those groups or categories.	Contact belongs to multiple Teams groups (only counts as one).
Either of the options	Contact has a valid PSTN-dialable number assigned in either **Office Phone** or **Mobile Phone** field in Teams.	Contact does not have a number configured in either of the phone fields in Microsoft Entra ID.

Phone Number and Extension Number Requirements

Teams contacts that count as part of the 22,000 limit must have a valid PSTN dialable number (not an abbreviated extension) assigned to them in the Office Phone or Mobile Phone fields of Microsoft Entra ID (previously Azure AD) as shown below. If the Office Phone field contains a valid number, the Mobile Phone field is ignored.

The phone number can be:

- A string of digits, for example: 4089094439
- In area code format, for example: (408) 909-4439
- In E.164 format, for example: +1 408 9094439

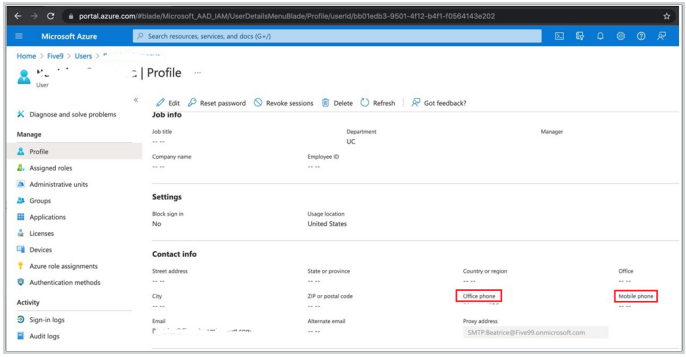
Phone numbers with extensions must use one of these formats:

- `+<phone number>;ext=<extension>`
- `+<phone number>x<extension>`

For more information about extension number dialing, see **Support for Extension Number Dialing**.

The adapter address book does not support Teams contacts with only an extension number.

To see where the Teams adapter imports user phone numbers, view the Users panel in Microsoft Entra ID.



Data is considered and imported in this order:

1. If the business number plus the extension number is present, that number plus the extension is imported.
2. If not, and the business PSTN number is present, the business PSTN number is imported.
3. If neither the business number plus extension or the business PSTN are present, and the mobile phone number is present, the mobile phone is imported.

Contacts Belonging to Multiple Groups

It is common for a Teams contact to belong to multiple Teams groups. The Five9 address book only shows such contacts under one of the groups by lexicographic order. An agent searching for a particular contact should use the hot search window to search for the contact by name if they do not know which group the contact appears in.

Note

You can create a new Teams group of Office 365 type and assign all the contacts you want to be seen in the Five9 address book to that group and only that group. Then, once you enter the name of the new group in the Group Filter field of the Admin Console adapter configuration, all of those contacts will appear in the Five9 address book.

Supported Teams Group Types

The Group Filter feature is not configured by default. To use the adapter with the Group Filter default option, Teams contacts must belong to at least one Teams group of type Office 365 with the Teams status icon enabled as shown below.

Note

You can create a Teams-enabled group by selecting the option to add Microsoft Teams to your group when creating a new Microsoft 365 type group.

Group Filter Feature Used

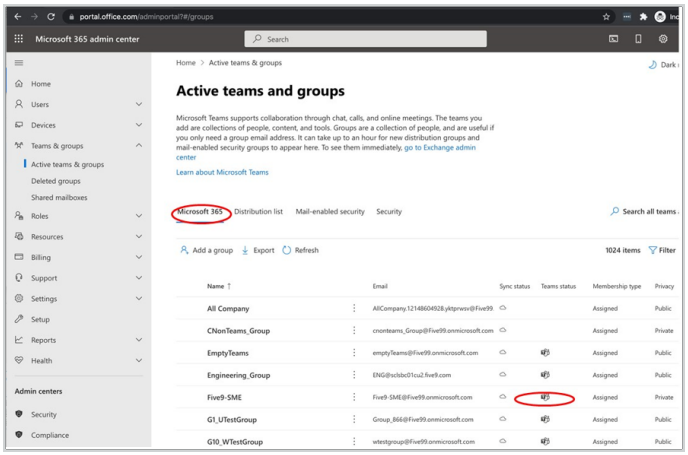
If you have entered one or more Teams group names in the Group Filter parameter, the group can be any type: Microsoft 365, not Microsoft 365, Teams-enabled or not Teams-enabled, Security Group, or Distribution group.

Group Filter Feature Not used

If you do not configure the Group Filter feature, there are a number of limitations that apply to the types of Teams group that will be imported. Any Teams group of type Microsoft 365 that has the Teams Status icon enabled as shown below will be imported.

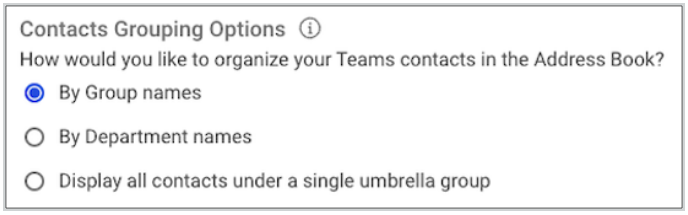
Note

Group types Distribution and Security, or ones that do not have the Teams Status enabled, will be filtered out. The contacts that belong to such groups will also be filtered out and not count toward the 22,000 limit.



Organizing Contacts in the Five9 Address Book

By default, the Five9 address book groups Microsoft Teams contacts by group name. You can use the Contact Grouping Options setting in Admin Console to display contacts in other ways.

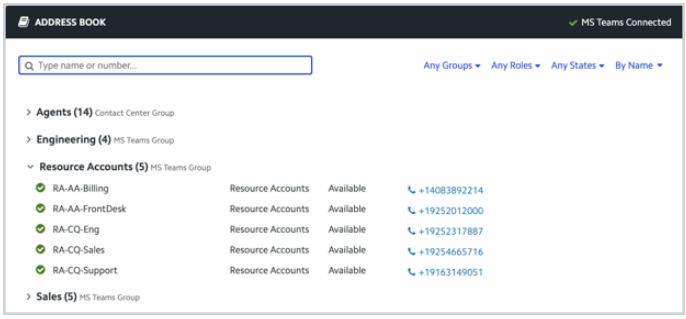


Note

The method you choose to organize contacts in the address book only affects the display of the contacts and isn't related to the group filtering option described above in *Contacts in Groups Specified in the Admin Console Group Filter*.

Using Teams Resource Accounts for Call Queues and Auto Attendants

The Five9 agent address book also supports Microsoft Teams call queues and auto attendants. Call queues and auto attendants are associated with resource accounts that require a special license and have assigned phone numbers. Five9 allows you to sync resource accounts with the Five9 address book.

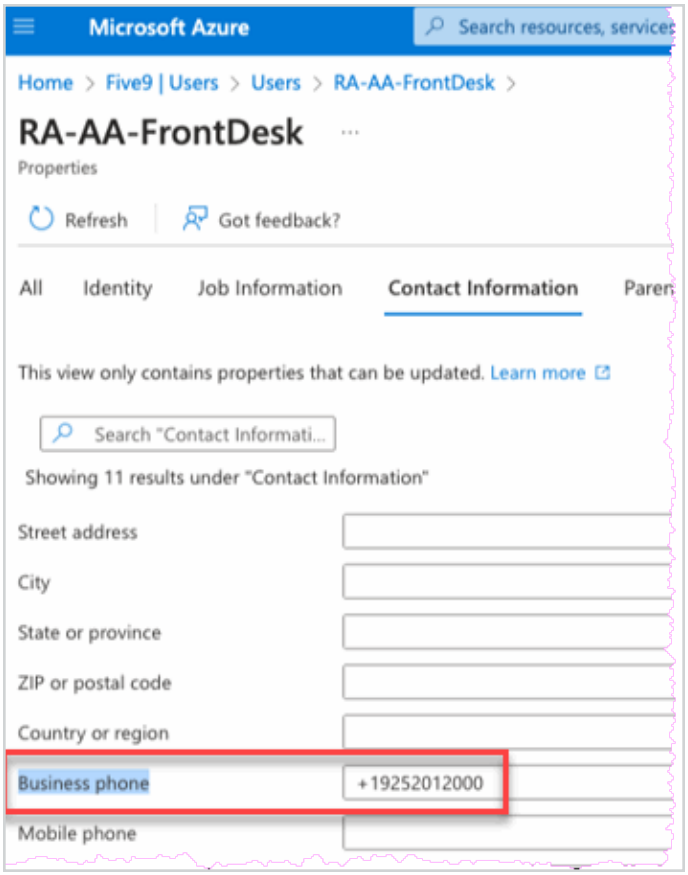


Note

The status shown for resource accounts is always Available.

Requirements

Support for resource accounts requires the Microsoft Teams Phone Resource Account license. Each resource account must have a phone number in the **Business phone** field in Azure AD or Microsoft 365 Admin.

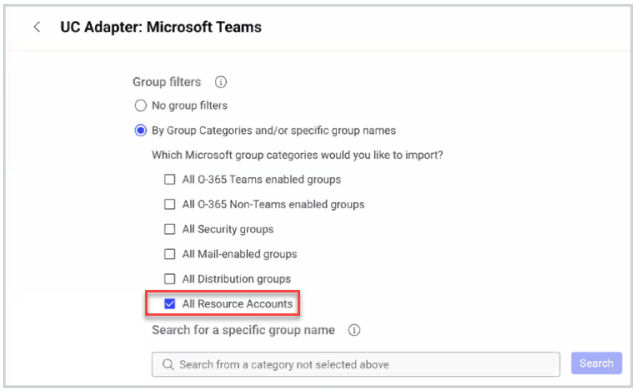


Enabling Resource Accounts

Resource accounts are synced by default unless you are using group filters. For more information about group filters, see **Enabling and Configuring Microsoft Teams in Admin Console**.

If you are using group filters to sync, select the **All Resource Accounts** category under **Group Filters**.

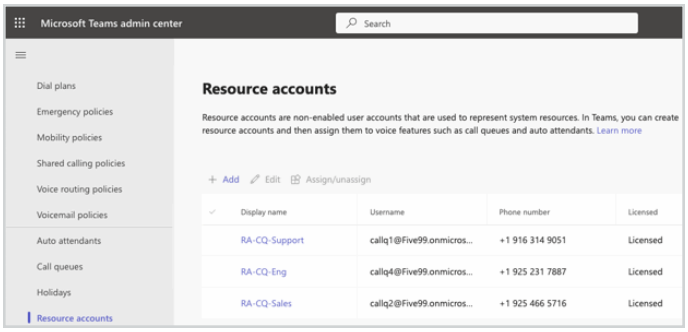
1. On the Admin Console home page, click **UC Integrations**.
2. Click **Edit**.
3. Under **Group filters**, if the **By Group Categories and/or specific group names** is selected, make sure the **All Resource Accounts** category is selected.



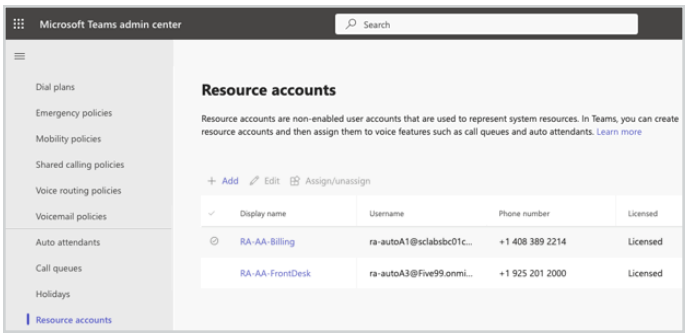
4 Click **Save** and confirm your changes.

Microsoft Teams Examples

Resource accounts for auto attendants:



Resource account for call queues:



Enabling the Adapter in Multiple Five9 Domains

Install the MS Teams adapter for each Five9 domain to enable a single Teams account (also known as *Teams Tenant*) in multiple Five9 domains.

Here are some important considerations:

- Enablement steps
  - For each Microsoft Azure authorization step, you can use the same global MS Teams admin credential to authorize all Five9 domains.

    Note

    You must use unique Five9 admin credentials for each Five9 domain.

    For example, you can use your MS Teams account *Teams-admin1* and Five9 admin *F9-Domain1* credentials for your ***Five9-Domain1*** enablement. You can also use *Teams-admin1* for **Five9-Domain2**, but you must use your Five9 admin *F9-Domain2* credentials. You can use this method for all Five9 domains in your environment.

- Admin Console
  - Configure Admin Console parameters for each Five9 domain separately.
  - Each Five9 domain Admin Console configuration can use a different group filter setting.

    For example, you can choose in *Five9 Domain1* to only display Teams contacts in the agent address book for Teams groups *Group1* and *Group2*, while in *Five9 Domain2* only display Teams contacts for Teams groups *Group2* and *Group4*.

- Capacity considerations
  - The maximum number of UC contacts you can import into the Five9 address book is 22,000 across all enabled Five9 domains.

    Use the **Group Filter** setting (above) to limit the number of contacts.

Configuring SIP Trunk for Microsoft Teams

Contact your Five9 representative to register your domain in Microsoft Teams to communicate with Five9 using a SIP trunk. This enables direct routing for interoffice dialing between Five9 and Microsoft Teams users.

> **Important**
>
> This must be done for SCL and ATL domains in US, LDN and AMS domains in EMEA, MTL03 and MTL10 domains in CAN.

Support for Extension Number Dialing

If your organization has contacts with telephone extensions, here's how you can configure the Microsoft Teams adapter to dial extensions. Configuration requires setup in Admin Console, Microsoft Teams Admin, and Active Directory.

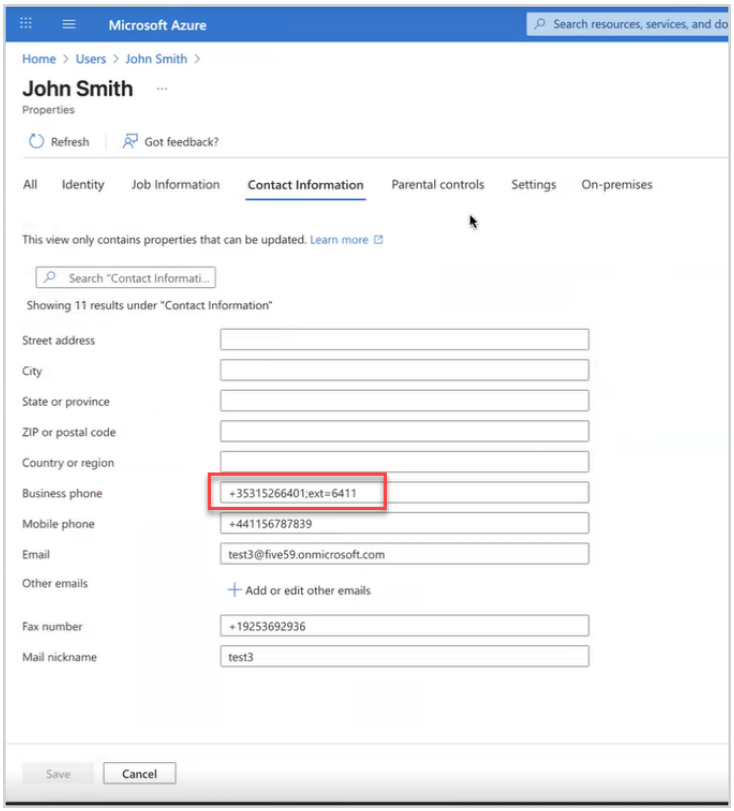
For more information about the order in which phone numbers are imported, see **About Teams Contacts and Groups**.

Prerequisites

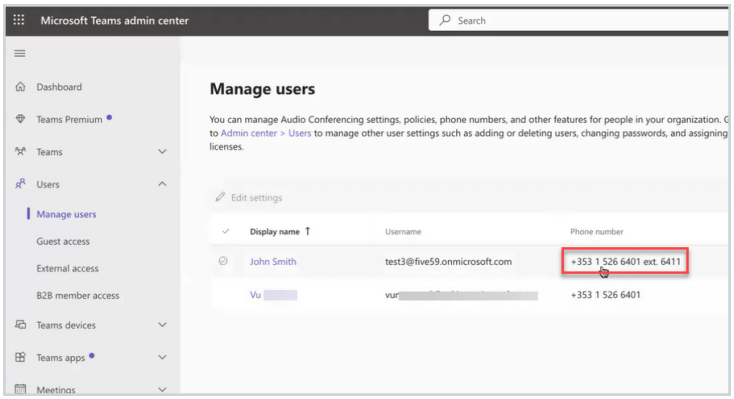
- In Five9 Admin Console, under **Teams** > **Setup** > **Call Routing Options**, enable **Microsoft Teams Telephony Connect**.

  > **Note**
  >
  > Contact your Five9 representative to enable Microsoft Teams Telephony Connect for the first time.

- Ensure that users have an extension assigned in Microsoft Teams Admin Center and in the Business Phone field in Microsoft Entra ID. To view the phone number fields in Microsoft Entra ID, go to **User** > **Properties** > **Contact Information**.



An admin must enter the extension in both Microsoft Teams Admin Center and Microsoft Entra ID.

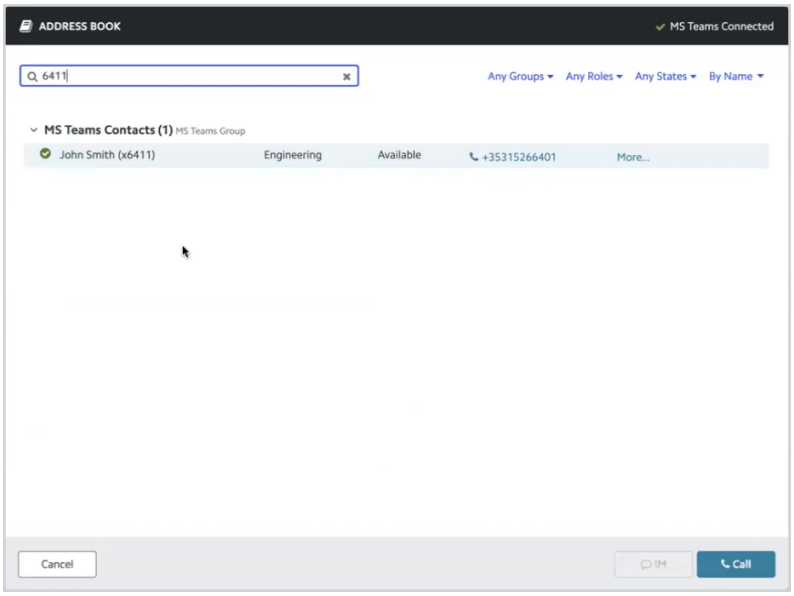


- Phone numbers and extensions must use one of these formats:

- +<*phone number*>;ext=<*extension*>
- +<*phone number*>x<*extension*>

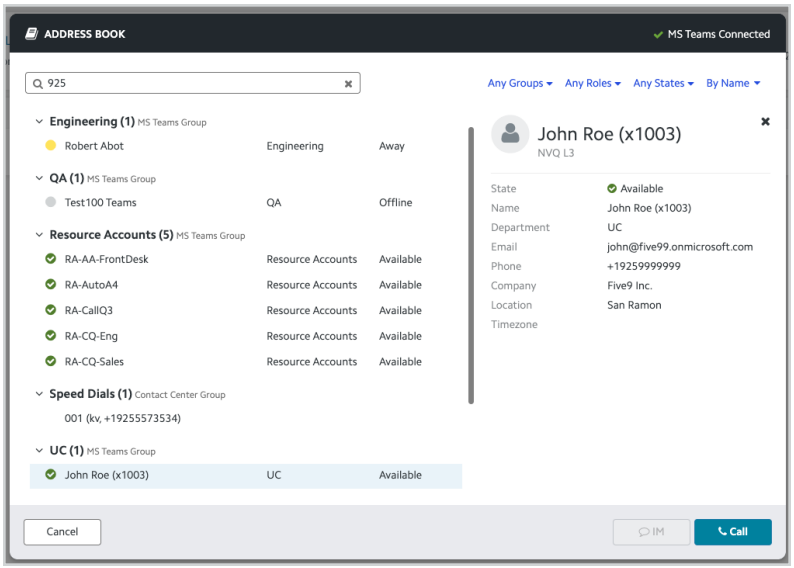
Searching for Contacts

You can search for a contact in the Agent Desktop Plus address book by typing the extension number in the search field.



Contact Card

The phone number extension appears next to the name on the contact card.


ADDRESS BOOK
MS Teams Connected
925
Any Groups
Any Roles
Any States
By Name
Engineering (1) MS Teams Group
Robert Abot
Engineering
Away
QA (1) MS Teams Group
Test100 Teams
QA
Offline
Resource Accounts (5) MS Teams Group
RA-AA-FrontDesk
Resource Accounts
Available
RA-AutoA4
Resource Accounts
Available
RA-CallQ3
Resource Accounts
Available
RA-CQ-Eng
Resource Accounts
Available
RA-CQ-Sales
Resource Accounts
Available
Speed Dials (1) Contact Center Group
001 (kv, +19255573534)
UC (1) MS Teams Group
John Roe (x1003)
UC
Available
John Roe (x1003)
NVQ L3
State
Available
Name
John Roe (x1003)
Department
UC
Email
john@five99.onmicrosoft.com
Phone
+19259999999
Company
Five9 Inc.
Location
San Ramon
Timezone
Cancel
IM
Call

Office@Hand and RingCentral

This section describes how to prepare your implementation to use the Unified Communications Adapter for Office@Hand or RingCentral.

Note

A current limitation in the partner API prevents some presence changes in Office@Hand from updating the Five9 address book.

- Agents who use an Office@Hand and RingCentral client: When agents log out of Office@Hand and RingCentral, their presence is not displayed as *offline*, but remains the same as it was before they logged out.
- Agents who use a RingCentral-registered desk phone: The only presence status supported is **on a call**.
- Agents who set their RingCentral status to *invisible* are shown as *available* in the Five9address book.

Requirements
Creating a User as a Service Account
Installing the UC Adapter Application
Enabling and Configuring Office@Hand or RingCentral in Admin Console
Updating the Application for Existing Integrations

Requirements

Request that your domain be enabled for this UC Adapter. For more information, contact your Five9 representative.

Obtain or configure an Admin Console administrator account with at least the **uc.uc.Access UC Panel** permission.

Obtain the AT&T Office@Hand or RingCentral administrator account that relates to your implementation.

Creating a User as a Service Account

You might occasionally see a failure in the contact sync or agent presence status updates for RingCentral and Office@Hand adapters due to issues with the access token. For example, the admin user's password changes, the admin has the maximum number of logged in sessions open, or the token is revoked or corrupted.

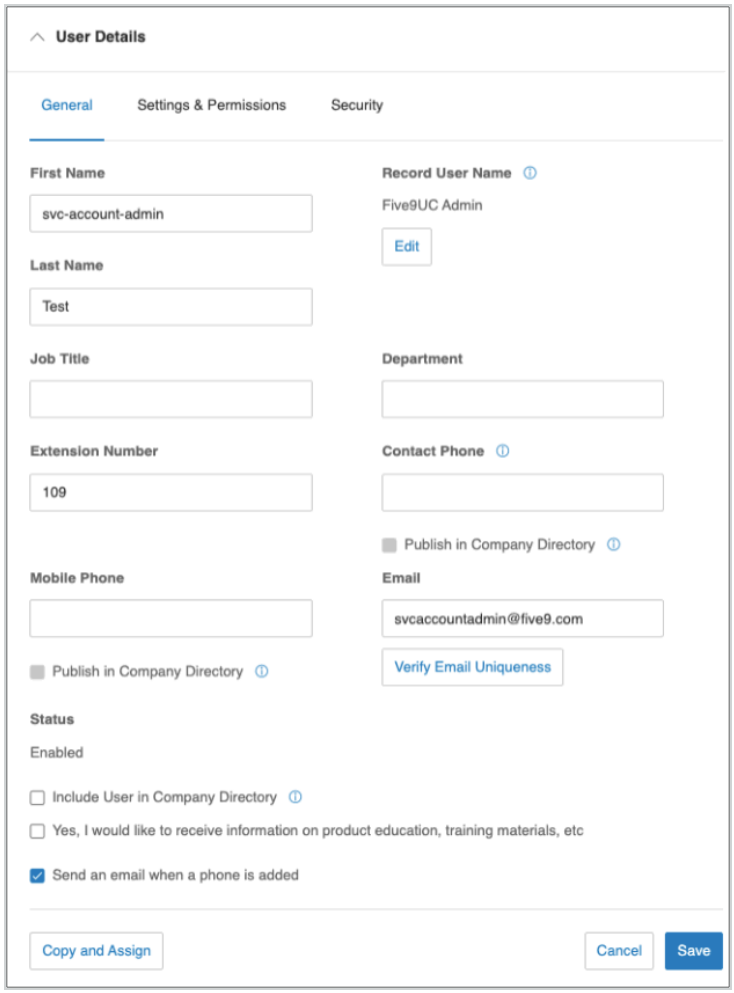
You can resolve these issues by creating a dedicated user as a service account for authorizing the UC adapter.

> **Note**
> Creating a user as a service account is optional. You can still use a regular admin user for granting consent for the Five9 UC adapter app without affecting integration capabilities and features. However, when there is a change to the regular admin user, you need to register the Five9 UC adapter again to fix the token error. You should see the token error in the adapter's status in Administrator Console when it occurs.

To create and manage the account:

1. In the RingCentral or Office@Hand admin portal, create a new user with the following details:

Setting	Set to
Name	svc-account-admin, for example
Role	Super admin
Include User in Company Directory	Unselected (prevents the user from appearing in the Five9 address book)
Email	A unique email for the user as required by RingCentral or Office@Hand.



2 Click **Save**.

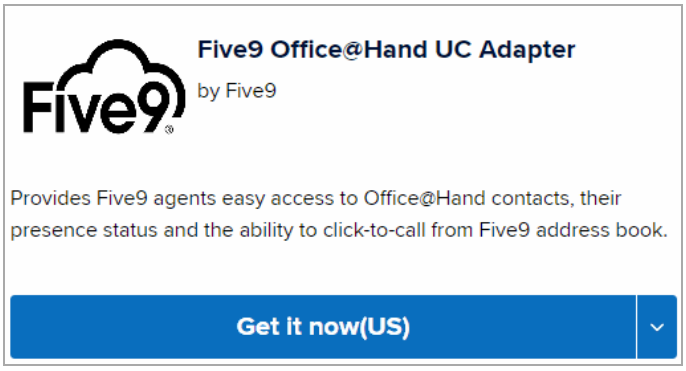
Once the service account is activated by clicking a link in the activation email, use it to log in to the RingCentral or Office@Hand App Gallery and add the UC adapter as described in **Installing the UC Adapter Application**.

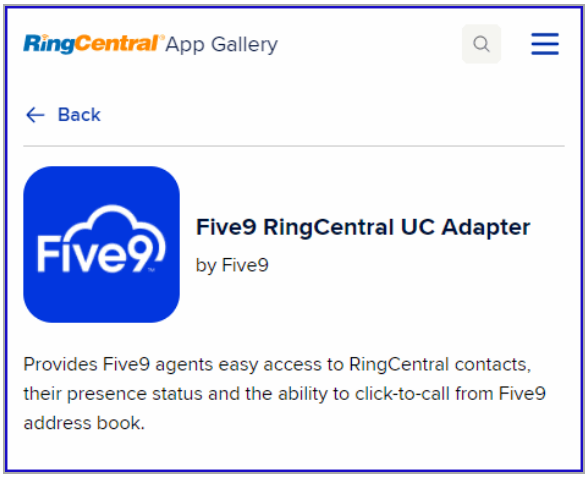
Installing the UC Adapter Application

You need to install a Five9 app located in the RingCentral or Office@Hand App Gallery. This app automatically sends to Five9 all data required to enable the adapter.

1 Log into the Office@Hand or RingCentral app gallery that matches your implementation.

2 Locate and select the appropriate **Five9 App**.



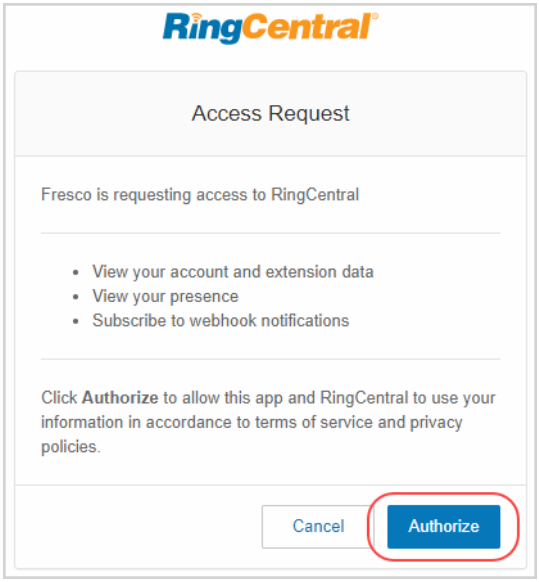


3 In the Five9 App**,** enable **Pre-approve** if it is disabled, and click **Visit site to install**.

4 In the Five9 landing page, log into your administrator account.



5 Click **Authorize**.



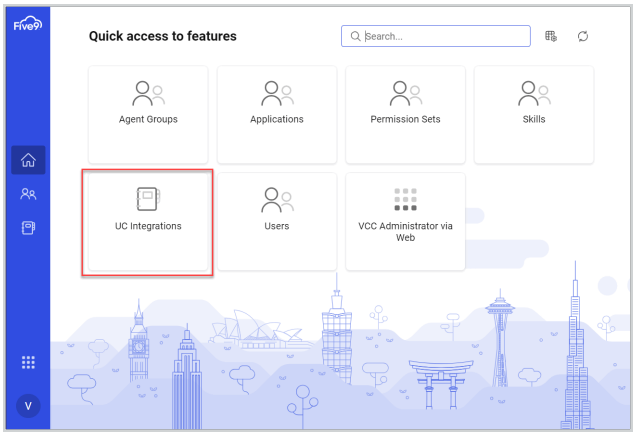
6 Once the Authorization Successful message is displayed, close the authorization notification.

Enabling and Configuring Office@Hand or RingCentral in Admin Console

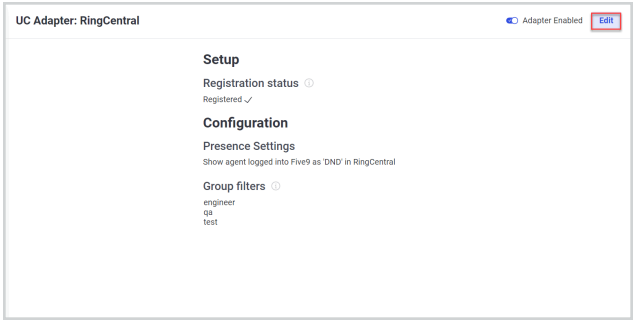
Once you connect Five9 to your Office@Hand or RingCentral account, configure and enable the adapter in the Five9 Administrator Console application.

1 Log in to Five9 Admin Console at https://admin.us.five9.net or your regionalized login URL.

2 Select the **UC Integrations** card to display the **UC Adapter** page.

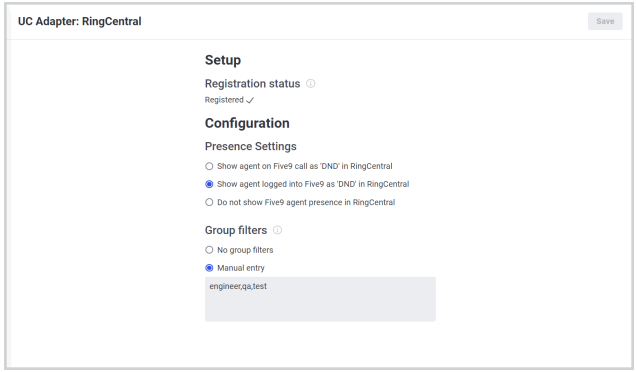


The **Unified Communications: RingCentral** or the **Unified Communications: Office@Hand** page appears.

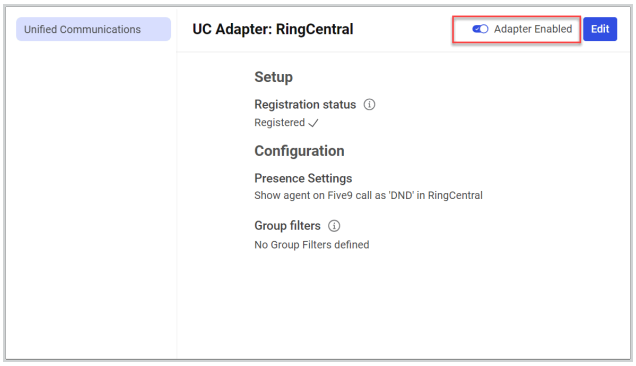


3 Click **Edit**.

The **Setup** page displays.



4 Use the toggle in the upper-right corner to enable the adapter for agents, and then click **Enable** when asked to confirm.



Note

You can enable or disable the adapter in Admin Console at any time after the initial configuration. To access the setting, select the Unified Communications card on the Admin Console home page. Use the toggle in the upper-right corner to enable or disable the adapter.

Refer to the following sections to configure the RingCentral or Office@Hand group filters and agent presence options, and enable or disable the adapter.

Note

You must complete the App Gallery authorization steps described in Installing the UC Adapter Application before you can configure any settings. If you have not successfully completed that procedure, you will see a **Registration Failed** error in Admin Console.

Configuring the Group Filter

The group filter feature lets you import a comma-separated list of Office@Hand or RingCentral departments (such as Engineering, Finance, Product Management) into the Five9 address book.

It is important to note that:

- Names must exactly match the department names as they appear in the Office@Hand or RingCentral directory.

- Entries are not case-sensitive.
- If this field is left blank, all departments are imported.
- Making changes to the Group Filter list in large directories may take a few minutes to take effect.

1. Open the **UC Adapter: RingCentral** or **UC Adapter: Office@Hand Setup** page as described above.
2. Under **Group filters**, select either **No group filters** or **Manual entry**.
3. If you selected manual entry, enter a list of Office@Hand or RingCentral department names.
4. Click **Save** and confirm your changes.

Configuring Agent Presence

The agent presence feature enables you to set an agent's status in Office@Hand or RingCentral to DoNotDisturb, either when the agent is on a customer call or when the agent has logged in to Five9. You can configure how agent presence works for your organization.

1. Open the **UC Adapter: RingCentral** or **UC Adapter: Office@Hand Setup** page as described above.
2. Under **Presence Settings**, select one of these agent presence options:
    - **Show agent on Five9 call as 'DND' in RingCentral**

      When the agent is on a customer call in Five9, their RingCentral or Office@Hand status is DND. If you select this option, it becomes active the next time agents handle a Five9 call.
    - **Show agent logged into Five9 as 'DND' in RingCentral**

      When the agent's status is DND in Five9, their RingCentral status is Do Not Disturb. If you select this option, the agent status on RingCentral/Office@Hand shows as Do Not Disturb the next time the agent handles a call or logs in to Five9.
    - **Do not show Five9 agent presence in RingCentral** (default)

      The agent's presence status does not display in RingCentral or

Office@Hand.

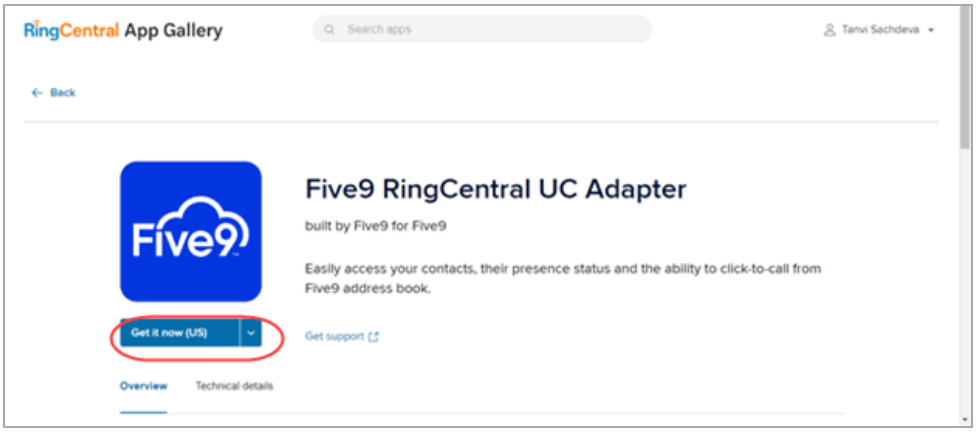
3 Click **Save** and confirm your changes.

Updating the Application for Existing Integrations

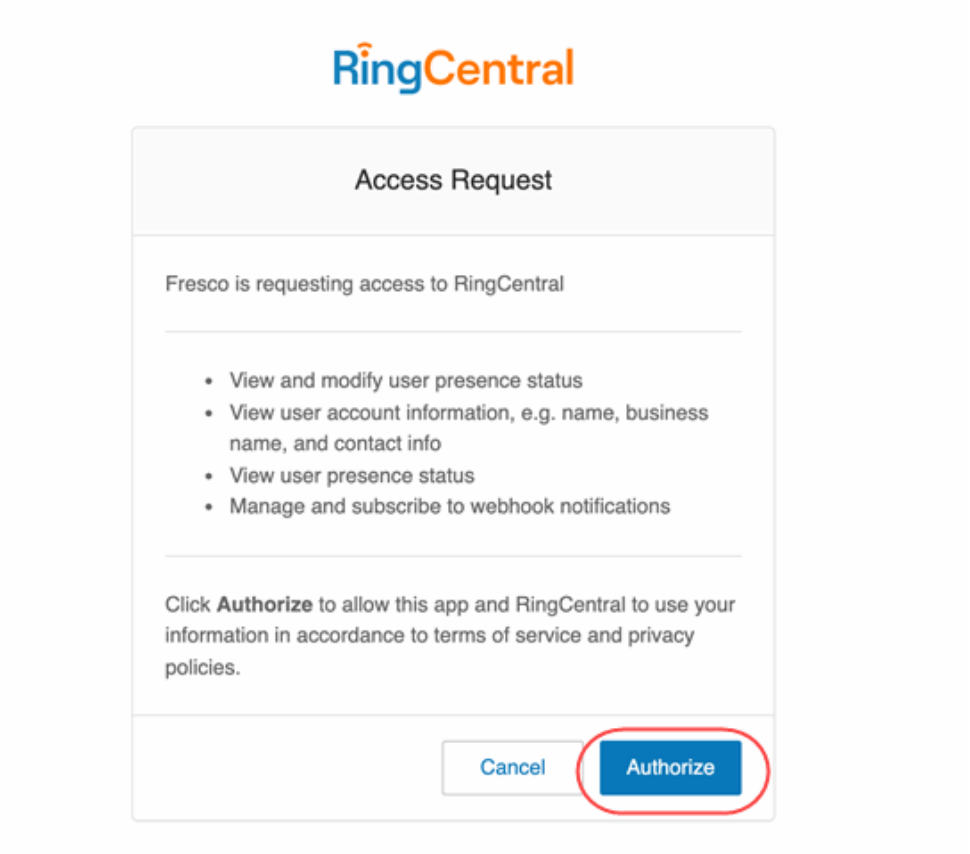
To activate the Agent Presence feature, existing Five9 integrations must update the API permissions for the adapter from the RingCentral or Office@Hand App Gallery. New customers enabling the adapter for the first time will get the needed API permissions and do not need to go through this process. For existing customers, follow these steps to update the API permissions for the RingCentral/Office@Hand adapter application:

1 Go to RingCentral or Office@Hand App Gallery and search for the Five9 app.

2 Click **Get it now (US).**



3 Click **Authorize**.



Nextiva

This section describes how to prepare your implementation to use the Five9 UC Adapter for Nextiva.

Requirements
Authorizing the Adapter in the Nextiva Admin Portal
Enabling the Nextiva Adapter in Admin Console

Requirements

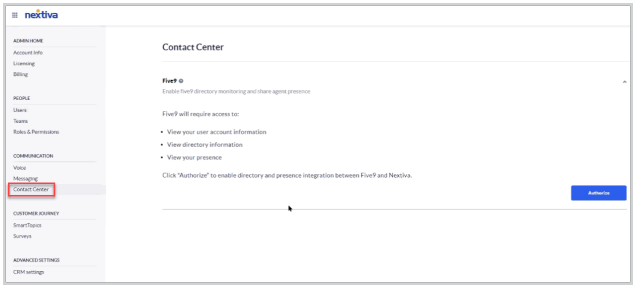
- Request that your domain be enabled for this UC Adapter. For more information, contact your Five9 representative.
- Before starting, obtain the Nextiva administrator credentials that apply to your implementation.
- Obtain or configure a Five9 Administrator Console administrator user with at least the **uc.uc.Access UC Panel** permission.

Authorizing the Adapter in the Nextiva Admin Portal

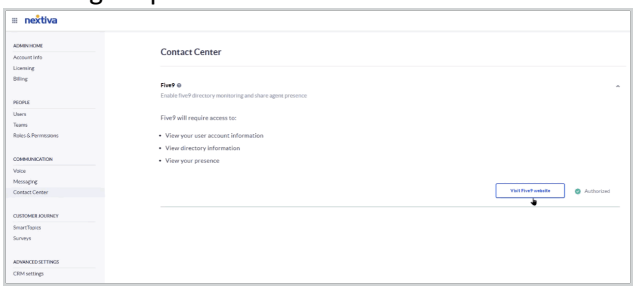
Before you can enable the adapter on the Five9 side, you must authorize the adapter on the Nextiva side.

1 In the Nextiva administrator portal, go to Administration.

2 Under Communication, click **Contact Center**.



3 Click **Authorize**. This authorizes the adapter to monitor the Nextiva directory and share agent presence.



4 Click **Visit Five9 Website** to go to the Five9 Global Authorization page.



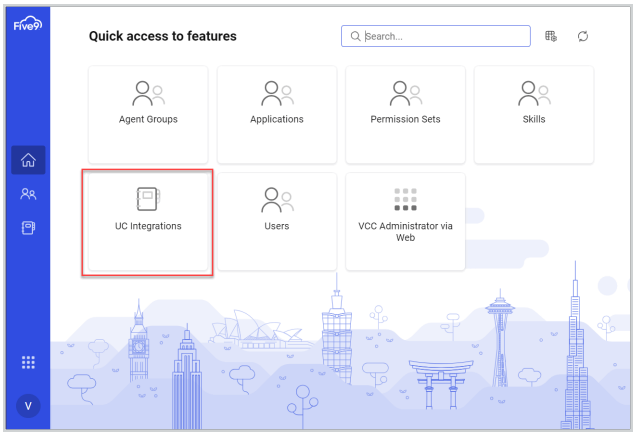
5 Log in using Five9 VCC admin credentials. You should see an "Authentication Successful" message after you log in.

Once you connect Five9 to your Nextiva account, enable the adapter in the Five9 Administrator Console application. See **Enabling the Nextiva Adapter in Admin Console**.

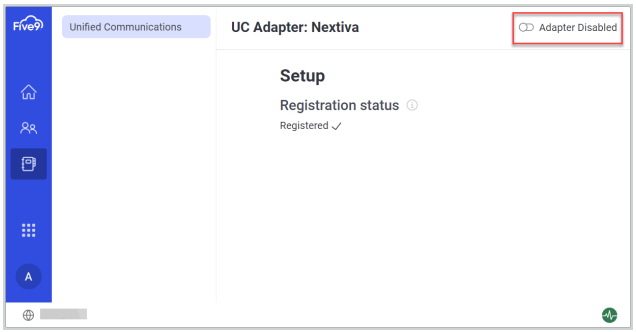
Enabling the Nextiva Adapter in Admin Console

In **Authorizing the Adapter in the Nextiva Admin Portal**, you authorized the adapter on the Nextiva admin side. Now, in Five9 Admin Console, you need to enable the adapter so agents can view Nextiva users and their presence.

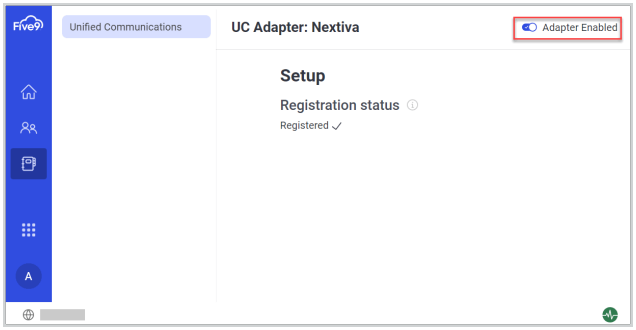
1. Log in to Five9 Admin Console at https://admin.us.five9.net or your regionalized login URL.
2. Select the **UC Integrations** card on the Admin Console home page.



The **UC Adapter: Nextiva** Setup page displays.



3 Use the toggle in the upper-right corner to enable the adapter for agents, and then click **Enable** when asked to confirm.



Note

You can enable or disable the adapter in Admin Console at any time after the initial configuration. To access the setting, select the Unified Communications card on the Admin Console home page. Use the toggle in the upper-right corner to enable or disable the adapter.

After completing these steps, contact Five9 Professional Services or the implementation team to create routing rules for Nextiva extension calls.