8x8 Global Cloud Communications

Configuration Manager

User Guide

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Contents

Overview

Configuration Manager is your platform to set up your Virtual Contact Center tenant. Administrators can use a graphical user interface (GUI) to manage all components in a tenant. Configuration Manager is easy to use and requires no special software or hardware to run. It is 100% cloud-based and accessible from anywhere and anytime as long as you have a computer and Internet access. Using Configuration Manager, administrators can set up agents and supervisors, create roles and assign tasks, create campaigns, broadcast messages, create wallboards, and much more.

Use Configuration Manager to:

- Create and configure your contact center's communication channels, interaction queues, agent groups, agent accounts, and the optional Status Code and Transaction Codes features.
- Customize the tools and features available to your agents.
- Define security policies for the tenant.
- Customize the Local CRM to match your customer resource management requirements.
- Provide Internet access to your contact center's channels with a Virtual Contact Center Support Center.
- Create and run campaigns based on phone media.
- Integrate your Virtual Contact Center with an External CRM, such as NetSuite or Salesforce.
- Send broadcast messages to your Virtual Contact Center groups.
- Define status codes to indicate the reasons for agents' change of status.
- Define transaction codes to indicate the purpose or outcome of interactions.

For details about our latest Virtual Contact Center features, see What's New for Administrators. See Get Started and Understand the Interface in this guide to learn how to start.

System Requirements

Each administrator requires a computer equipped with one of the following browsers:

- Google Chrome (Build 50 or newer)
- Mozilla Firefox (Build 39 or newer)
- Microsoft Internet Explorer 11 or newer
- Microsoft Edge

Known Issue: If you use Internet Explorer to run Virtual Contact Center applications, you may encounter high memory usage. To resolve this issue, clear cookies and cache, activate the setting to clear history, clear history on exit, and reboot.

Note: Virtual Contact Center is partially compatible with Safari, offering support for the Agent Console Control Panel functionality.

Note: Firefox requires the QuickTime plug-in for audio features.

For more information about the administrator workstation technical requirements, refer to our Technical Requirements.

What's New in the Virtual Contact Center 9.9 Release for Administrators?

We have introduced the following enhancements to improve the productivity of agents, supervisors, and administrators in our new release of 8x8 Virtual Contact Center.

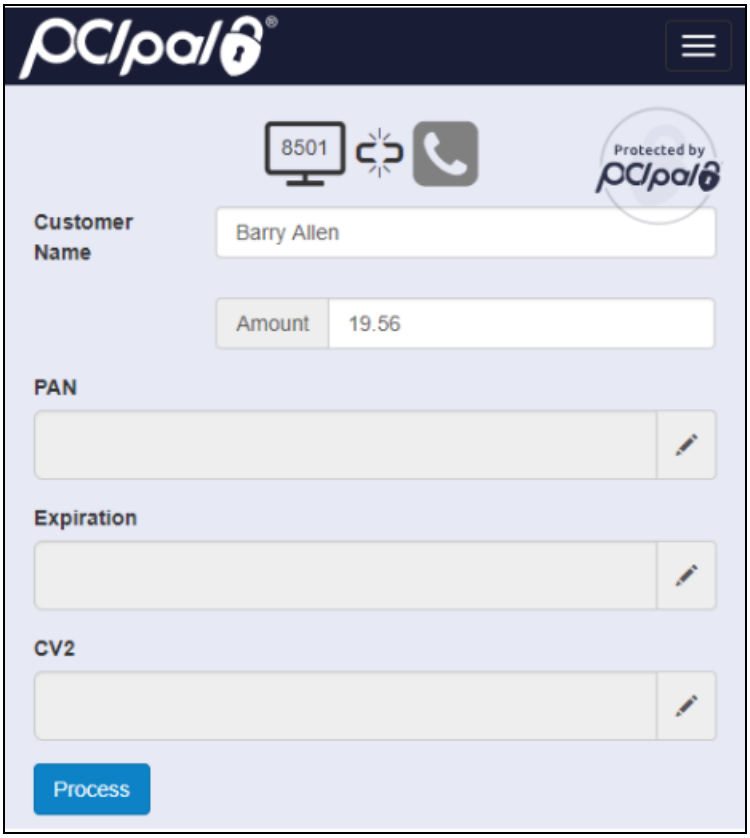
Introducing 8x8 Secure Pay

8x8 Virtual Contact Center now offers customers a secure integration to support the processing of bank card information via our partner PCI Pal. 8x8 Secure Pay enables an agent and customer to stay in contact on a call while masking the card input from the customer's handset so that the sensitive card data stays secure and out of the contact center. The service can be integrated with a CRM, Enterprise Resource Planning (ERP), or a billing system and the customer's payment gateway to process the payment. The service can also feed information about the payment back to the originating system.

This new integration offers agents a secure payment page for processing customer transactions. The secure payment page can be configured to include pre-populated data or data that the agent adds manually. When this page is opened, the customer audio is rerouted via PCI Pal, which allows them to mask the keypad input both visually and audibly.

The agent hears the conversation and controls the card input, but only hears a single-tone DTMF and sees starred out digits for the card number, date, and Card Verification Value (CVV). In the event of erroneous data input by customers, agents can reset the relevant data field in the payment page, allow customers to fix the input, and facilitate a successful

transaction.



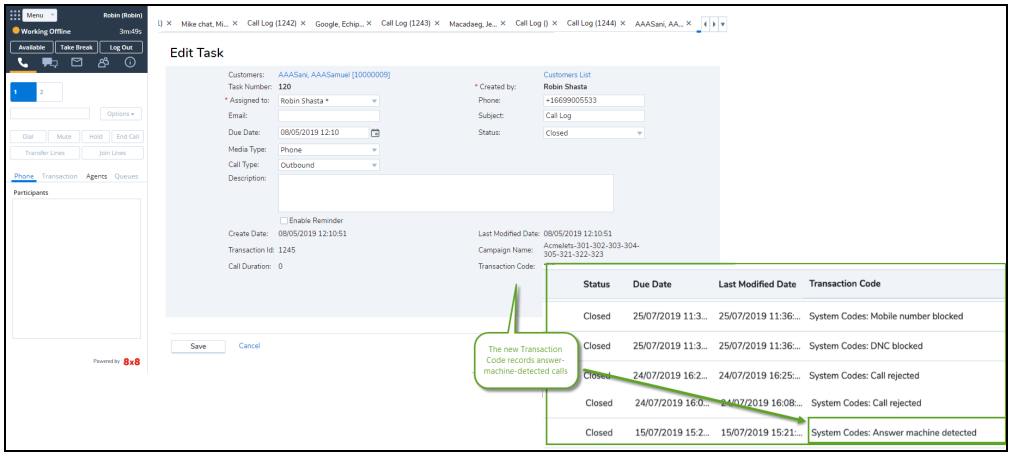
When on an active call during the card payment, the agent hears the conversation and controls the card input, but only hears a single-tone DTMF and sees starred out digits for the card number, date, and Card Verification Value (CVV). The agent can reset any field if a mistake is made, and once the data is ready they can take a payment and receive the confirmation or rejection of the transaction.

Introducing the Answer Machine Detection (AMD) Service

In 8x8 Virtual Contact Center when the dialer is used in its aggressive mode, it can call more numbers than available agents to maximize agent efficiency. The dialer needs a service which detects the calls answered by a machine instead of people, and to filter them. We have now introduced the Answer Machine Detection (AMD) service to identify such calls and allocate the calls answered by people to the available agents. When the AMD service identifies a machine-answered call, it sends a one-way message to the call routing to end that call and resolve it automatically. AMD is a learning service and it needs some time to build an effective library of known audio samples before it reaches the maximum efficiency. Once this is done, the AMD service resolves a machine-answered call quicker than the manual effort of an agent.

Once AMD is provisioned for your tenant, the contact center administrators can activate it for the desired campaigns. For details, see our content on the Answer Machine Detection (AMD) service.

AMD works in conjunction with our new Auto-TCL. The transaction code for such calls appears as **Answer machine detected** in CRM Cases or under Historical reports.



Note: The AMD service is only applicable to the calls routed via campaigns, but not the outbound calls placed by an agent.

Ability to Detect TCPA-Listed Phone Numbers via Carrier Call Blocking (CCB)

8x8 Virtual Contact Center is now able to detect TCPA-listed phone numbers via Carrier Call Blocking (CCB) service. This feature is available for US customers only. The Telephone Consumer Protection Act (TCPA) designed to safeguard consumer privacy restricts telemarketing communications via calls, SMS texts, and fax. To comply with TCPA, we have introduced Carrier Call Blocking (CCB) service for campaign calls which allows the campaign manager in the Dialer to apply special routing to two carriers: Brightlink and RSquared. They will then run dialer calls through a service that checks whether or not the phone number is listed on a Do Not Call (DNC) or mobile block list. If listed, the call is terminated by the carrier and an appropriate Session Initiation Protocol (SIP) code response is sent back to the interaction router. The call is then handled by our Auto-TCL and completed. Once provisioned, CCB can be enabled at the campaign level. If CCB is enabled, the campaign dialer checks whether the outbound call's phone number is listed on TCPA list.

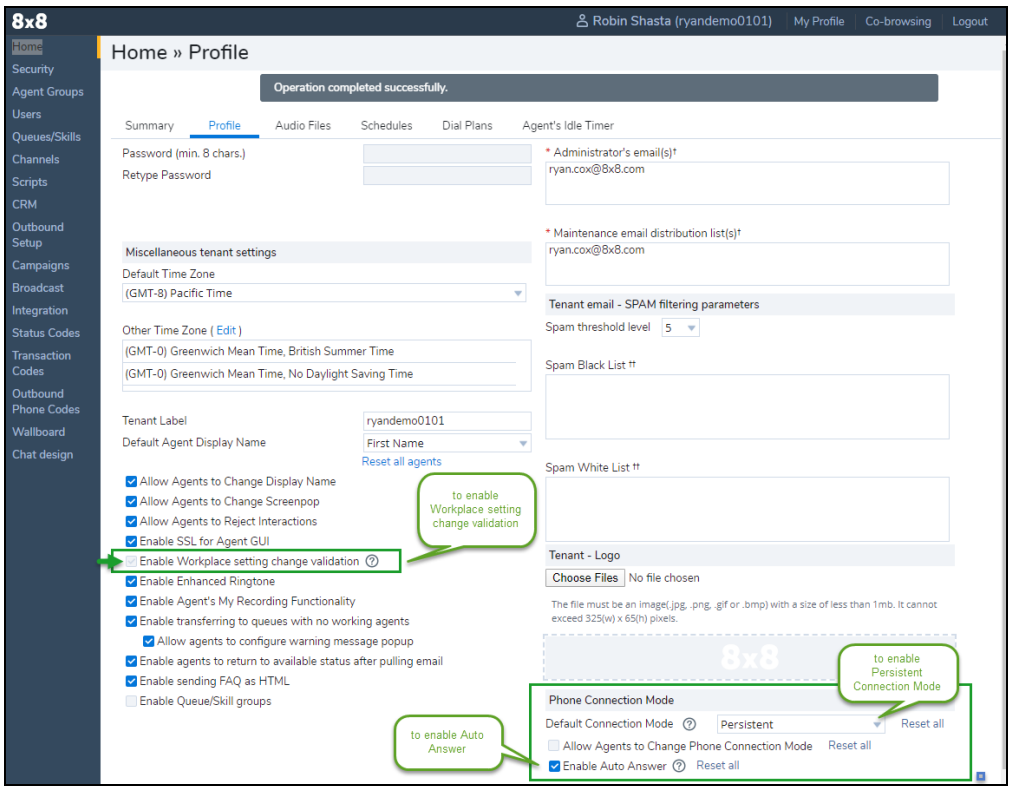
Once CCB is provisioned for your tenant, the contact center administrators can activate it for the desired campaigns. If CCB is enabled, the campaign dialer checks whether the outbound call's phone number is listed on TCPA list. For details, see our content on Carrier Call Blocking.

Improved Call Handling via Phone Connection Mode and Auto Answer

Note: Auto Answer is currently on limited availability. Contact 8x8 Support for more help.

8x8 Virtual Contact Center has improved the existing call handling capability via two features: Phone Connection Mode and Auto Answer. With Phone Connection Mode, agents set up their phone connection before they start working on calls and remain connected throughout their working day. It allows them to respond to incoming and outbound phone calls with a simple click on the user interface improving their call handling efficiency. There is no audio indication with the Phone Connection Mode. For details, see our content on Phone Connection Mode.

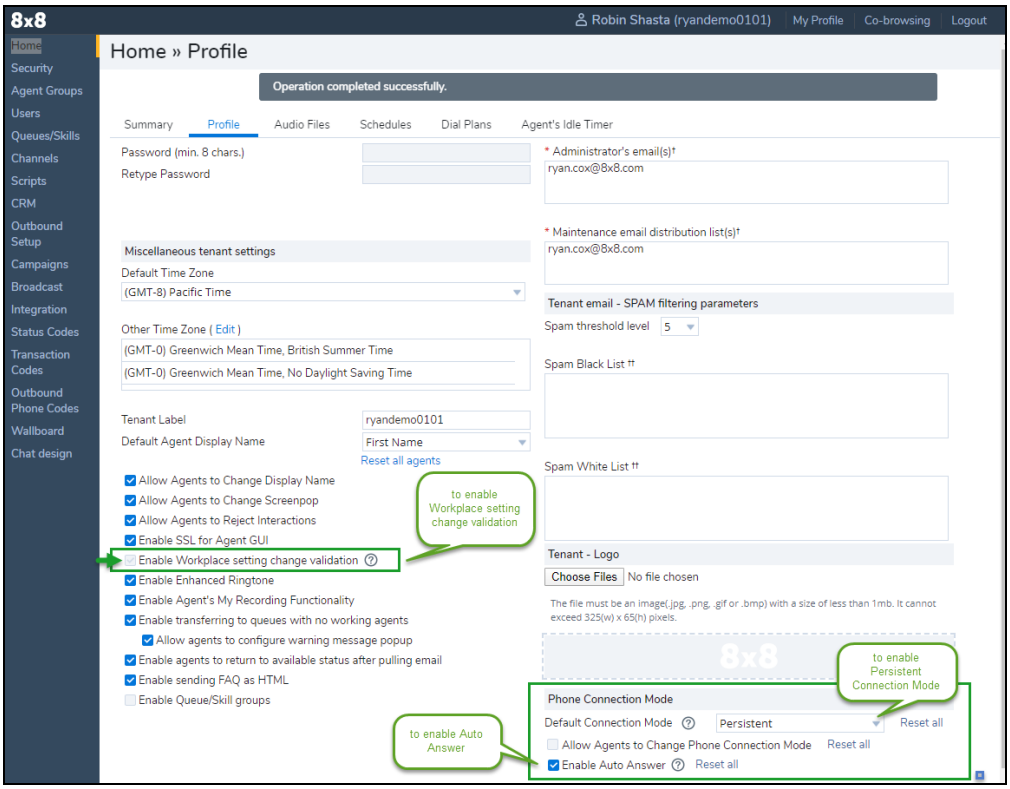
With Auto Answer, however, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually. Agents receive an audio prompt to alert them of a call as it connects. Auto Answer is paired with Workplace Setting Validation and is configurable at the tenant level. To enable Auto Answer, you must also enable workplace setting validation. For details, see our content on Auto Answer.



Once Phone Connection Mode is provisioned for your tenant, the contact center administrators can activate both Phone Connection Mode and Auto Answer for your tenant. Auto Answer is only supported on line **1** for phone interactions.

Introducing Workplace Setting Validation

When changing workplace setting (Workplace Phone and Workplace SIP URI), agents must validate their changes to be able to handle the calls. When they click to validate the change, it triggers a phone call to the updated phone number. A PIN code is then communicated to the agent. The agent must enter the PIN code to validate the changes and continue. If they are unable to confirm the PIN, they must exit and revert to their last validated setting. The workplace setting validation is offered as a mandatory security feature with Auto Answer, or it can be deployed as a stand-alone feature. For details, see our content on Workplace setting validation.

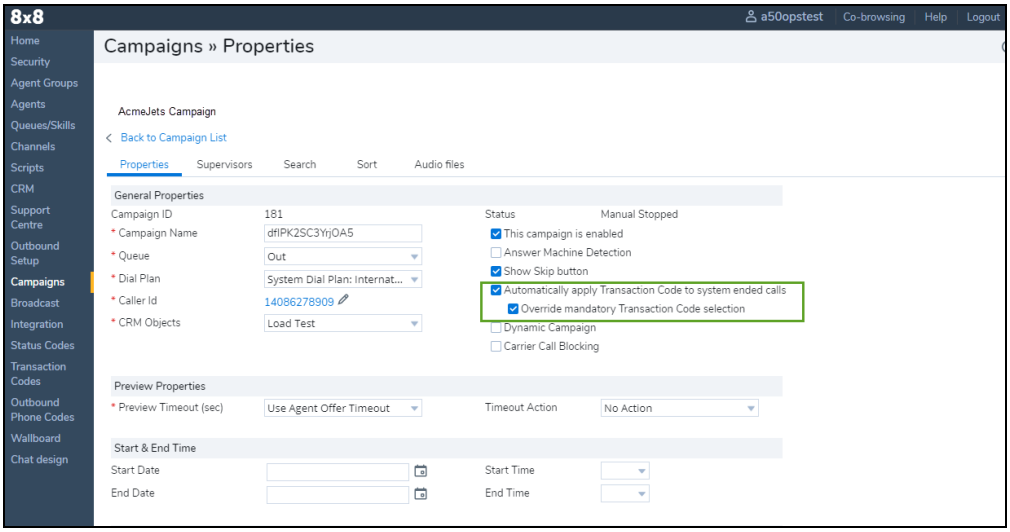


Ability to Automatically Apply Transaction Code (Auto-TCL)

8x8 Virtual Contact Center automatically assigns transaction codes to campaign calls when the destination party is not available to answer the call, or the call cannot be completed, such as when there is a busy tone or dead line. The new feature also identifies the calls that are answered by a machine. Auto-TCL works with Answering Machine Detection

(AMD) service to identify such calls and automatically disposition them. It then moves onto the next call with minimal agent disruption. This feature allows agents to be more efficient with their time.

Once Auto-TCL is provisioned for your tenant, the contact center administrators can activate it for the desired campaigns. For details, see our content on how to Automatically Apply Transaction Codes (Auto-TCL).



Dynamic Campaigns: Ability to Update Live Campaigns

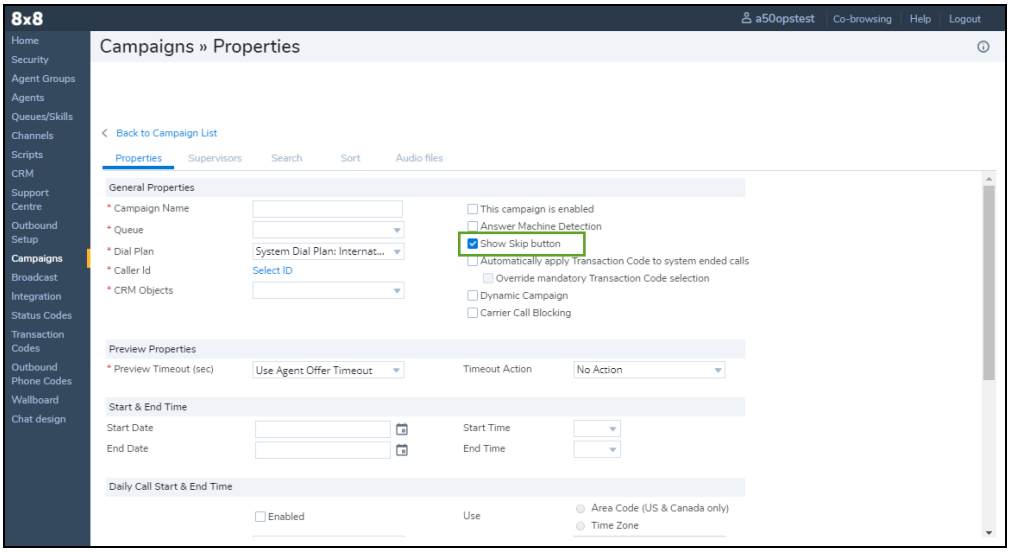
Dynamic Campaigns allow you to add or remove records from an active campaign via API. Prior to this release we could not add or remove records from a campaign after it started running. This supports integrated lead capturing systems which feed new prospects into the corresponding campaign in real time so they can be dialed within five minutes. Removing a campaign record will not delete it from the list but will keep the record for future reports.

For details, see our content on dynamic campaigns. For API configuration details, see our support article on how to configure Virtual Contact Center Dynamic Campaign API.

Allow Agents to Skip Campaign Calls While on Auto Answer

8x8 Virtual Contact Center is now offering agents the option to skip the campaign calls during a campaign. To give the agents this capability, you must enable this option under **Campaign > Properties** . For details, see our content on

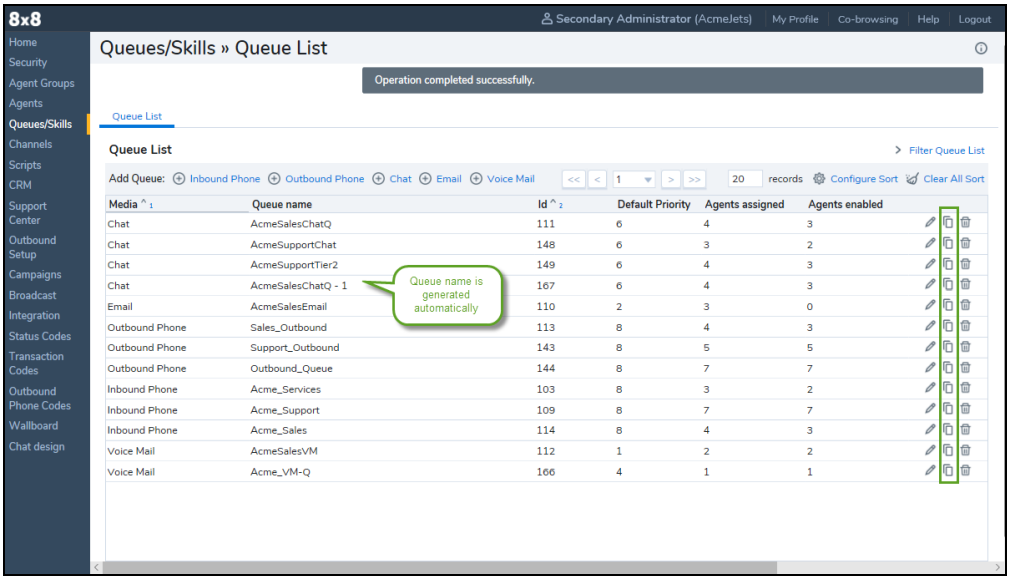
how to skip campaign calls while on Auto Answer.



Ability to Clone Queues

8x8 Virtual Contact Center now offers customers the ability to clone queues. With this new enhancement, administrators can copy inbound phone queues, outbound phone queues, chat queues, email queues, as well as voicemail queues with a simple click. Cloning queues allows Contact Center administrators to create multiple queues in a short time.

When you clone a queue, the queue properties, members, interactions, SLA, and email settings are copied. A queue name is automatically generated. You can modify or make changes to the new queue, if required. To clone a queue, in Configuration Manager, go to **Queues/Skills** to display a list of queues, select a queue and click **Copy**. For details, see our content on how to clone queues.



Media	Queue name	Id	Default Priority	Agents assigned	Agents enabled
Chat	AcmeSalesChatQ	111	6	4	3
Chat	AcmeSupportChat	148	6	3	2
Chat	AcmeSupportTier2	149	6	4	3
Chat	AcmeSalesChatQ - 1	167	6	4	3
Email	AcmeSalesEmail	110	2	3	0
Outbound Phone	Sales_Outbound	113	8	4	3
Outbound Phone	Support_Outbound	143	8	5	5
Outbound Phone	Outbound_Queue	144	8	7	7
Inbound Phone	Acme_Services	103	8	3	2
Inbound Phone	Acme_Support	109	8	7	7
Inbound Phone	Acme_Sales	114	8	4	3
Voice Mail	AcmeSalesVM	112	1	2	2
Voice Mail	Acme_VM-Q	166	4	1	1

See our content on all Previous releases.

Previous Releases

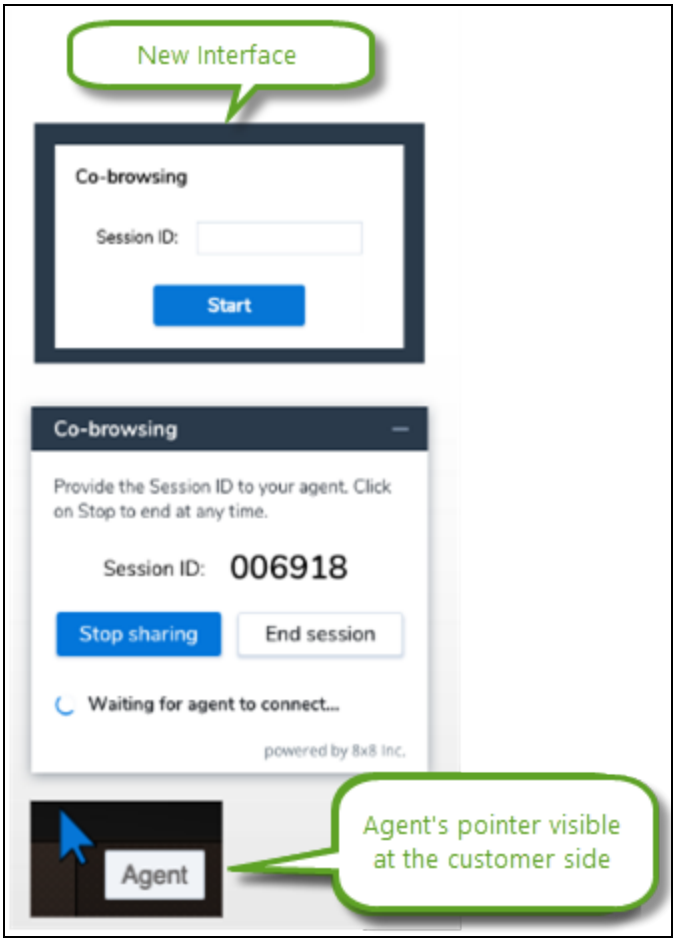
You can find our previous releases here:

Release 9.8

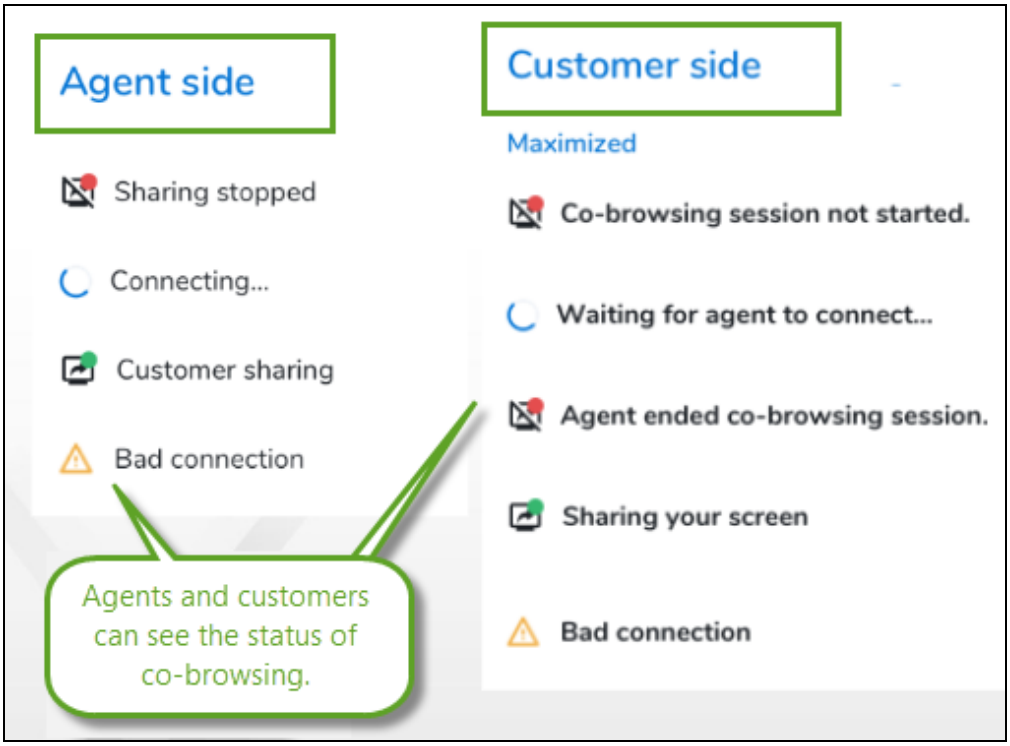
- **Enhanced Usability of Co-browsing**: With Co-browsing, you offer live, hands-on assistance to customers, take control of their cursor, and demonstrate how to perform the action while the customer observes. Via co-browsing, you can securely connect to remote computers, access, and troubleshoot problems over the Virtual Contact Center platform. For details, see our content on how to get remote customer assistance.

  Customers, who use 8x8 Co-browsing for remote assistance, can now enjoy better usability with the following enhancements.

- A refreshed user interface.

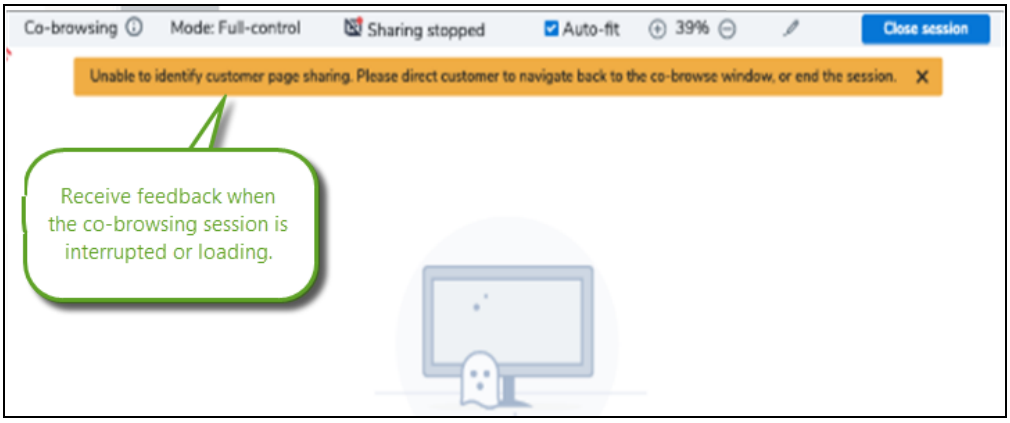


- Better visibility to the status of co-browsing session on customer side.



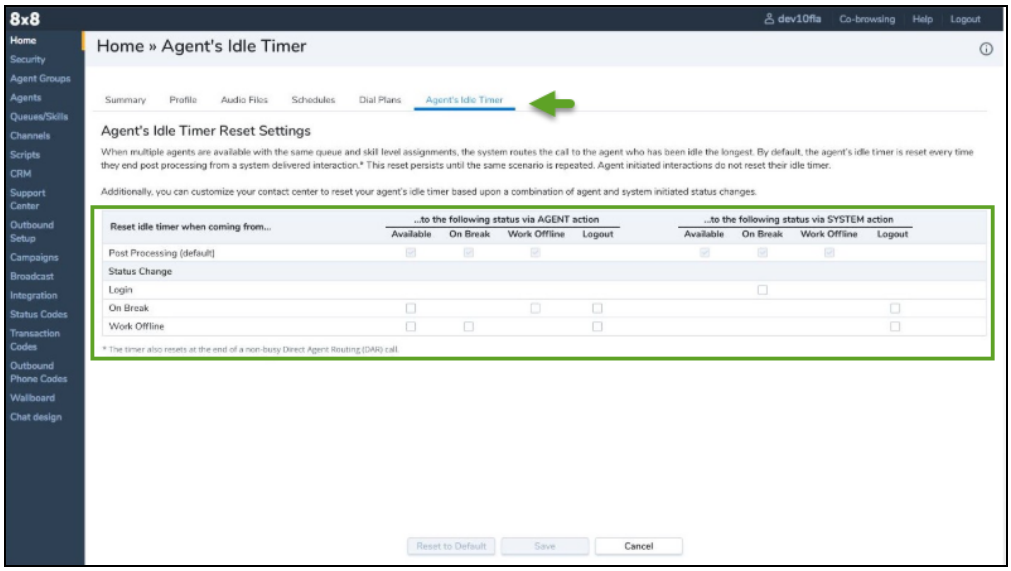
- The auto-minimized status window allows the customer to keep an eye on the status of the shared screen at all times. The customer can move the status window to the desired location while in a live session.

- Agents receive feedback when the co-browsing session is interrupted, or takes time to load.



- **Ability to Reset the Agent's Idle Timer**: In Virtual Contact Center, idle time refers to the length of time agents have been idle and is measured for each agent by the agent's idle timer. By default, an agent is considered idle from the time he ends post processing of a system-delivered interaction and becomes available. When multiple agents with the same queue and skill level assignments are idle, the system routes the call to the agent who has been idle the longest. The agent's idle timer is reset every time they end post processing of a system-delivered interaction. This reset persists until the same scenario is repeated. Agent-initiated interactions do not reset the idle timer.

  To supplement the default behavior, we now allow Virtual Contact Center administrators to reset the idle timer when agents transition from one status to another. For example, The idle timer resets when agents change their status from On Break to Available when they log in. For details, see our content on reset agent's idle timer.

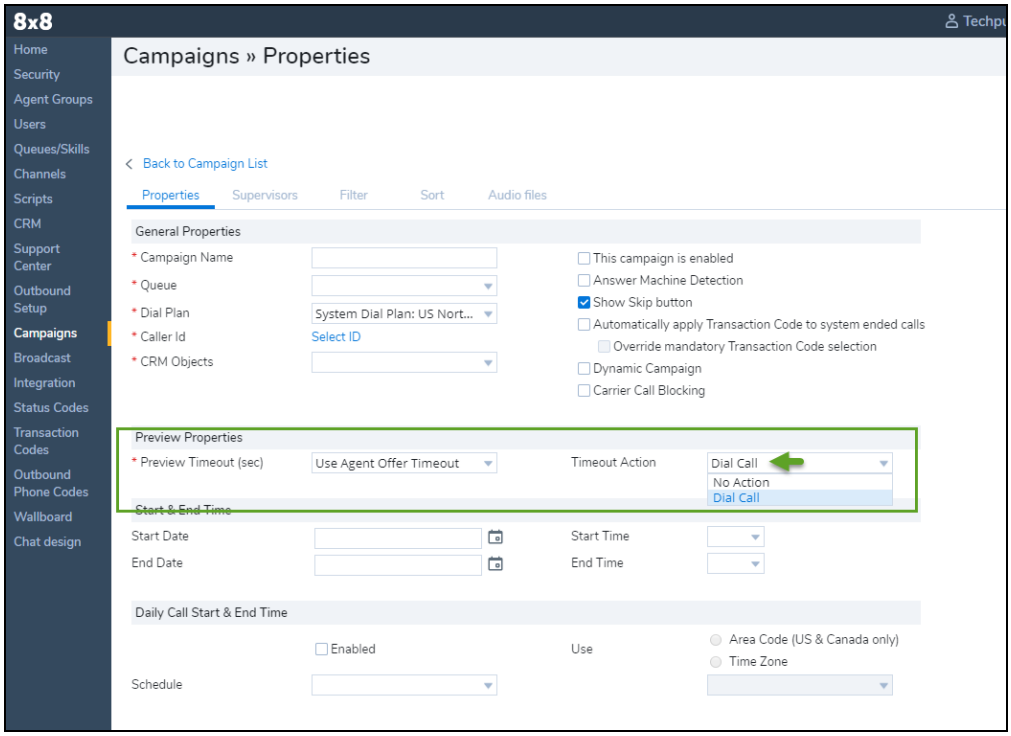


- **Ability to Autodial Campaign Calls after Preview**: In this release, we have introduced the ability to autodial campaign calls when an agent has spent all the preview time without taking an action. Autodialing campaign calls after previewing a campaign record is controlled by a campaign setting.

> **Note:** This feature enhancement is only applicable if your company uses Virtual Contact Center campaigns.

Prior to this release, agents handling a campaign could view the campaign record for the specified preview period and manually start, reject, or skip the interaction. They were not forced to take the interaction in the time allowed. Additionally, the need for a manual action to initiate a call was repetitive and inefficient. With the autodial feature,

however, at the end of the preview time if no action is taken, calls are initiated automatically eliminating the need for manual action by the agent. The Virtual Contact Center administrators can enable autodialing for each campaign when an agent's preview countdown ends. The minimum preview duration is 15 seconds. For details, see our content on how to set up autodial for campaign calls.



- **Efficient Voice Channel Workflow via off-Hook Mode**: With off-hook connection mode agents can instantly and seamlessly connect to customers and improve their productivity. Off-hook is a persistent connection from the agent's device to Virtual Contact Center. It removes the need to connect the agent's workplace phone for every call handled. Agents set up their voice connection before they start working on calls and remain connected throughout their working day. It allows them to respond to incoming and outbound phone calls with a simple click on the user interface.

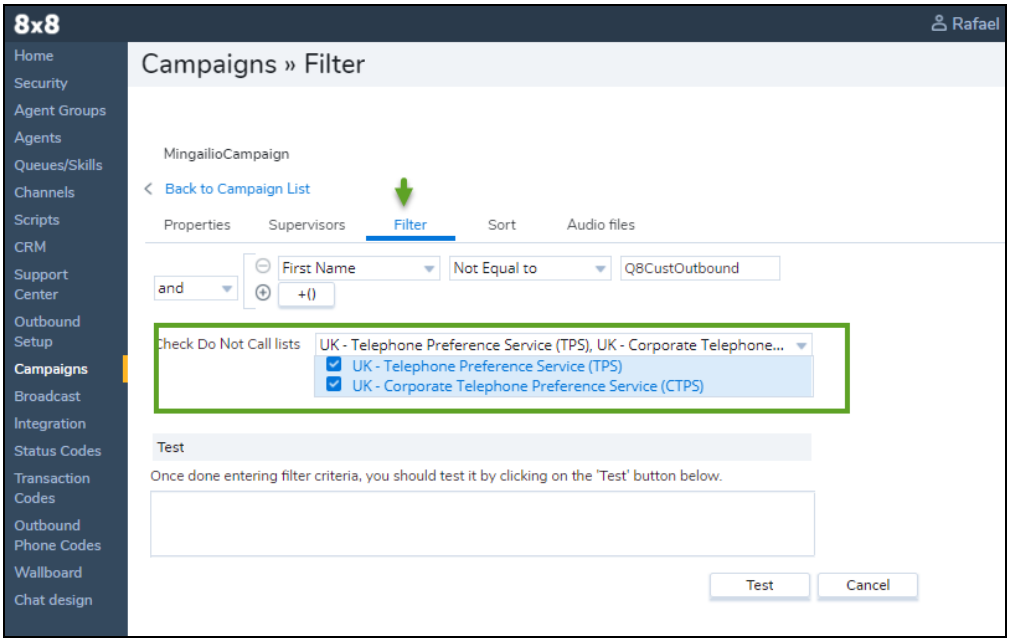
  In the previous behavior, after agents log in to Virtual Contact Center and make themselves available, they have to accept the interaction for every call that comes through the queue. If they miss the ringing phone, they will no longer be available to take the interaction.

  To enable off-hook connection mode for the tenant, log in to Configuration Manager as an administrator and click **Enable Off-hook Connection Mode** in **Home > Profile**. If enabled by the contact center administrators, agents can click **Enable Off-hook Connection** in their Agent Console's user profile. For details, see our content on off-hook connection mode.

Release 9.7.3

We have introduced a brand-new look for Virtual Contact Center applications in this release. Additionally, we have a new feature enhancements for administrators:

Ability to Filter Campaign Lists Based on Do Not Call Preferences: While creating a campaign filter, you can filter those numbers from Local CRM records that are registered with the Telephone Preference Service (TPS) and Corporate Telephone Preference Service (CTPS), to be compliant with TPS and CTPS. This feature is currently supported for UK phone numbers, but will be extended to other countries in future releases.



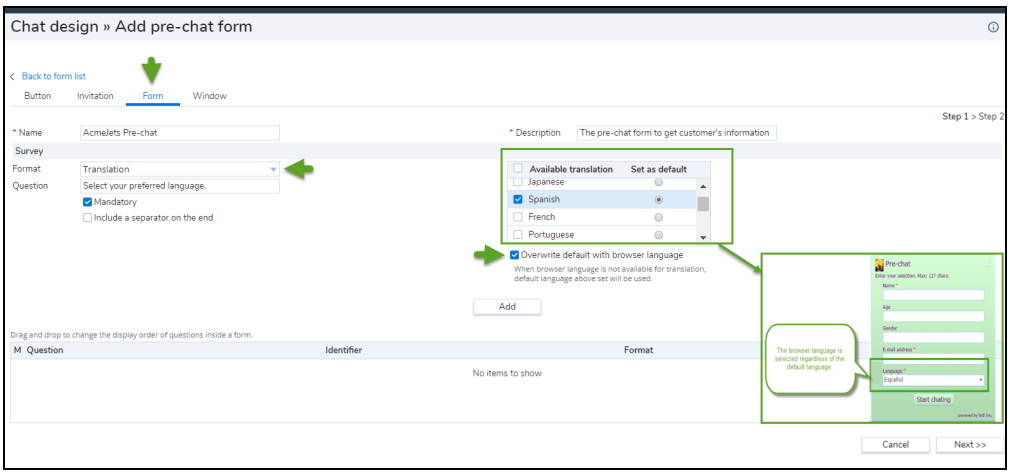
This feature helps customers to be TPS/CTPS compliant, but does not guarantee it. Customers are responsible for their own compliance. It is recommended not to run campaigns longer than 28 days. For details, see our content on Filter Campaign Lists Based on Do Not Call Preferences.

Release 9.7.1

We have introduced the following new enhancements to improve the productivity of agents, supervisors, and administrators.

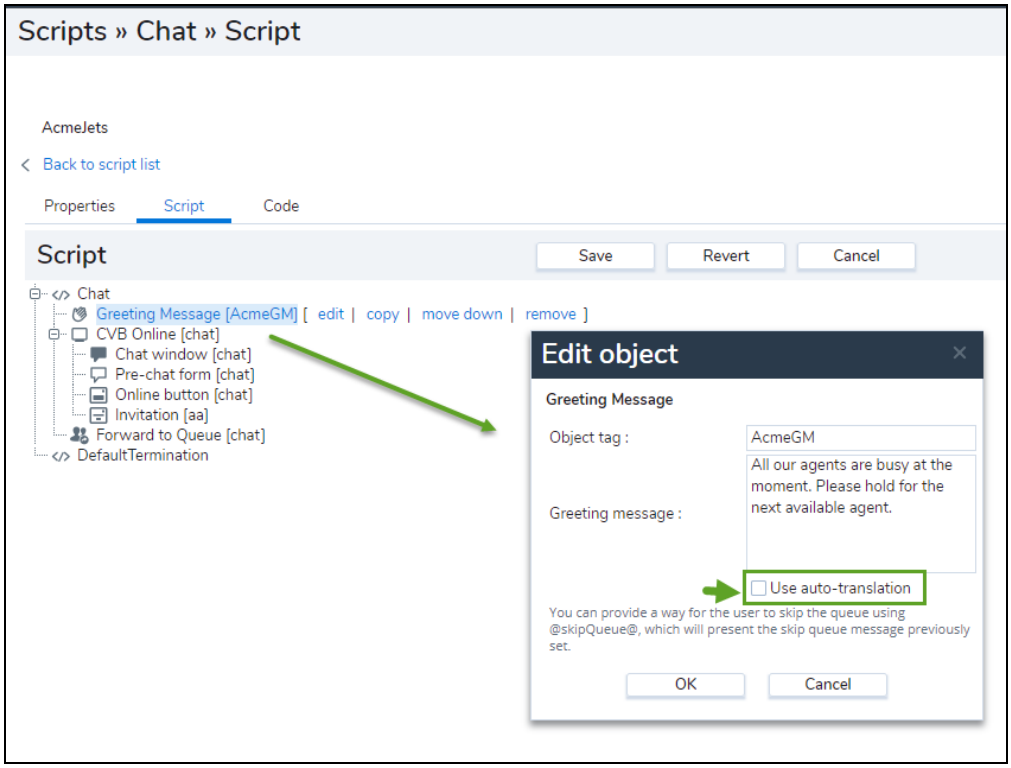
- **Ability to Set the Browser Language as the Pre-Chat Language**: In Configuration Manager, administrators can now set the browser language as the language visible in the pre-chat form. A pre-chat survey form serves to gather information from a chat user before initiating a chat. Using the form, you can collect information from an existing user, such as their preferred language. With this enhancement, the customer's browser language can optionally overwrite the pre-chat default language, eliminating the need for the customer to answer an extra

question. When the translation is not available for the browser language, the pre-chat selected language will be in effect. See Translation in pre-chat form.



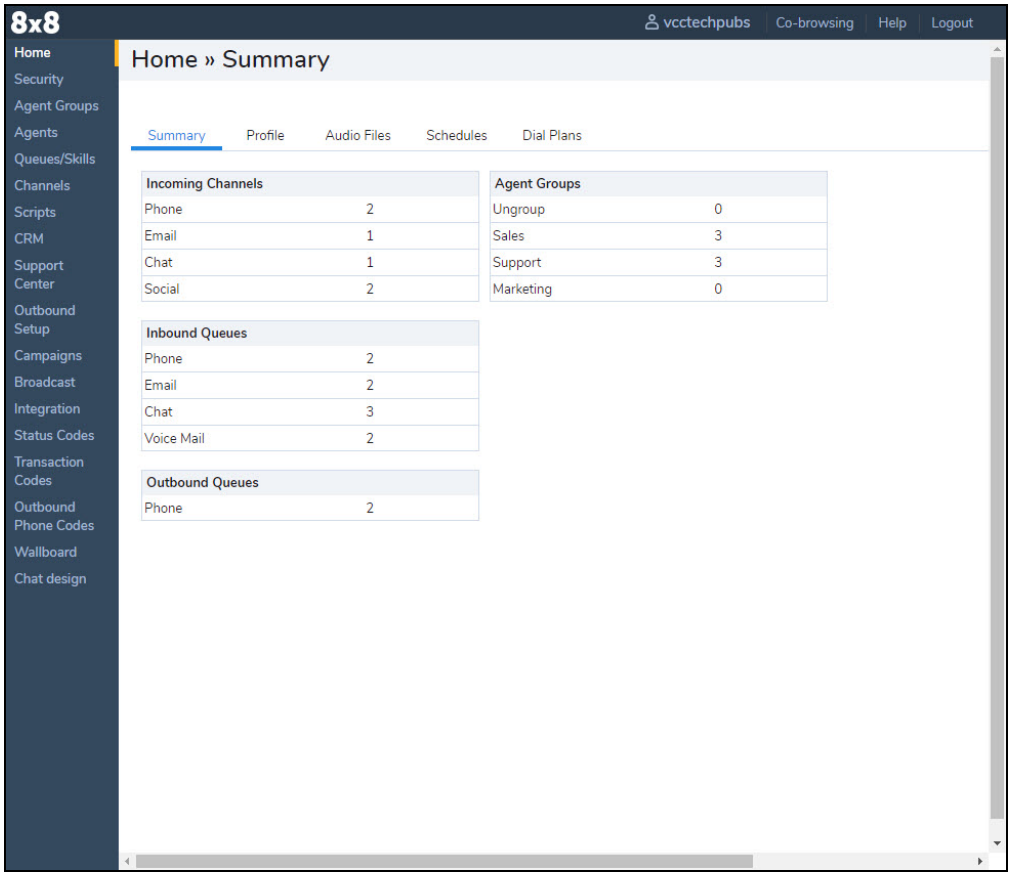
- **Ability to Bypass Automatic Translation in Greeting Messages**: In Configuration Manager, the administrator can configure the greeting messages to bypass the automatic translation. Greeting messages are routinely used to invite the customers to a chat session. You can type your message in the chat window, and select to automatically translate. With the new enhancement, however, you can bypass the automatic translation and let

the user provide a customized translation instead. See Greeting Messages in the summary table.

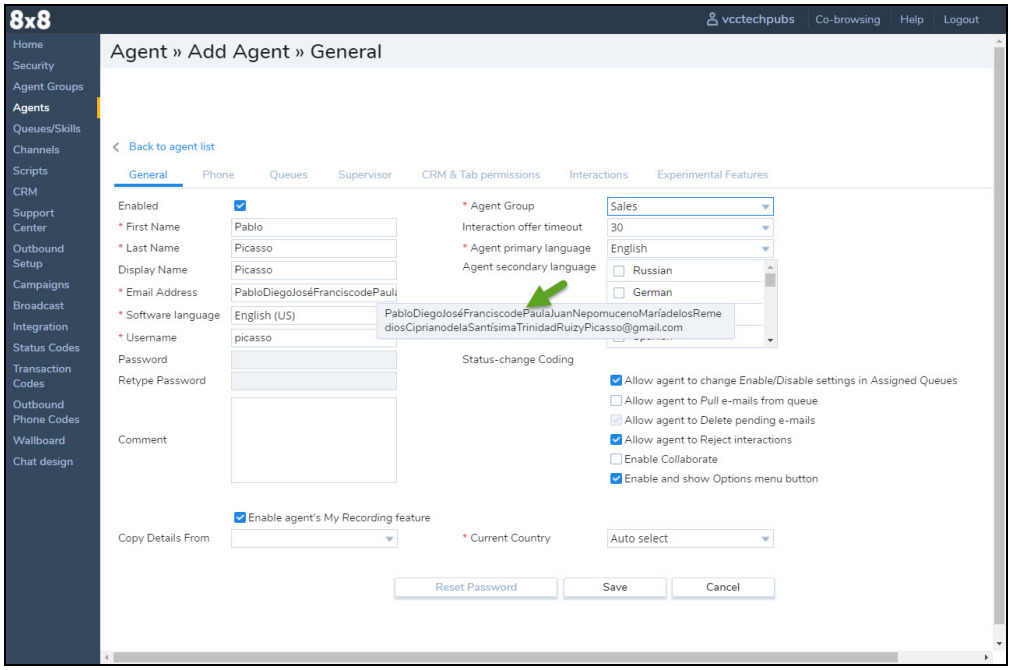


Release 9.6

- **Refreshed New Look for Virtual Contact Center**: Whether you are an agent, a supervisor, or an administrator of Virtual Contact Center, you will certainly love the new refreshed user interface of all our applications. Look out for the notifications when you launch your application. Please note that we have kept all our functionality workflows intact so there is no learning curve for you.



- **Ability to Message Customers via Facebook and Twitter**: Take advantage of Facebook and Twitter to service customers directly and increase customer satisfaction with Virtual Contact Center Social Integration. By unifying the agent experience, 8x8 Social allows users to channel their messages from social media into Virtual Contact Center. Customers can contact the businesses and receive support from within their social platform. Virtual Contact Center Social supports messaging via Facebook and Twitter in this release.To receive chat interactions, agents must be assigned to an enabled chat queue and be in Available state. See Social Media Integration.
- **Increased Length of Email Addresses**: You can now save email addresses exceeding 55 characters. The maximum limit now stands at 254 characters. This change allows many areas such as saving longer email IDs of agents, customers in Local CRM, setting up email notification for voicemails, and more. See User Profile.



For the complete list of areas that benefit from this enhancement, see below.

Increased Email Address Length from 55 to 254.

CM:

- Home - Profile
- Security - Edit Administrator
- Security - SMTP Server
- Agent -General
- Queue - SLA
- Voice Mail - Que Notification
- Voice Mail IVR -Additional Email address
- Scripts Email scripts
  - Check Recipient
  - Check Sender
  - Reply to: From, To, BCC
- Scripts - Chat - Skip Queue
- Scripts - Social - Skip Queue
- Channels - Incoming Email
- Wallboards - URL Share
- Chat Design - Forms
- etc..

AGUI:

- Agent Profile
- CRM edit Customer
- CRM edit Cases
- CRM edit Follow-up
- CRM edit Task
- CRM Case report
- CRM Customer report
- Chat Pop-up
- CRM Customer Search
- Pending Emails list grid
- Agent Online Control Panel -Truncate long email with elipsis
- etc…

WAPI:

Web API allows customers to synch or integrate their applications with 8x8 CRM data.

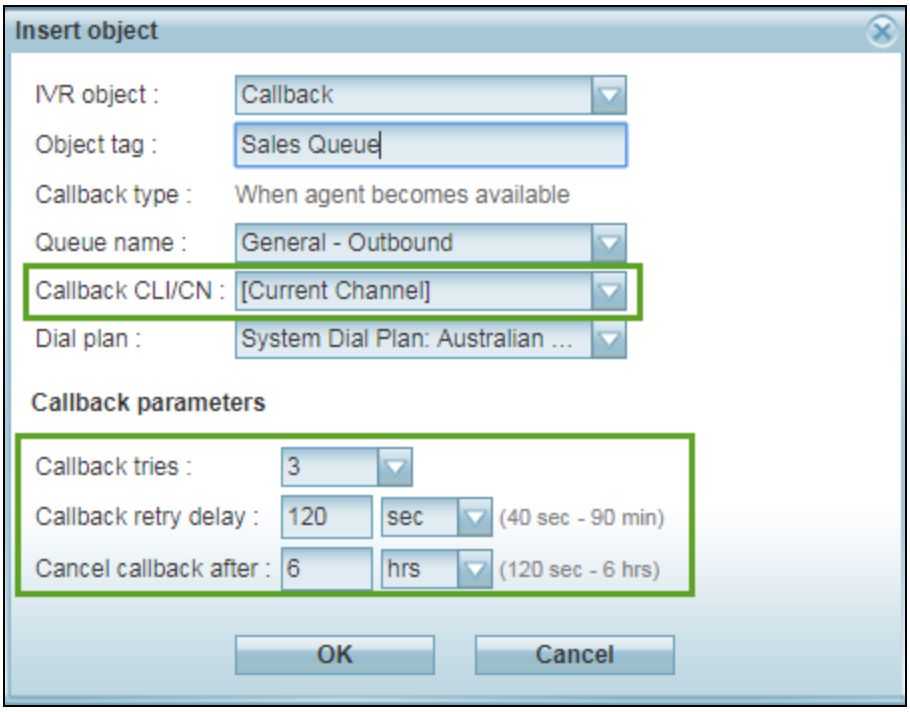
- Added - edit Customer
- Added - edit Task

Objects:	Actions:
Customer	Add
Case	Modify
Follow-up	Get
FAQ Category	Delete (FAQ Only)
FAQ	List
Customer Fields	

Release 9.5.2

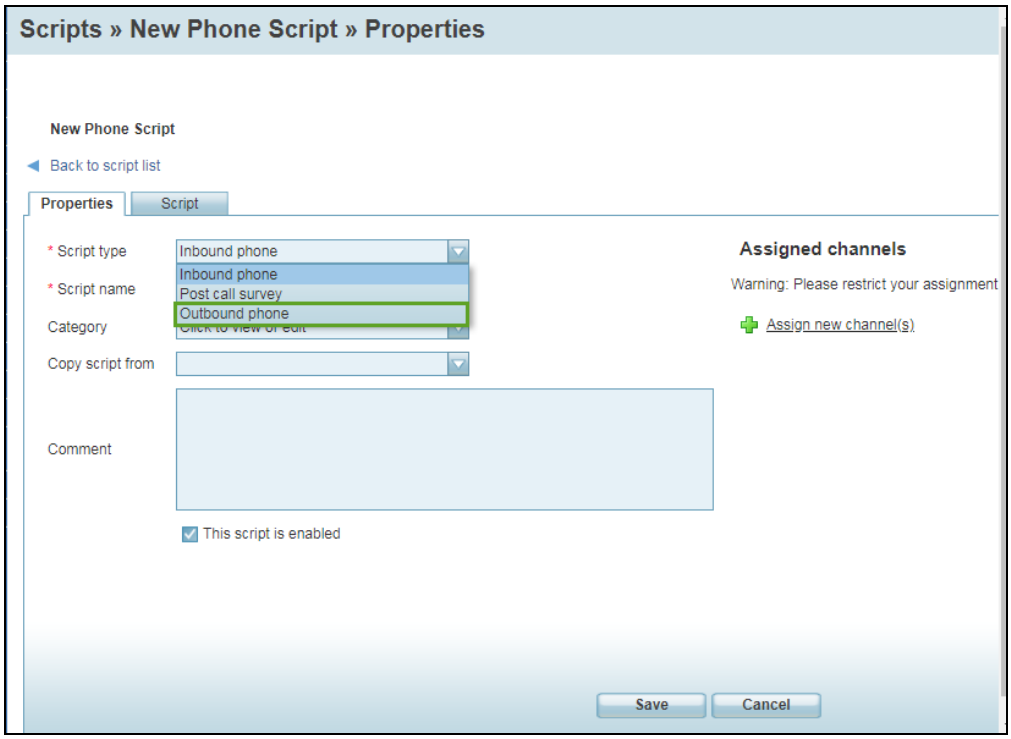
New features and enhancements to VCC-Configuration Manager impact supervisors and agents. Some of these features are available to agents and supervisors by default, while others need to be enabled by administrators to benefit from the functionality.

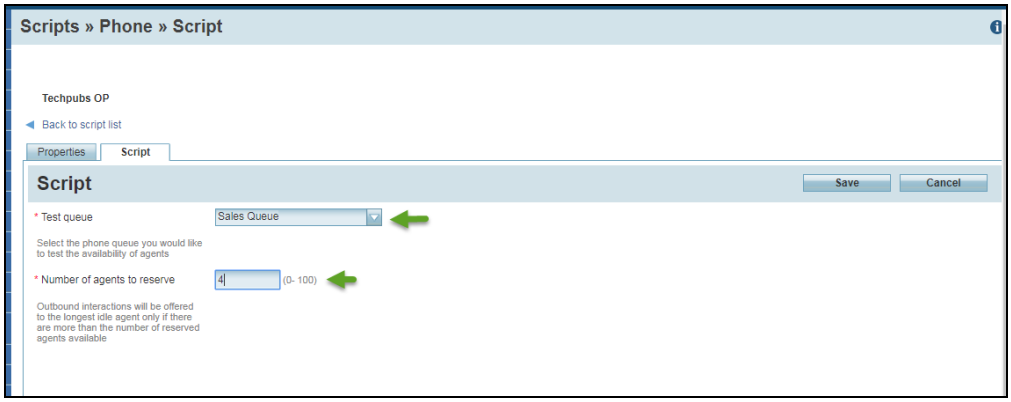
- **Enhanced Queued Callback**: Our phone IVR scripts can now provide increased callback time, time granularity, and efficiency:
  - **Increased callback time:** The cancel callback time can be set to an increased maximum of six hours. The requested callback remains in an outbound queue for the duration of that time. Any callback attempt is prevented after the time expires. The callback request is removed from the outbound queue after Cancel Callback duration has expired.
  - **Improved granularity for callback retry delay:** You can set callback retry attempts using minutes, and seconds.
  - **Improved granularity for Cancel callback after:** You can set the time duration to cancel call back using hours, minutes, and seconds.
  - **Improved efficiency for selecting the callback channel number:** Using the new option [Current Channel] for CLI/CN, you can display the original channel number, which the caller used as the caller ID for the callback. This option is selected by default. If you wish to display any other channel number during the callback, you can select from the list of available channels.



- **Ability to Reserve Idle Agents for Inbound Queues**: This feature only applies to outbound calls that are assigned to go through an outbound queue. The Reserve Idle Agents feature allows a configurable number of agents to be reserved in available and idle state, to improve the probability of quickly attending to a new inbound

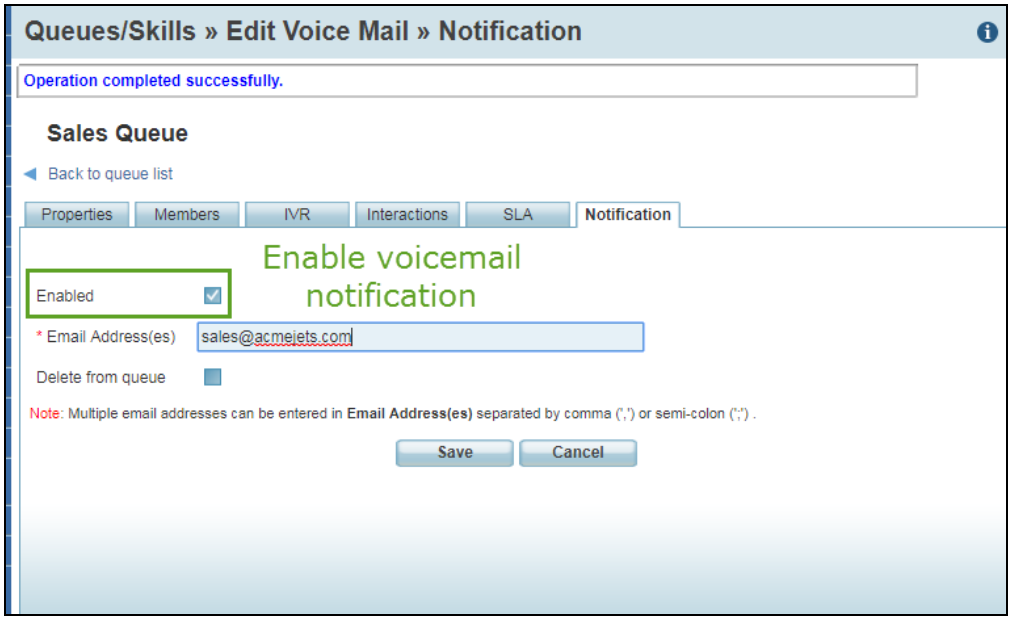
call. While there are fewer than the assigned number of reserved “Available and idle” agents, no queued outbound calls will be presented to agents. Whenever the “Available and idle” agents reserve is exceeded then the most idle agent will receive a queued outbound call.

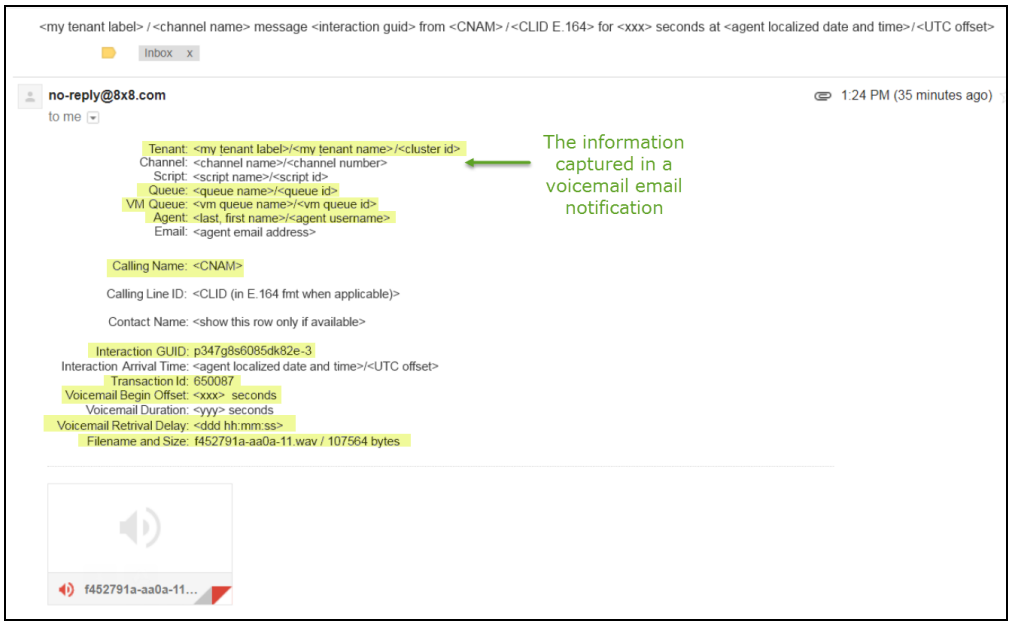




- **Enhanced Voicemail Email Notification**: The voicemail email notification provides more data allowing you to track the queued voicemails better. The following information is captured in the voicemail email notification: Transaction ID, tenant name, cluster ID, phone queue ID, voicemail queue ID, calling name, interaction GUID of the inbound phone queue, transaction ID of the inbound phone interaction, voicemail begin offset, filename, agent

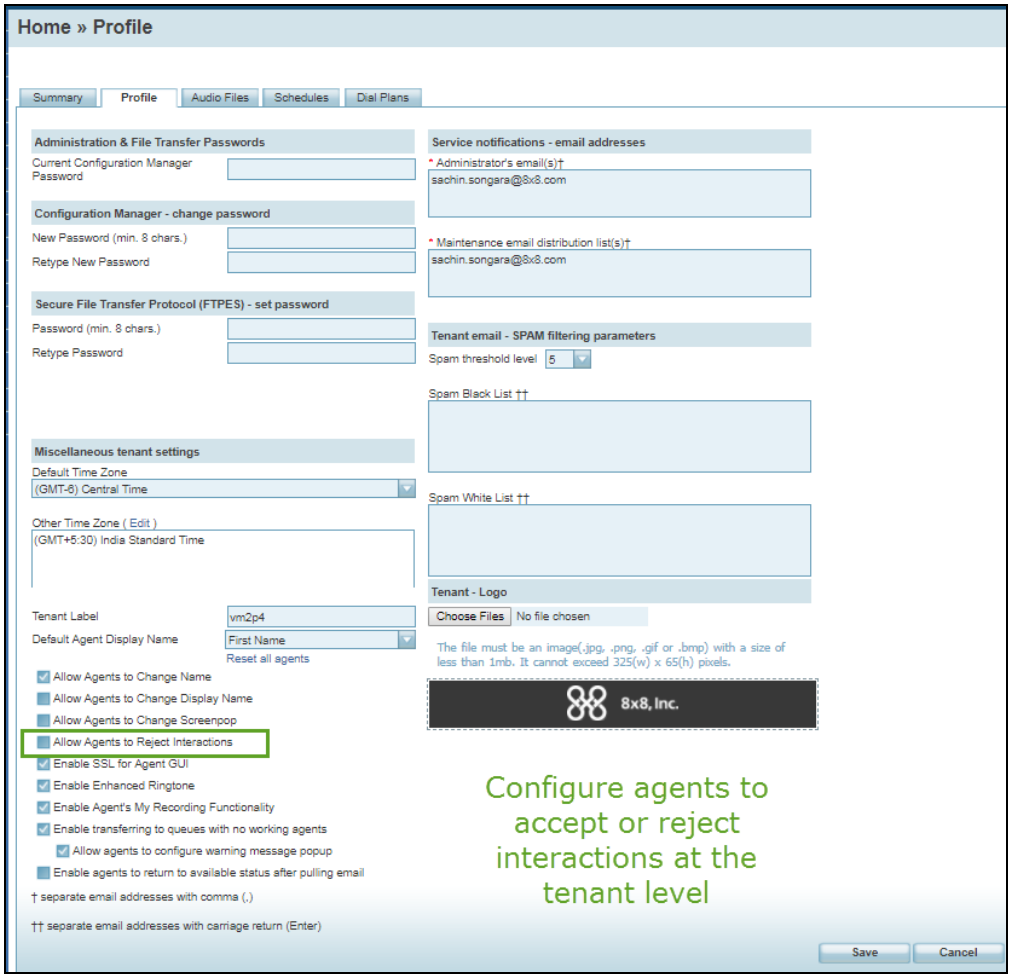
name, and voicemail retrieval delay.

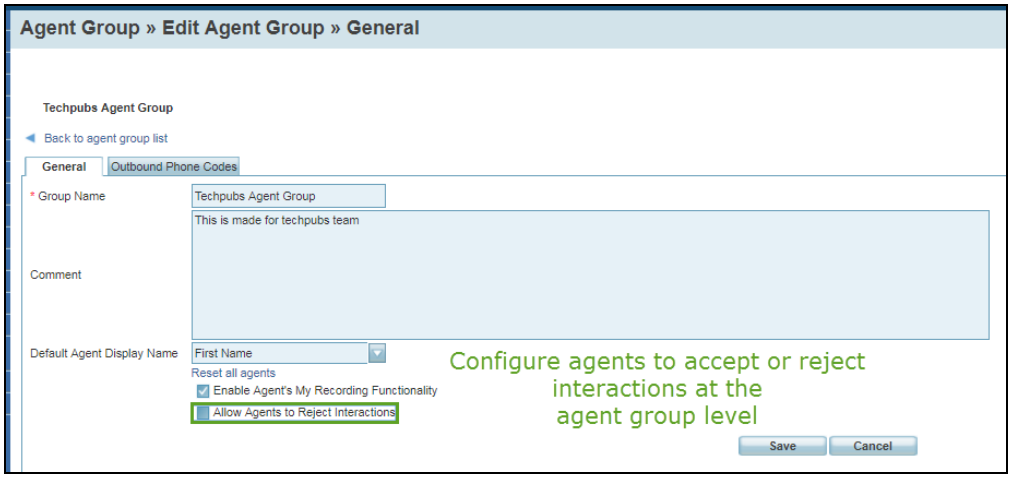


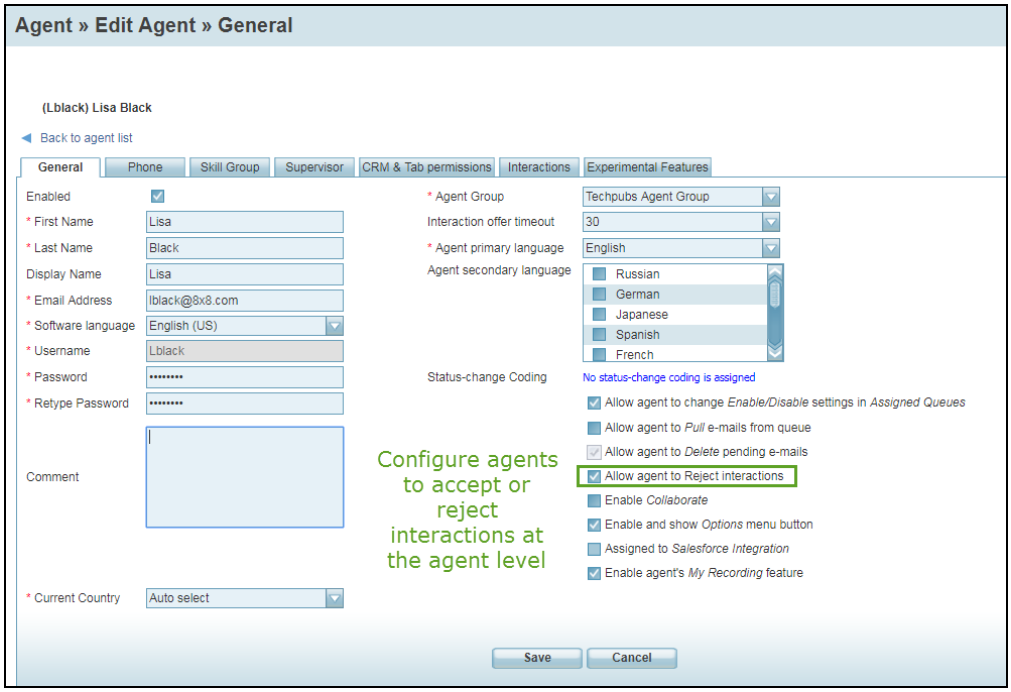


- **Ability to Prevent Agents from Rejecting Interactions**: Improved the ability in Configuration Manager to allow or prevent agents from rejecting interactions. You can set up this ability for the entire tenant, an agent group, or individual agents. By default, this option is enabled allowing agents to reject interactions. When disabled, the

Reject button in Agent Console is disabled preventing agents from rejecting the interactions they are offered.

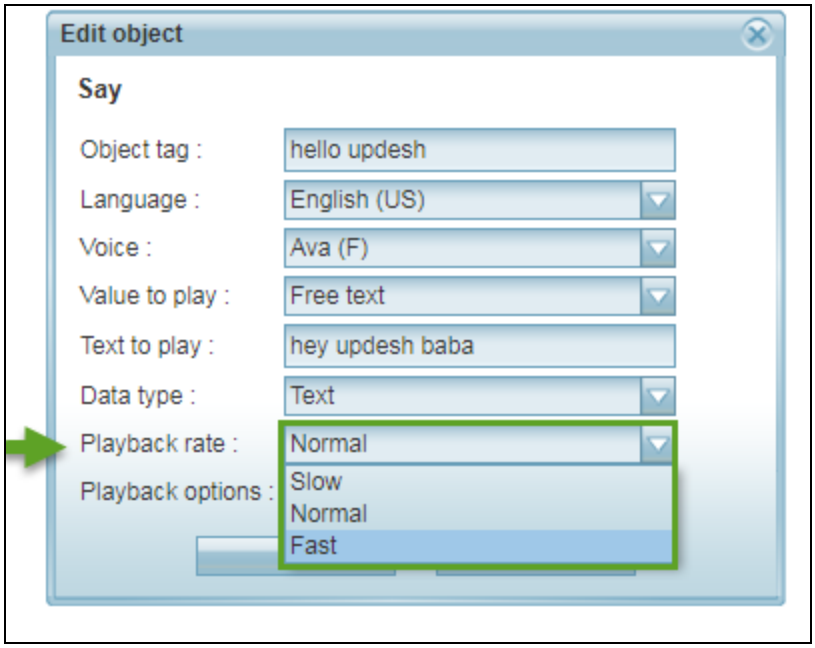




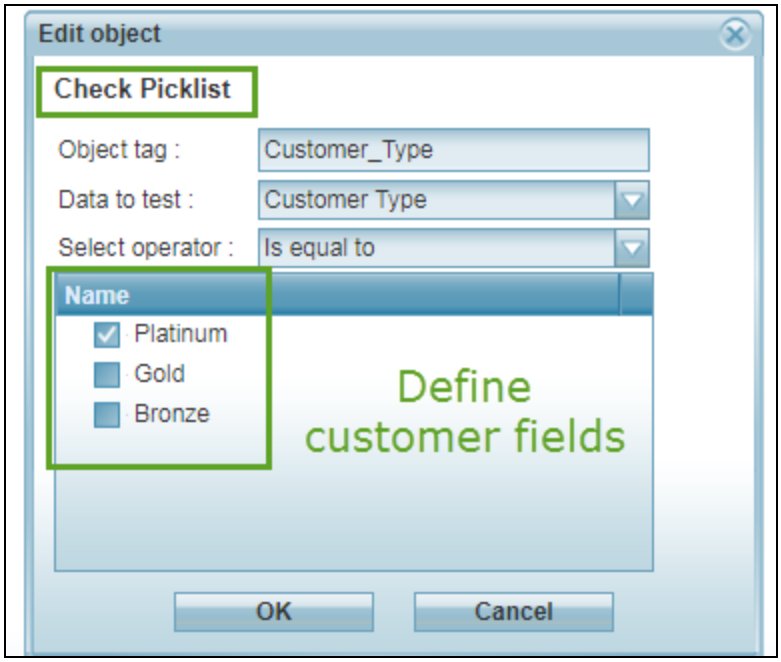


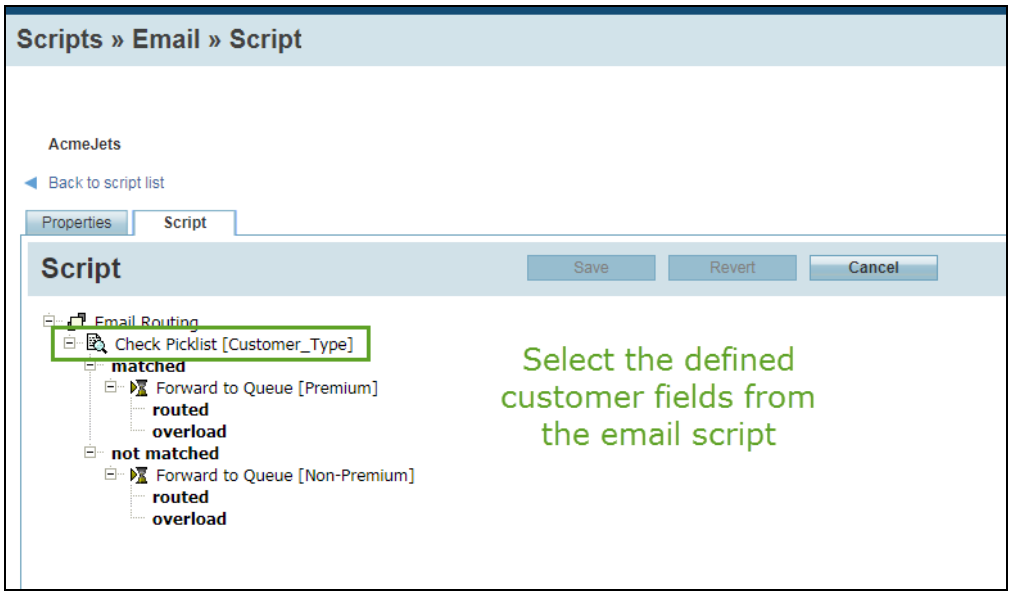
- **Ability to Define Playback Speed of Text-To-Speech Prompts**: You can define the playback speed of IVR Text-To-Speech (TTS) prompts when using the Say object. The Say object converts programmed text and variable objects such as phone number and queue position into speech. You can play these prompts slowly, at a normal speed, or at a faster pace. Using the playback rate option, you can control the speed of the speech that reads your text so your callers do not miss the important information such as names, numbers, or account balances. The

default speed is Normal. The playback speed is set per IVR Say node.



- **Enhanced Email Routing Based on Customer Data**: Emails can now be routed based on the CRM customer field of picklist type. For example, if a company wishes to prioritize their premium customers and offer to assist them quickly, agents can prioritize and route the emails from customers based on their account type, say Platinum, Gold, and Bronze. Emails received from Platinum customers can be routed to a dedicated queue for faster processing. Using the Check Picklist object in the email script, you can filter emails based on the customer type and send them to their respective queues for better customer experience. To take advantage of the check picklist object, you must first define the desired customer field of picklist data type in the Local CRM and then select this field in the email script.

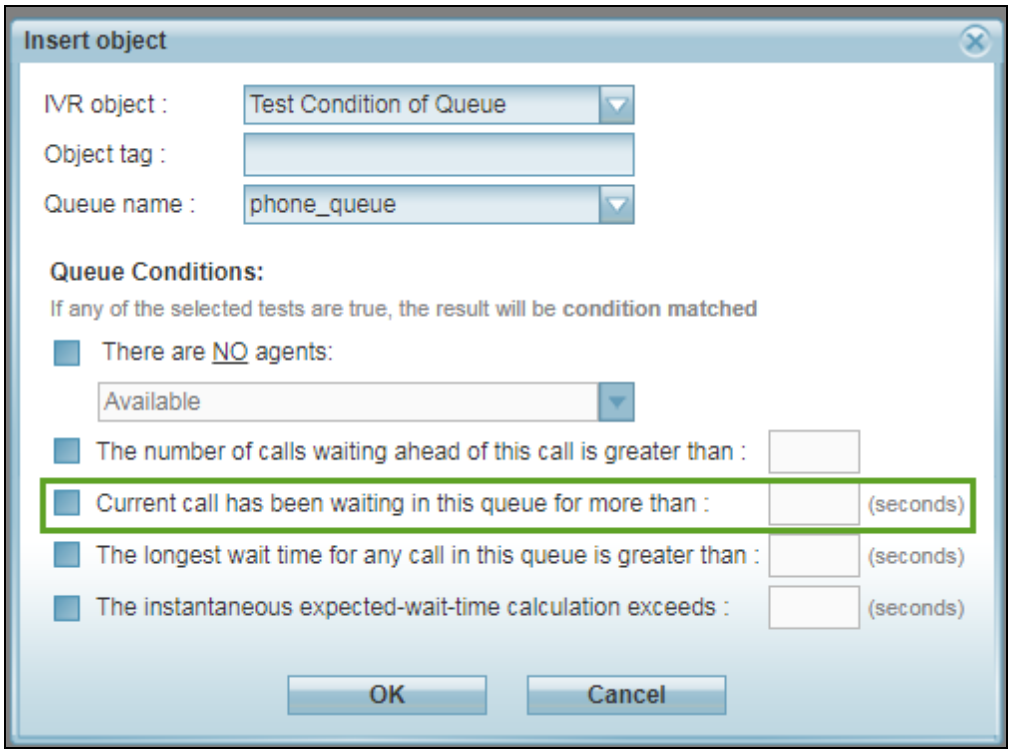


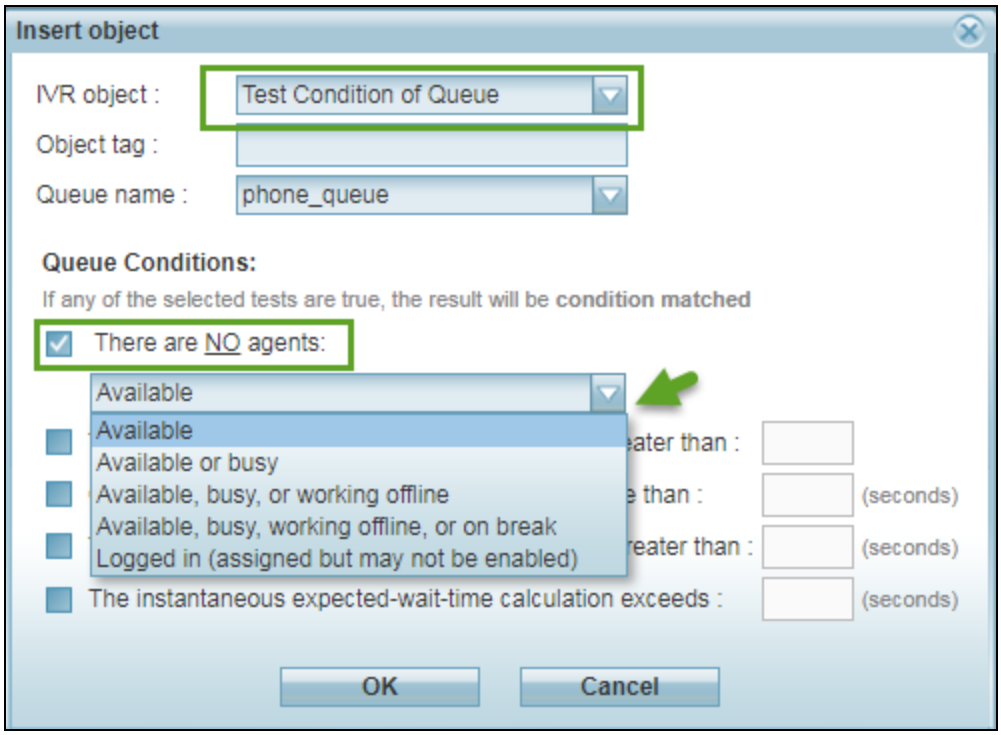


Release 9.5

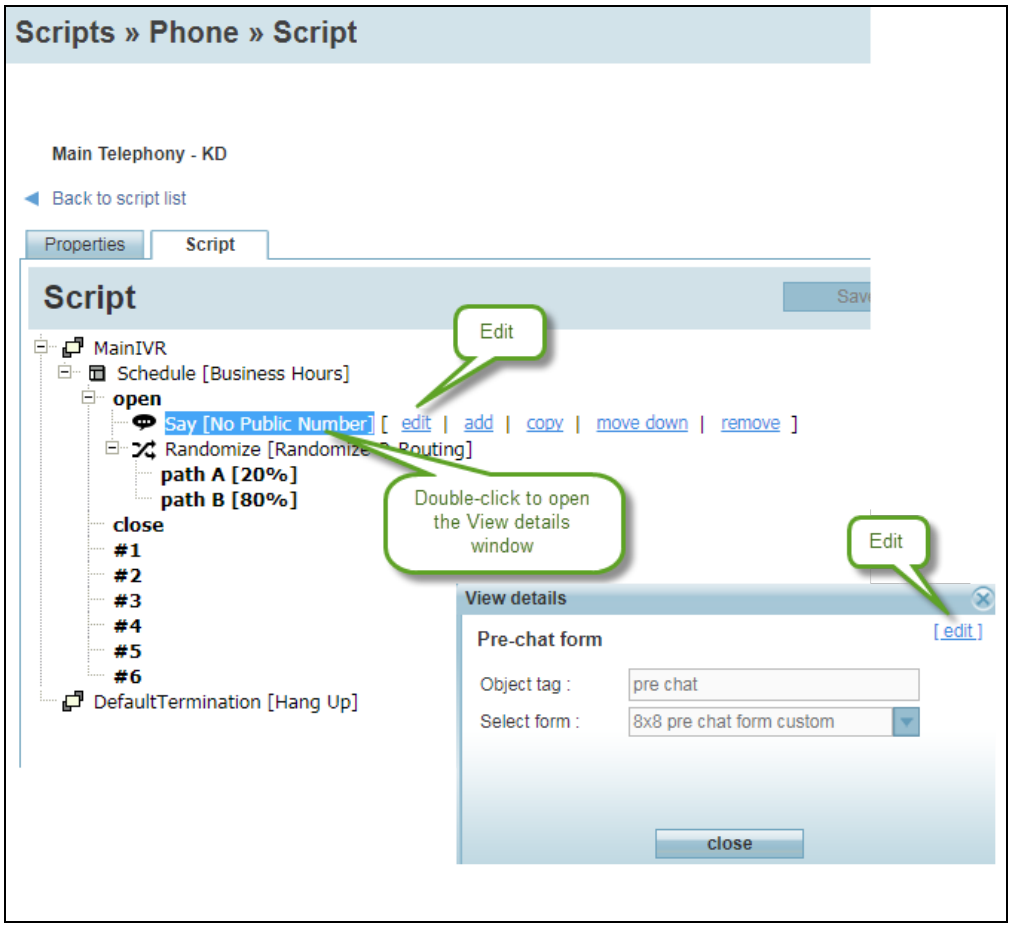
In this release, we have introduced a few enhancements and fixed many bugs:

- **Improved Test Queue and Forward to Queue**: Our scripts can now provide in-queue treatments, checking the status of a call in-queue, such as how long the current call has been waiting in the queue. We can also check the agent's availability in the queue at a more granular level in both Test Queue and Forward to Queue objects.



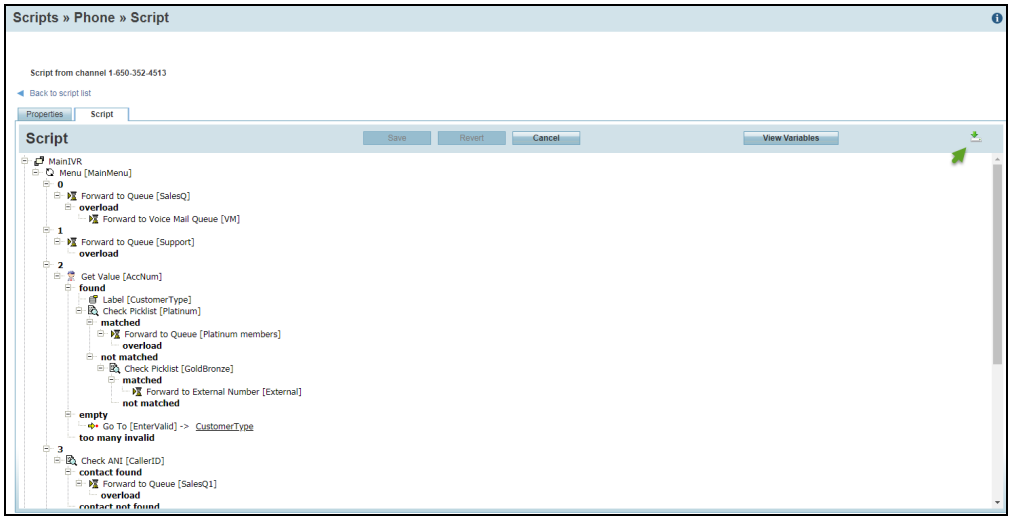


- **Enhanced Edit and View inside scripts**: The new enhancement adds double-click capability inside a script. This enhancement provides a quick way to view the object's details without opening it in the edit mode.
  To edit the object, click **edit** inside the View details window, or click the **edit** link next to the object inside the script.
  This enhancement applies to all scripts including phone, email, and chat.



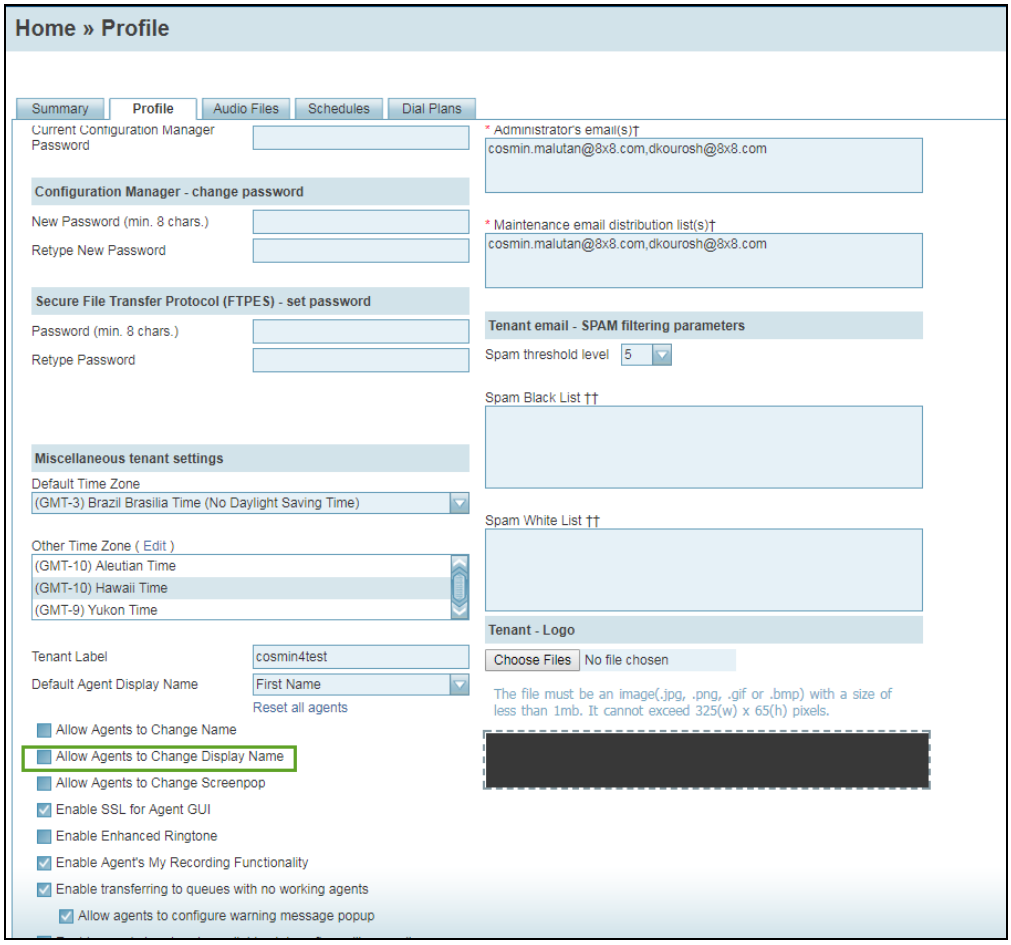
- **Ability to generate PDF images for scripts**: You can now generate a PDF image of the script in a printable format and save it locally. It gives developers the ability and flexibility to review and design the script at a later time.

This enhancement applies to all scripts such as phone, email, and chat.



- **Allow agents to change Display Name**: This new improvement allows agents to present themselves with a customized display name. The new feature ensures agents privacy and helps them save time and effort to introduce themselves to customers every time they start a new chat. The display name also shows up in the chat log. Display Name can be modified by the Virtual Contact Center administrator in the Configuration Manager, or if

permitted, by the agents in Agent Console. The changes immediately appear in both applications.



Release 9.4.3

Enhanced Control for CRM Reports: As an administrator, you have the ability to allow or prevent agents from creating or downloading reports for customers, cases, and tasks in Local CRM. By default, agents are allowed to create and download reports.

Release 9.4

This release offers Global Reach for Virtual Contact Center. The Single Tenant Global Reach initiative from Virtual Contact Center provides best call quality on VoIP across the globe. If your contact center has agents and customers distributed globally, serving your customers 24/7 with the right skilled agents and providing smooth call quality can be a challenge given the global operation. The last thing you want is to distress customers with poor call quality when they need help. The Single Tenant Global Reach initiative from Virtual Contact Center provides best call quality on VoIP across continents.

With Single Tenant Global Reach, Virtual Contact Center houses all your agents on a single platform and on a single tenant irrespective of their geographic location. The single-tenant architecture eliminates the need to log in to multiple tenants to manage traffic from different continents. An agent logging in from North America can service customer interactions not only from North America, but also from Europe and Asia Pacific with a single login and with little compromise on the interaction quality.

Benefits of Global Reach

- Single tenant for a global contact center
- Best call quality for global audience
- Availability of media servers in US, Canada, Europe, Australia, and Asia Pacific
- Call flow based on the media server closest to the point of call origination
- Eliminated need for multiple tenants to serve geographically-distributed agents
- Smooth call quality and agent interaction experience

For details on Global Reach use cases, refer to Single Tenant Global Reach.

Improvements

In addition to Global Reach, the release offers key improvements in IVR capabilities, improving caller experience:

- In-Queue Treatments and Controls: Ability to provide better in-queue experience to callers.
- Queued Callback: Ability to call back customers who opted out of waiting in the queue.
- Text to Speech: Ability to announce free text or dynamically collected data using the text to speech engine.
- Agent Menu: Enhanced experience for callers in direct agent routed calls.
- IVR Variables: The ability to set variables allows programming abilities within IVR scripts enabling better caller experience. You can use variables to store the user input and use them to drive the call flow.

Other features and enhancements include:

- Time Zone Enhancements: Support for multiple time zones to better handle global operation of the contact center.
- Co-browsing via Chat: Ability to initiate Co-browsing via chat sessions.
- Improvements in Local CRM: The Local CRM now gives the ability to mark fields as mandatory, customize the display order of these fields, and even hide them.
- Optimized call quality and routing: We allow agents to input their country of location that helps optimize call quality and routing.
- Localization: We support European French and German languages.
- Browser Support: We support Microsoft Edge browser.

Release 8.1

- Multi-Chat
- Embedded Chat Design
- Enhanced Chat Script
- Direct Agent Routing
- Script Decoupling
- Single Sign-On Access for NetSuite Integration
- Single Sign-On Access for Zendesk Integration
- Handling Multilingual Chat
- Common Identifier for Pre-Chat Forms in Multiple Languages
- Enhanced Awareness of Queue Status
- Enhanced System Access Authentication
- Shared Wallboard Authentication

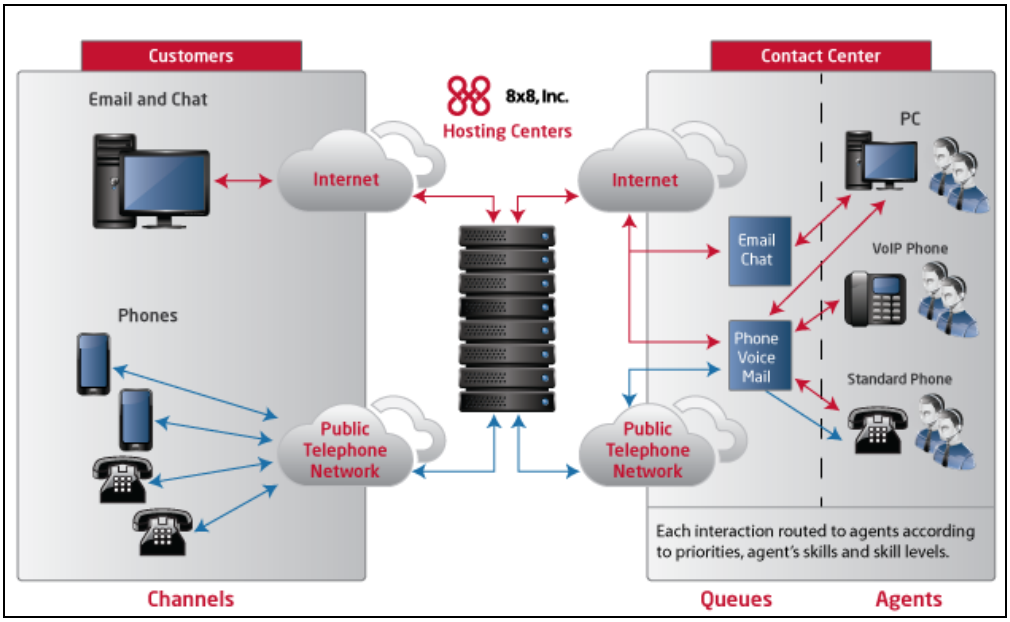
Get Started

To get started using Configuration Manager, refer to:

- Basic Entities of Virtual Contact Center
- Plan Your Contact Center Entities
- Before You Start
- How to Log In and Log Out
- Reset Password
- Understand the Configuration Manager Interface
- Summary of the Configuration Manager Tabs

Basic Entities of Virtual Contact Center

The primary call-handling characteristics of your Virtual Contact Center are determined by four interaction processing and reporting entities. When a phone, chat, or email interaction enter Virtual Contact Center, appropriate channels receive them, direct them to the desired queues, and lastly to agents who are members of the queue. The following image shows an overview of Virtual Contact Center entities and relationships.



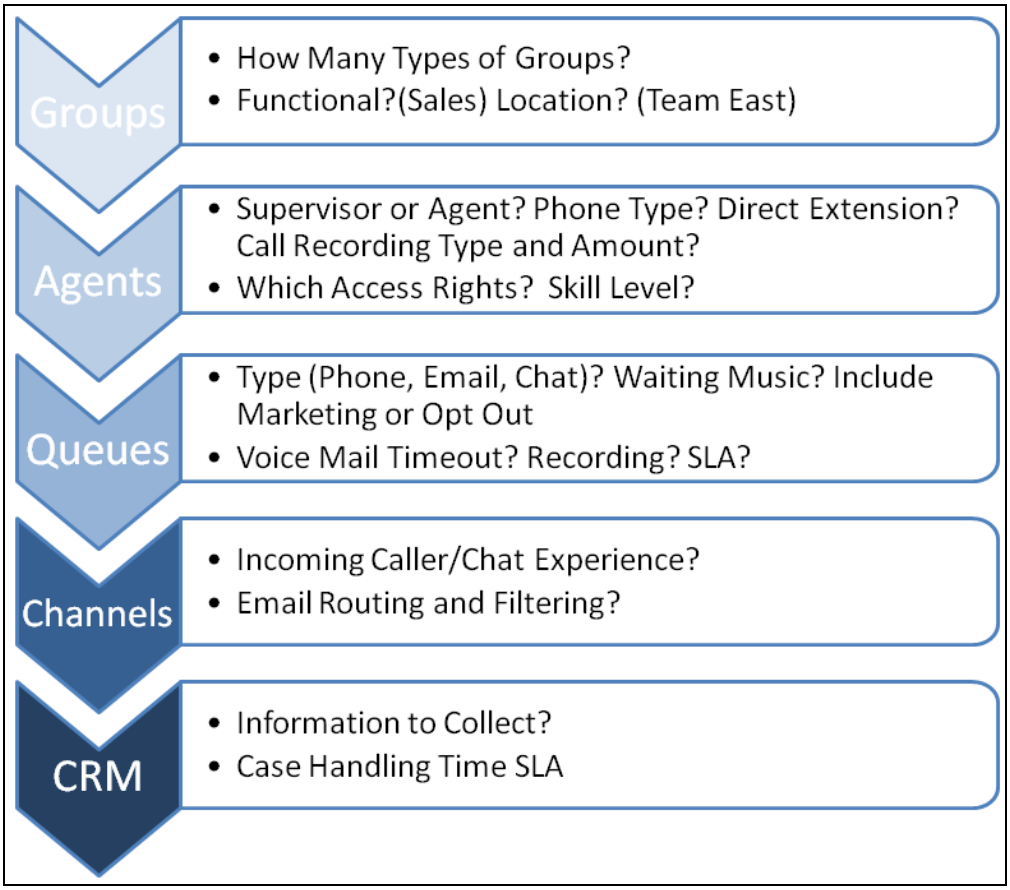
The following table lists the entities in the order they process an incoming service request:

Call handling or reporting entity	Description of inputs, operation, and outputs
Channels	■ Receive new service requests (calls or interactions) from phone, email, or chat communications media. ■ Categorize each incoming service request. ■ Send incoming service requests to the appropriate queue.
Queues	■ Receive service requests from one or more channels. ■ Prioritize each service request. ■ Send service requests to the agents assigned to the queues.
Agents	■ Receive prioritized service requests from queues. ■ Service the incoming interaction. ■ Complete the interaction.
Groups	Specify organizational categories, such as Sales or Support, used to analyze and report upon the performance of the contact center's Channels, Queues, and Agents.

Plan Your Contact Center Entities

Virtual Contact Center consists of a series of configuration entities.

To use Configuration Manager most efficiently, and to create and configure your contact center's entities, follow a top-down hierarchy. The following image illustrates the contact center planning and configuration hierarchy, and lists the contact center planning considerations you use when creating and configuring those entities.



Because the Groups, Agents, Queues, and Channels entities are interrelated, you can save time if you create and configure the entities in the following order:

1. Create Groups for the categories that use Virtual Contact Center.
   Groups may be functional (Support or Sales), or organizational (by team or management entity).
   Creating Groups first enables you to completely create new Agent profiles.
2. Create Agent accounts for all of your contact center agents.

3. Define your contact center's Phone, Email, Chat, and Voicemail Queues.
   To enable you to assign voice mail rollover to your Phone queues, create your Voicemail queues first.
   When you create Queues, you can assign one or more previously defined Agents to the Queue.
4. Configure your Phone Channels, then create Email, or Chat Channels.
   To create a Phone Channel, contact 8x8, Inc.'s provisioning department.
5. Configure your Local CRM.
   Add customized customer, case, and follow-up fields to your CRM.

Before You Start

To configure your Virtual Contact Center, you need to:

- Review technical requirements: More[1]
- Create a maintenance notification distribution list: More[2]
- Compile a list of users: More[3]
- Gather physical phone number, soft or SIP phone IDs: More[4]
- Diagram automated call processing rules: More[5]

Log In

You need a login URL and credentials to access Configuration Manager. 8x8 Provisioning provides you with the URL, username, and password to log in to your Configuration Manager account.

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[1]To ensure your infrastructure is best configured to interoperate with Virtual Contact Center, refer to the Virtual Contact Center Technical Requirements document.
[2]Virtual Contact Center sends maintenance notifications via email. We recommend you ask your email administrator to set up an email distribution list that includes all employees in your company who want to be notified of contact center maintenance. You can then enter the email list under Home > Profile.
[3]Compile a list of employees who will use Virtual Contact Center to interact with customers. The list should include the first and last name, email address, login name, and phone number the user uses as their agent number in Virtual Contact Center.
[4]If agents use physical phones to process contact center calls, gather agents' phone numbers. If agents use softphones (such as Bria), the software must be downloaded and installed. Gather the SIP phone IDs.
[5]Draft a diagram on how you would like your call flow to be. This helps you configure an interaction flow to achieve the best customer experience.

Before You Begin

Before you log in to Configuration Manager:

- For the latest browser requirements, refer to the Virtual Contact Center Technical Requirements document.
- Acquire the URL, username, and password for your Virtual Contact Center tenant's Configuration Manager.

Log In Roles

You can log in to Configuration Manager in various roles. For details, refer to Roles and Administrators.

- **Primary Administrator**: an administrator with unrestricted administrative privileges to Configuration Manager.
- **Role-based or Secondary Administrator**: an administrator who assumes a role with full or partial configuration rights to Configuration Manager.
- **Wallboard Access**: a Secondary Administrator to access and run 8x8 Wallboards.

Log in as the Primary Administrator

The 8x8 Provisioning communicates information required to log in to your tenant by email. The email provides:

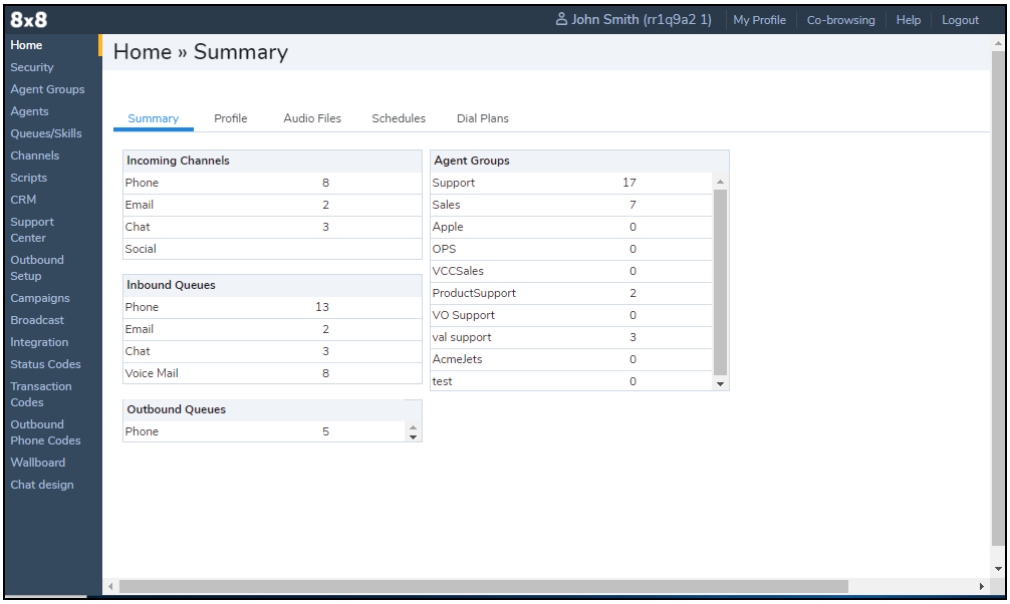
- URL to log in to your tenant
- URL to log in as an agent
- Login credentials

To log in as a Primary Administrator:

1. Initiate a browser session.
2. Enter the URL provided by 8x8, such as https://vcc-na8.8x8.com/CM/login.php.

   Configuration Manager displays the Administrator login page.
3. In the Login page, enter your Login ID and password:
   - **Login ID**: <TenantName>
   - **Password**: <TenantPassword>

4. Click **Login**.
   Configuration Manager launches the **Home >Summary** page.



Log in as a Secondary Administrator

As a Secondary Administrator, you inherit privileges defined for the role you are assigned to. For example, if you are a campaign manager with administrative rights to the Campaigns object, you can create, edit, and manage campaigns.

To log in as a Secondary Administrator:

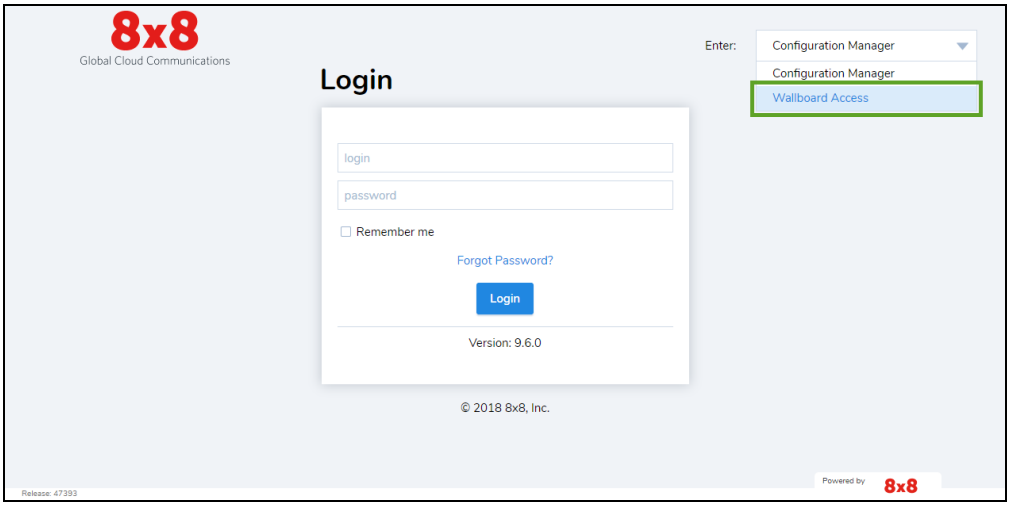
1. Go to the Configuration Manager login page.
2. Enter the login credentials communicated to you.
   If the login URL does not contain the tenant name (as in https://vcc-na8.8x8.com/CM/login.php); add the tenant name in the Login ID:
   - **Login Id**: *<AdministratorUserName>@<TenantName>* as in nwayne@AcmeJets
   - **Password**: *<AdministratorPassword>*

Log in for Wallboard Access

Use the Configuration Manager login credentials to access and run wallboards. For details, refer to Run a Wallboard.

To Access Wallboards:

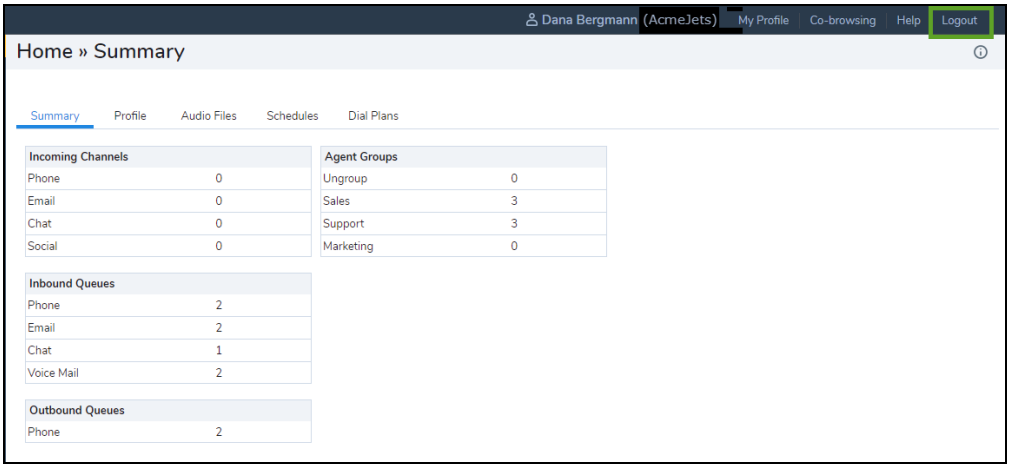
1. In the Configuration Manager login screen, select **Wallboard Access** from the drop-down menu.



2. Enter the Configuration Manager login credentials, and click **Login**. The Wallboard launches displaying the list of configured wallboards.

Log Out

To log out of Configuration Manager, click **Logout** in the header bar.



Additionally, Configuration Manager forces you to log out during:

- **Idle Time**: When your session is idle for longer than 45 minutes, the session logs you out automatically.
- **Concurrent Session**: Your login credentials allow you access to a single session only. Invoking a second session using the same credentials logs you out of the first session.

Reset Password

As an administrator, you can change your password and security question by going to your profile in Configuration Manager.

To change the password or your security question:

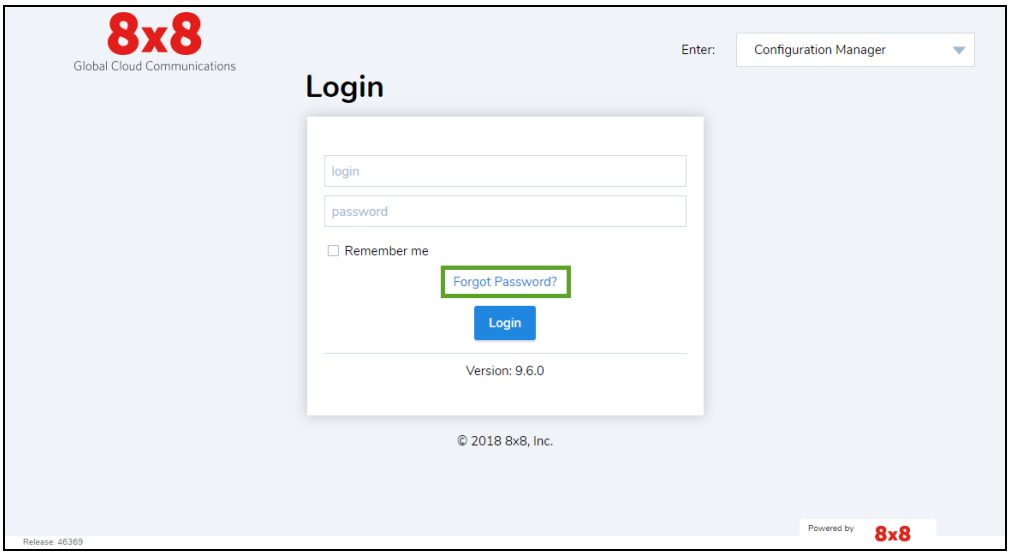
1. Log in to Configuration Manager.
2. From the top navigation menu click **My Profile**.
3. Enter the **Old Password** and the **New Password**.
4. Enter a **Security Question** for additional password protection.
   The security question is offered when you request your password to be reset. You must answer the security question to receive a link with the temporary password.
5. Click **Save**.

Forgot Password

If you forget your password during login, you can reset the password. When you reset the password, you receive an email communication with a temporary password. The reset password is your gateway to change the password. When you log in with the reset password, you are prompted to change the password. The changed password takes effect from the next login session. The login fails if you do not change the password.

To reset the password:

1. Go to the Configuration Manager login screen.
2. Click **Forgot Password?**.



A Reset Password window appears and you are prompted to enter your user name.

3. Enter the **User Name**, and click **Continue**.
   A message indicates that the reset password will be communicated to your email instantly.
4. Retrieve the temporary reset password from the email communication. If you have set the security question, you must answer it first in order to receive the link with a temporary password.
5. Log in to Configuration Manager with the reset password.

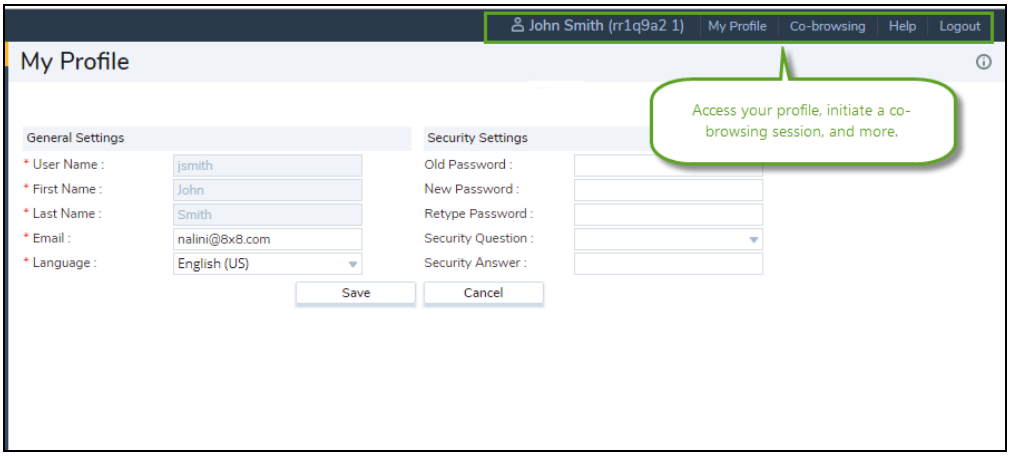
   You are prompted to change the password.
6. Enter a new password, and click **Change**.
   The changed password takes effect from the next login session.

Change Your Configuration Manager Language Settings

Administrators can select their preferred language for Configuration Manager. To change the language from English (default) to a different language, go to My Profile in Configuration Manager.

To change the language you use to see Configuration Manager:

1. Log in to Configuration Manager.
2. From the top navigation menu click **My Profile**.



3. Select a different **Language** from the list and click **Save**. The new language is in effect the next time you log in to Configuration Manager. We support the following languages:
   - English
   - Japanese
   - French
   - Canadian French
   - German
   - Spanish
   - Dutch
   - Italian
   - Portuguese

Update Email Address

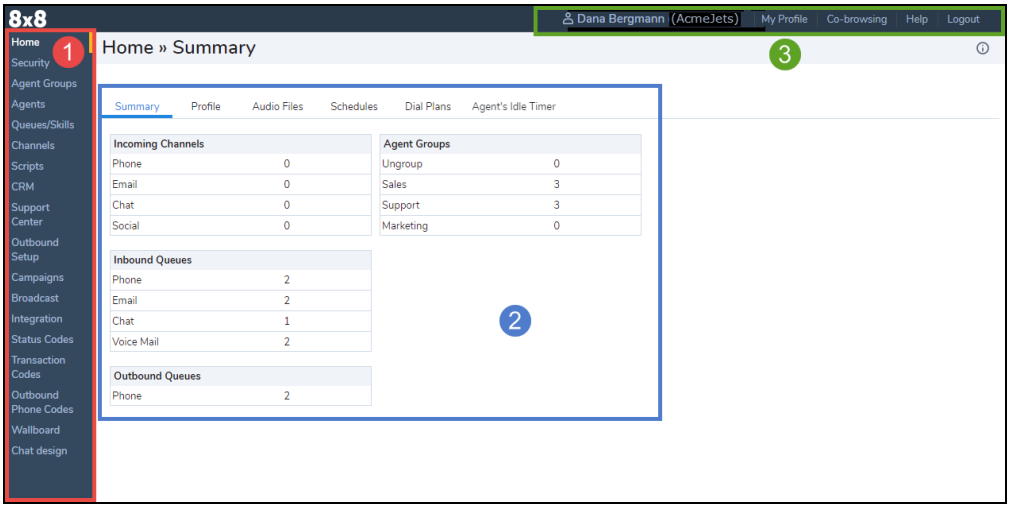
As an administrator, you can update your email address by going to My Profile in Configuration Manager.

To update the administrator email:

1. Log in to Configuration Manager.
2. From the top navigation menu click **My Profile**.
3. Enter your new **Email**.
4. Click **Save**.

Understand the Configuration Manager Interface

When you log in to Configuration Manager, you see the Configuration Menu, the Home page, and some tabs. Configuration Manager organizes the user interface into three functional areas:



The following table summarizes the functional areas in Configuration Manager. For details about each area, see Summary of the Configuration Manager Tabs.

Functional Area	Description
1) Configuration Menu	Use the Configuration Menuon the left to configure a desired functionality for your contact center. The Configuration Menu lists features your company has subscribed to.
2) Configuration tabs	Select a desired item in the Configuration Menu, such as Profile or Audio Files, to configure the feature.
3) Header Bar	■ **My Profile**: Allows the Secondary Administrator to change their Configuration Manager interface language to French or Japanese, for example, edit their email address, change password and set up a security question using this link. For more information refer to How to change the role-base administrator password. The supported languages are: English, Japanese, French, Canadian French, German, Spanish, Dutch, Italian, and Portuguese. ■ **Co-browsing**: Allows Virtual Contact Center customers using Configuration Manager to seek hands-on assistance from 8x8 customer support or deployment team. To initiate a Co-

Functional Area	Description
	browsing session from Configuration Manager: 1. Click **Co-browsing**. 2. A pop-up window appears with a session ID that helps you establish a secure connection with the customer support agent. 3. Communicate the Session ID to the agent, and click **Start**. See Get Remote Customer Assistance. ■ **Help**: Opens a link to the FAQ and documentation guides. ■ **Logout**: Logs you out of Virtual Contact Center.

Get Remote Customer Assistance

8x8 Co-browsing allows customer support agents to assist customers remotely via a shared browser. With Co-browsing, you can empower a website or any browser-based application, and offer live, hands-on assistance to customers. A customer in need of assistance must initiate the remote session, generate a unique session code, communicate it to an agent via phone or chat. The agent then uses the code to establish a remote session. Co-browsing session co-exists with a call or a chat for communicating the session code.

Features

- Visual, real-time web page assistance: Monitor and assist customers in real time through browser instance shared by the customer.
- Mouse tracking: As a customer, easily follow along by viewing the agent’s mouse location and movement.
- Platform details: Access information about the customer’s platform.
- Sub-domain support: The Co-browsing session continues working if the user navigates to a site that is hosted in a sub-domain, assuming that Co-browsing snippet is also included on that new sub-domain.
- Form co-filling: Co-fill forms on websites.
- Customer privacy and security: During a Co-browsing session, if the customer is filling a form and entering sensitive information such as SSN in a form, it can be encrypted and hidden from the agent.
- Highlighting: Agents can highlight content on web pages and call out information to customers during Co-browsing. Highlight key elements on the page with drawing tools.
- Auto-fit: Agents can automatically scale the browser view to fit customer's view settings. If the customer's screen is bigger than the agent during a Co-browsing session, agents will have to scroll constantly. With the ability to auto-fit,

agents can enable “Auto-fit” to automatically scale the view to fit agent's view settings or manually increment/decrement the zoom level to the desired value.

- Privilege control: You can control the extent of remote help agents can offer using Co-browsing mode. It varies from a basic view only mode to complete control of the browser instance. Take control of the customer’s screen, with their permission.

Limitations

- Co-browsing only works in HTTP secure web pages.
- Adobe Flash components, including videos, and Java applets are not supported.
- Anything that is external to the current page is not supported. This includes the file browser window that is open when selecting a file to be uploaded.
- WYSIWIG editors (AceEditor, CodeMirrorEditor, CKEditor, tinymceEditor) are not supported.
- Native tool tips are not visible between the two parties.
- Mouse hover texts do not show in the Agent side.
- Web pages with iframes with different domains are not supported.
- If the web pages open new browser window and the content has Co-browsing, this new window replaces the content in the Agent side.

Supported Browsers

Co-browsing is supported on the following browsers:

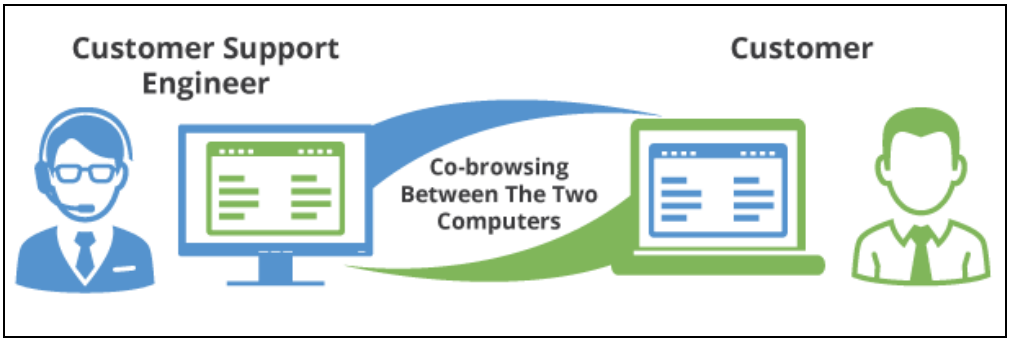
- Google Chrome (latest version)
- Firefox (latest version)
- Safari (Mac only: version 7.0 and above)
- Internet Explorer 11 (Not supported on IE 11 in compatibility mode)
- Microsoft Edge

Use Case

The following example demonstrates how a given website can be empowered with 8x8 Co-browsing.

Let us review an example of a travel company website visited by customers wanting to book their dream vacations. The website offers many travel packages and options to choose from. It requires customers to identify themselves by filling in a form. If a customer traversing through this website seeks hands-on assistance, he can initiate a remote session with a customer support agent in couple of clicks. Click on a help link on the web page to generate a code. Communicate this

code to the representative. The representative uses this code to establish a two-way hands on Co-browsing session.



Co-browsing Modes

By setting up a Co-browsing mode, administrators can control the extent to which agents can assist customers remotely. Co-browsing can be enabled in one of the following modes via code snippet. If you do not provide a mode in the code snippet, full-control is the default mode:

- **full-control (default)**: In this mode, agents have full control of the customer's browser session, including synchronized navigation and the ability to highlight and co-fill a form on the web page. The agent's cursor movements and mouse clicks are in sync with the customer, and vice versa. This is the default mode. If you do not provide a mode in the code snippet, full-control is the default mode.
- **partial-control**: In this mode, agents can highlight and control the browser navigation, but do not have the privileges to fill any forms on the Co-browsed page. All HTML form elements are disabled on the agent side, alerting agents with the message "Forms cannot be edited on the agent side".
- **no-control**: This is a view-only mode. Agents can observe the customer's navigation, highlight, and offer guidance.

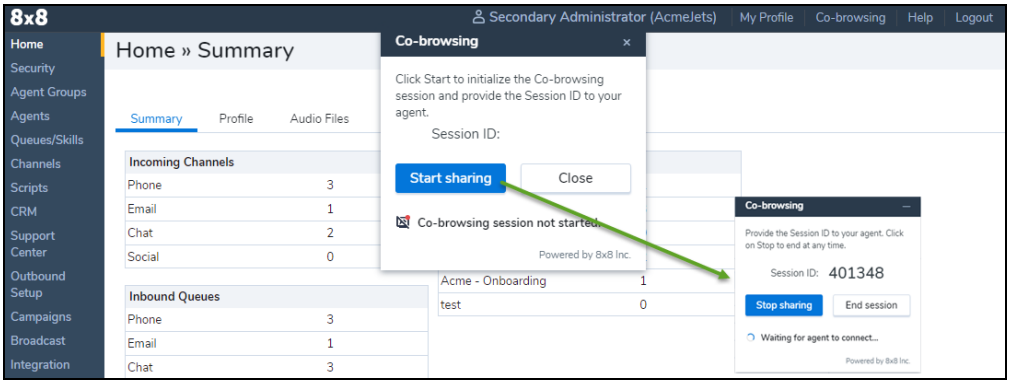
Notes:
-The highlighter works in all modes.
-In the full-control and partial-control modes, we cannot prevent agents from controlling form elements that are not native to the browser, such HTML drop-down.

How do I get remote customer assistance?

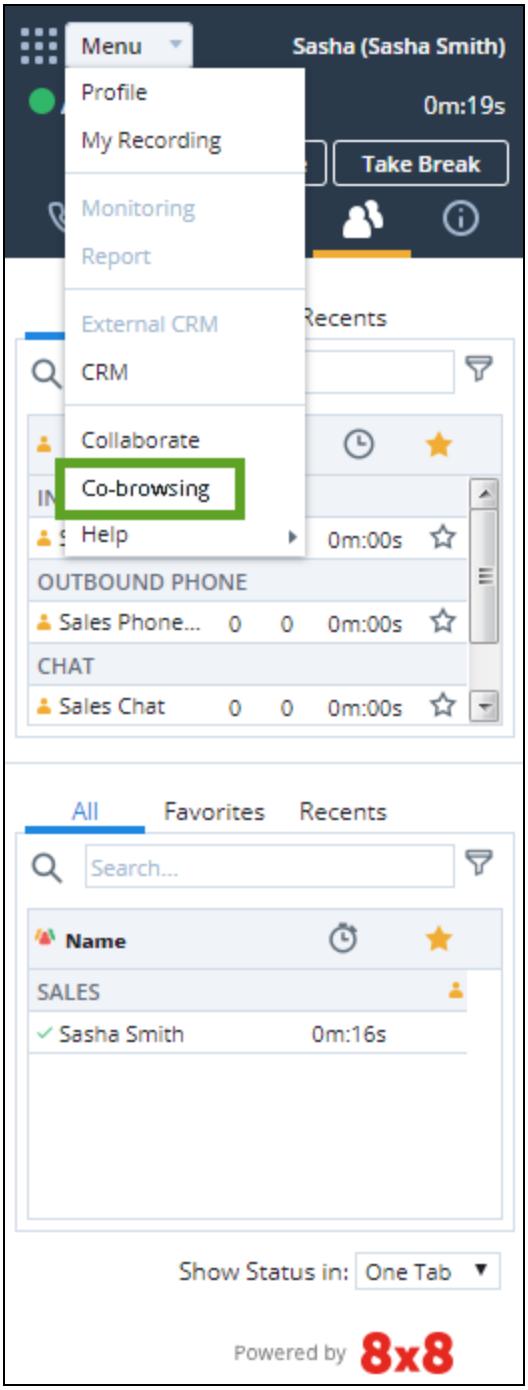
Co-browsing in Configuration Manager offers Virtual Contact Center customers using Configuration Manager to seek hands-on assistance from 8x8 customer support or deployment team. Let us assume you are on a phone call with 8x8 customer support agent seeking assistance for configuring your tenant.

To initiate a Co-browsing session from Configuration Manager:

1. Log in to Configuration Manager.
2. From the header bar, click on **Co-browsing** link.
3. In the pop-up window, click **Start sharing** to generate a code that helps you initiate a secure connection with the customer support agent.



4. Communicate the code you just generated to the agent.
   The agent, on the other hand, selects Co-browsing option from the Agent Console menu. This triggers a new browser window prompting for the code. Enter the code received from the customer to initiate Co-browsing. The agent can view the Configuration Manager session open by customer, co-browse, and observe the mouse movements and events of customer or offer hands-on assistance if needed. The session also respects the browser size set by the customer. Both parties can observe each other's mouse movements and events.



See how you can enable Co-browsing via chat as an administrator in Configuration Manager.

Summary of the Configuration Manager Tabs

The following table summarizes the Configuration Menu tabs and their functionality in Configuration Manager.

Configuration Manager Page	Tabs Directly Accessible from the Page
Home	View or modify the following information in **Home** page: ■ **Summary**: View a summary of your tenant channels, groups, and queues. ■ **Profile**: Configure account and tenant settings. ■ **Audio Files**: Upload and manage audio file greetings and messages. ■ **Schedules**: Configure the schedules for the contact center. For example, you can have a separate schedules for Support staff and Sales. ■ **Dial Plans**: Configure the tenant default dial plan or create a custom dial plan. ■ Agent's Idle Timer:
Security	Security options include: ■ **Password Policies**: Set up up password policies for Administrator, Agent and Supervisor accounts, and set up account lockup. ■ **Roles**: Create roles, define privileges or permissions, add and assign administrators to the roles. ■ **Administrators**: Add or edit administrators and enter their user names and password. ■ **SMTP Servers**: Configure a custom SMTP server for better security and HIPAA compliance in addition to the tenant SMTP server. ■ **IP Address Restriction**: To identify secure IP addresses from which agents and administrators can connect to the Virtual Contact Center network.
Agent Groups	Groups are organizational categories, such as Sales or Support. A group includes a collection of agents who report to a supervisor. For details, refer to Create Agent Functional Groups.
Agents	Agents use the Agent Console to view and manage customer interactions. Virtual Contact Center supports agents and supervisors. You can add agents and configure their workplace phone, assign queues, grant supervisor rights, and enable CRM and tab permissions using the **Agents** tab.
Queues/Skills	A queue is an ordered collection of interactions waiting to be served by agents qualified to respond to these interactions. Queues direct incoming interactions to agents.

Configuration Manager Page	Tabs Directly Accessible from the Page
	In Queues you can: ■ Create, edit, copy, and delete queues of all media types: inbound and outbound phone, chat, email, and voicemail. ■ Assign members to queues ■ Define targeted service level For details, refer to Create and Configure Queues.
Channels	Phone, email, or web chat interactions arrive at a tenant on a channel. Email and chat channels are created in the **Channels** page. You can add a new email and chat channels and edit the existing phone channels. **Note:** To create a Phone channel, contact the 8x8, Inc. provisioning department. For details, refer to Create Channels.
Scripts	IVR scripts define how Virtual Contact Center processes Phone, Email, or Chat interactions. They provide the capability of guiding incoming interactions to self-direct them to the desired destination within the contact center. Create a user-defined script or use a system default script such as **IVR script default**. For details on phone IVR scripts, refer to Create a Phone IVR Script. For details on email scripts, refer to Create an Email Script.
CRM	The **CRM** page allows agents and supervisors to manage customers, cases, follow-ups, and tasks. For details, refer to Configure Local CRM.
Support Center	**Support Center** allows you to create customer-facing support web page including FAQs, desktop sharing, chat, and email for your contact center. You can modify and use **My Default Support Center** or create your own. For details, refer to Support Center Services.
Outbound Setup	For campaigns to function successfully, they need to connect to the Virtual Contact Center CRM or an External CRM, extract data from a specific CRM object, and generate a target call list. The **Outbound Setup** allows defining global properties for campaign management. For details, refer to Configure Outbound Setup.

Configuration Manager Page	Tabs Directly Accessible from the Page
Campaigns	A campaign is an outbound phone based dialer that enables you to search, generate, and feed a call list to an outbound queue facilitating automated outbound dialing. The **Campaigns** page allows defining new campaigns, or controlling or managing existing campaigns. For details, refer to Create a Campaign.
Broadcast	Use the **Broadcast** page to send a message to one or more Agent Groups. The page contains only the **Broadcast** tab. For details, refer to Broadcast Messages.
Integration	Virtual Contact Center offers integration capabilities with Local CRM and third party Customer Resource Management (CRM) systems. For details, refer to Integrate with External CRM.
Status Codes	Status codes allow contact center supervisors to track how an agent functions through a workday. For details, refer to Status Codes Overview.
Transaction Codes	Transaction codes offer a means to apply call disposition to inbound as well as outbound interactions. For details, refer to Transaction Codes Overview.
Outbound Phone Codes	Outbound Phone Codes allows you to define and configure Outbound Phone Code lists. For details, refer to Outbound Phone Codes Overview.
Wallboard	Wallboard allows you to get the real-time metrics of your contact center operations. For details, refer to Wallboards Overview.
Chat Design	Chat design allows you to design a custom chat to match your company's requirements and to create a custom chat script to control the chat flow. For details, refer to Configure Embedded chat design.

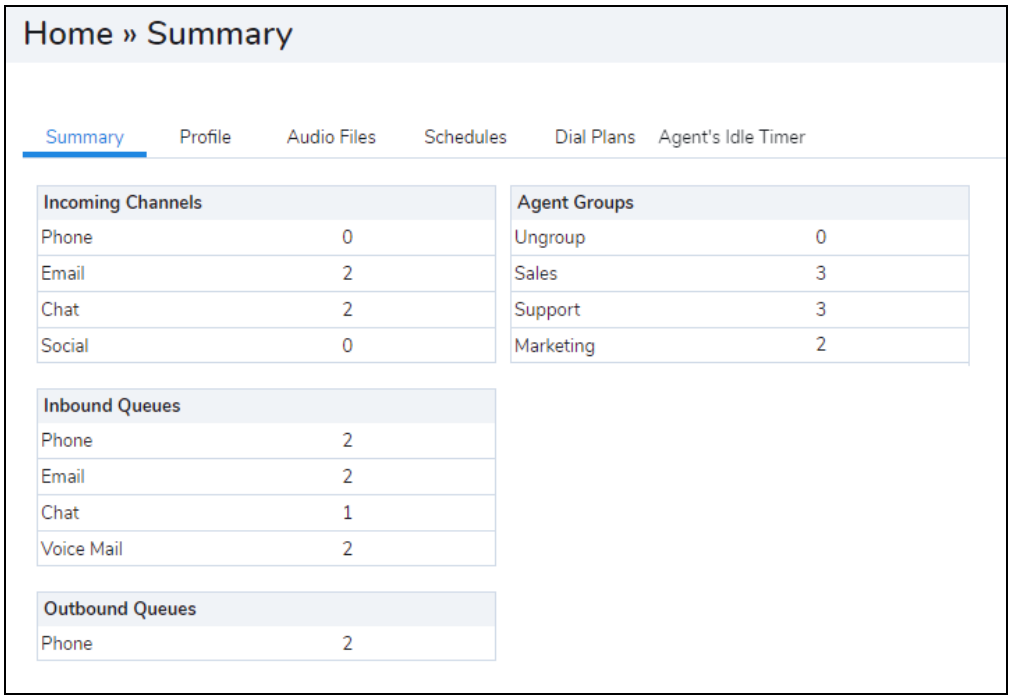
Configure Accounts and Profiles

Use the Configuration Manager **Home** page to:

- View Channels, Groups, and Queues Summary
- Configure Profile Settings
- Configure Audio Files and Recorded Greetings
- Define Business Hours and Schedules
- Understand Tenant Dial Plans
- Reset Agent's Idle Timer

View Virtual Contact Center Summary

You can have a quick view of your Virtual Contact Center channels, queues, and agent groups by going to Home >Summary. A channel facilitates communication of interactions in and out of a Virtual Contact Center tenant. A queue is an ordered collection of interactions waiting to be served by agents who are qualified to respond to these interactions. An agent group is a collection of agents who report to a supervisor. A single group may serve your entire call center or may be dedicated to one or more products, services, queues, or to a specific communication channel such as phone, email, or chat. Virtual Contact Center uses skill-based routing rules to place interactions to the appropriate queues.



The **Summary** page provides a quick statistical summary of:

- Phone, email and chat channels configured for your tenant.
- Inbound and outbound queues for all media, such as phone or email.
- Agent groups, with the number of agents in each group.

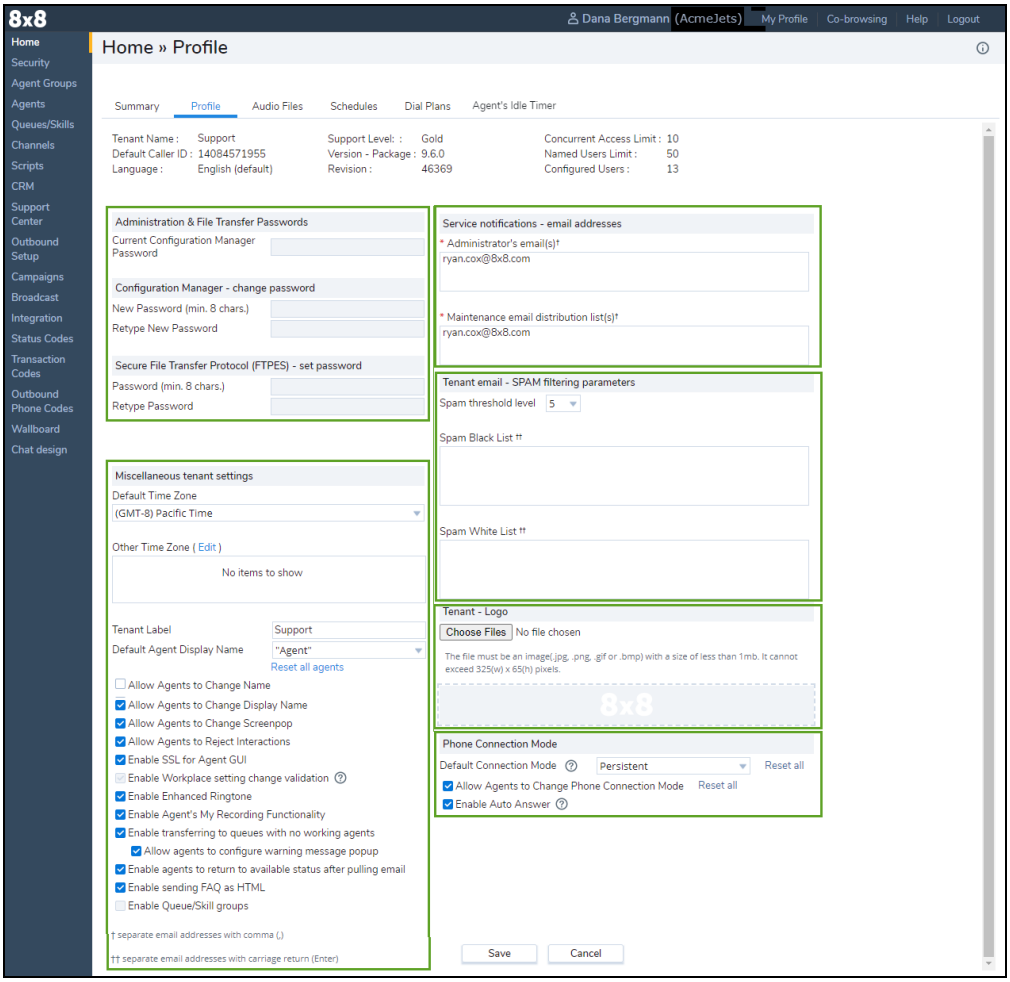
Summary Page Options

The following table summarizes the information you can find under **Home > Summary**. You can view a summary of incoming channels, inbound and outbound queues, and agent groups in this page.

Summary tab option	Description
Incoming Channels	For each type of Channel, summarizes the number of Channel definitions of that type. For details on Channels, refer to Create and Configure Channels.
Inbound Queues	Summarizes the number of Inbound Queue definitions of that type. For details on Queues, refer to Create and Configure Queues.
Outbound Queues	Summarizes the number of Outbound Queue definitions of that type. For details on Queues, refer to Create and Configure Queues.
Agent Groups	For each Group definition, summarizes the number of Agents assigned to that group. For details on Groups, refer to Create Agent Functional Groups. For details on Agents, refer to Add Agents.

Configure Profile Settings

You can find the tenant name, tenant language, support level, and other tenant subscription information besides your account preferences under Home > Profile.



The information in the **Profile** page is grouped under the following areas:

- **Administration and File Transfer Passwords**: The current password required to set a new password for either Configuration Manager, or Secure File Transfer Protocol (FTPES).

- **Configuration Manager - change password**: Allows the Primary Administrator to change Configuration Manager password. You must enter the current password first and then enter a new password.
- **Secure File transfer Protocol (FTPES) - set password**: Allows the Primary Administrator to set up a password to access agent call recordings through FTPES (Secure File Transfer Protocol).
- **Miscellaneous tenant settings**: Groups information on the tenant time zone, tenant label, and options to allow agents to change name, enable SSL API, change screen pop settings, and enable agent's workplace setting change validation.
- **Service Notifications - email addresses**: Specify email addresses for administrator and maintenance email distribution list.
- **Tenant email - SPAM filtering parameters**: Defines threshold level to filter unwanted emails and allows listing Spam Black Lists[1] and Spam White Lists[2].
- **Tenant - Logo**: Allows you to upload an image logo for branding 8x8 wallboards. Click **Browse** and upload an image.
- **Phone Connection Mode**: With Phone Connection Mode, agents set up their voice connection before they start working on calls and remain connected throughout their working day. You can choose On Demand or Persistent connection mode. You can allow agents to change their Phone Connection Mode or enable Auto Answer.

For a detailed summary of your tenant settings, refer to Summary of Profile Settings. See the following topics to learn how to configure your tenant settings:

- Allow multiple time zones
- Enable Phone Connection Mode
- Enable Auto Answer
- Enable Workplace Setting Validation

Summary of Profile Settings

The following table summarizes the options available under Home > Profile:

Profile tab option	Description
Tenant Name	Shows the name of your tenant. It can be your company name. Configuration Manager adds the value of the Company Name text entry

[1]List of email addresses whose communications should be filtered.
[2]List of email addresses whose communications are classified as legitimate.

Profile tab option	Description
	area to the top of the Configuration Manager browser window.
Support Level	Indicates your tenant's support level.
Concurrent Access Limit	Indicates the maximum simultaneous users that can log into Agent Console or Supervisor Console. Each Concurrent Access requires a Named User. One Concurrent Access and one Named User is synonymous with an agent seat. Named User can also be equivalent to an additional login.
Default Caller ID	Specifies the default caller ID for the tenant. This number is displayed to the dialed party as the caller's phone number when placing an outbound call from Virtual Contact Center.
Version Package	Specifies the version of Virtual Contact Center.
Named Users Limit	Indicates the maximum number of named users that can be added to the tenant. This field displays your current subscription plus one or two for authorized customer support users. Named User functionality provides for unique personal identity with roles (agent or supervisor) and permissions. **Note:** Each Tenant is pre-configured with one or two Named Users at no charge. These are used by authorized customer support personnel for troubleshooting purposes. You can identify the pre-configured users by an assigned group of Virtual Contact Center support.
Language	Read-only reminder of the language used to display the Configuration Manager user interface. This language setting was applied as requested when your Virtual Contact Center tenant was originally created, and it cannot be changed. **Note:** Your agents can select their preferred language separately in Agent Console.

Profile tab option	Description
Revision	Represents the revision number of Virtual Contact Center.
Configured Users	Indicates the number of Named Users currently setup in the tenant. The difference between the Named Users Limit and Configured Users are the remaining Named Users quantity that can be profiled.
Administration & File Transfer Passwords	
Current Configuration Manager Password	Allows the Primary Administrator to change Configuration Manager password. The new password must have minimum of 8 characters.
Configuration Manager - Change Password	
New Password	Enter a new password for Configuration Manager.
Retype New Pass-word	Retype your new password for Configuration Manager.
Secure File Transfer Protocol (FTPES)- set password	
Password (min.8 chars.) Retype Password	Enables setting up a password for Secure File Transfer Protocol of agent call recoding files. For details on agent recording files, refer to Configure Phone Settings. For details on downloading agent recordings, refer to Access Agent Recorded Calls.
Miscellaneous Tenant Settings	
Default Time Zone	Refers to your contact center's local time zone. Specifying the time zone enables Configuration Manager to: ■ Correctly interpret the hours of operation specified in the Schedule tab. For details on the Schedule tab, refer to Define Business Hours and Schedules. ■ Display time-stamped events in local time.
Other Time Zone	Virtual Contact Center supports time zone for global operation by allow-ing multiple time zone selections within the same tenant. Multiple time zones helps tenants with offices across the world. Supervisors can mon-itor queue and agent activities based on the local time zone.

Profile tab option	Description
Tenant Label	Refers to the Tenant Label that appears on top of Configuration Manager browser window. You can label the tenant differently from the Tenant ID.
Default Agent Display Name	Select whether you want to display the word **Agent** or the agent's first name such as <Robin>. The agent's display name appears in Agent Console.
Allow Agents to Change Name	Allows agents to change their login name from My Profile page after they log in to Agent Console.
Allow Agents to Change Display Name	Allows agents to change their display name in the Agent Console's **Profile** page. Display Name helps agents save time and effort to introduce themselves to customers every time they start a new chat. The agent's display name appears in the Agent Console's control panel, Profile page, chat window, and CRM case created after a chat session. It can be modified by the Virtual Contact Center administrator in the Configuration Manager, or if permitted, by the agents in Agent Console. The changes immediately show up in both applications. To prevent agents from changing their display name at the tenant level, clear the **Allow Agents to Change the Display Name** checkbox under **Home > Profile**.
Allow Agents to Change Screenpop	Allows agents to change screen pop window properties, such as opening a new screen pop window, and modifying the size and position of the window from Agent Console.
Allow Agents to Reject Interactions	This option is enabled by default allowing agents to reject interactions. If disabled, the Reject button in Agent Console is disabled preventing agents from rejecting the interactions they are offered. The Reject button in Agent Console appears when an interaction is offered to the agent. You can set up this ability for an agent group, or individual agents. If you disable this option at the tenant level, the checkbox will not show up for agent groups or individual agents.
Enable SSL for Agent GUI	By default, the **Enable SSL for Agent GUI** check box is selected and Configuration Manager uses secure communications. 8x8 strongly recommends that you always use secure communications

Profile tab option	Description
	when working with Configuration Manager. If you temporarily need to disable secure communications for purposes of troubleshooting, clear the check box.
Enable Workplace setting change validation	When changing workplace setting (Workplace Phone and Workplace SIP URI), agents must validate their changes to be able to handle the calls. When they click to validate the change, it triggers a phone call to the updated phone number. For details see our content on how to enable workplace setting change validation.
Enable Enhanced Ringtone	If enabled, the caller hears continued queue music until an agent accepts the call. Once the call is accepted, a short alerting ringtone is played back to the caller to signal the start of the interaction. At the same time, the agent hears a beep notification to prepare them for the call.
Enable Agent's My Recording Functionality	If enabled agents can access the **My Recording** feature from the Agent Console main menu. This option allows agents to record a voice message for the incoming calls.
Enable transferring to queues with no working agents	If enabled, allows agents to transfer interactions to an unattended queue. If disabled, prevents agents from transferring interactions to an unattended queue.
Allow agents to configure warning message popup	If enabled, agents can disable the warning message before transferring the interaction to an unattended queue.
Enable agents to return to available status after pulling email	If enabled, agents can go back to the **Available** status after pulling an email from the queue. If this option is disabled, agent's status remains working offline after pulling emails from the queue.
Service Notification - Email Addresses	
Administrator's Email (s)	Lists the Primary Administrator's email address. If an Email Channel attempts to retrieve queued emails, and that retrieval attempt fails, then Configuration Manager sends email notification to the administrator.

Profile tab option	Description
	For details on Email Channels, refer to Set up Email Channels.
Maintenance Email Distribution List(s)	Lists the email distribution list(s) to which maintenance issues regarding the tenant are mailed.
Tenant Email - SPAM filtering parameters	
Spam Threshold Level	Choose how strictly Configuration Manager filters administrative email messages for unsolicited junk email or spam. By default, Configuration Manager sets the Spam Threshold Level equal to 5. Choose a lower number to apply stricter spam filtering. Do not choose a spam threshold setting lower than 3 or higher than 7 unless directed to by Virtual Contact Center support.
Spam Black / White List	If the Email Script tab in the Email Channel page includes a Check Spam script object, then: ■ **Spam Black List**: Enter the email addresses whose communications should be classified as spam. ■ **Spam White List**: Enter the email addresses which should not be classified as spam. Both the Spam Black List and Spam White List text entry areas support the use of asterisks (*) as wild-card characters.
Tenant Logo	
	Select an image logo for branding 8x8 wallboards. Click **Choose Files** and upload an image.
Phone Connection Mode	
Default Connection Mode	Administrators can choose one of the following Phone Connection Modes for agents: On Demand or Persistent. For details, see our content on how to enable phone connection mode.
Allow Agents to change Phone Connection Mode	Agents are able to change their Phone Connection Mode from within the Agent Console. For details, see our content on how to change your phone connection mode.
Enable Auto Answer	With Auto Answer, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually. If

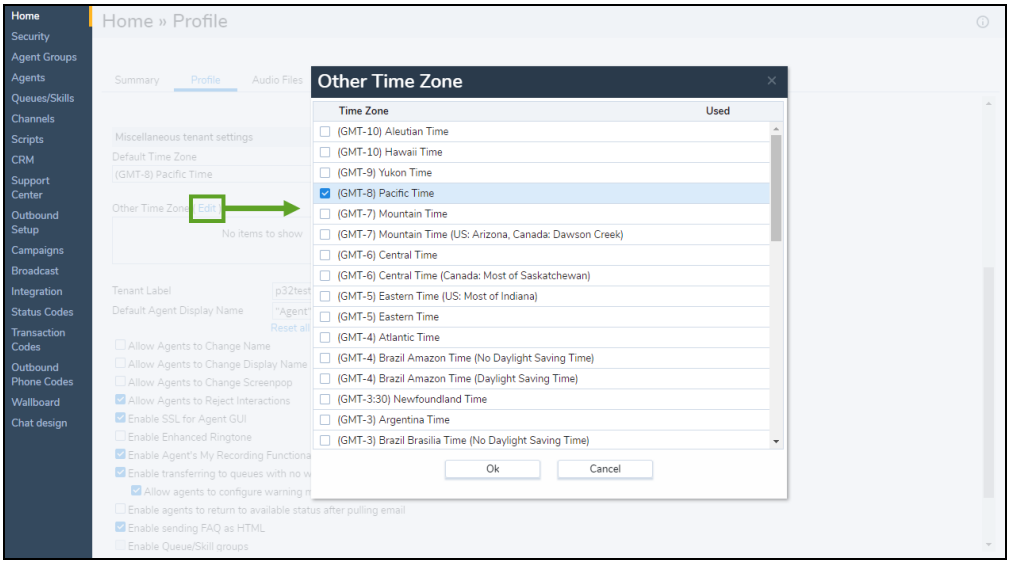
Profile tab option	Description
	Auto Answer is provisioned for your tenant, you can enable it at the tenant level, agent group level, or agent level. For details, see our content on how to enable auto answer.

Allow Multiple Time Zones

Virtual Contact Center supports time zones for global operation by allowing multiple time zone selections within the same tenant. Access to multiple time zones helps tenants with offices across the world. For example, if a business has offices in the US, the UK, and China, the administrator can select the US Pacific time zone as the default, and select UK and China as additional time zones. Agent supervisors in the UK office can monitor queue and agent activity based on their local time zone, and a wallboard manager in China can apply the Asia Pacific time zone to the desired wallboard.

To allow multiple time zones for a tenant:

1. From the Configuration Menu, open **Home**.
2. Go to the **Profile** tab.
3. Under **Other Time Zone**, click **Edit**. You can add more time zones are in addition to your default time zone as desired.
4. Select the desired time zone(s) from the list, and click **OK**.
   A time zone that is being used shows up as highlighted.



5. Click **OK**.
6. Click **Save**.
   The tenant now has multiple time zones. The time zones can be selected when creating a wallboard, or in Agent Console, and by supervisors when monitoring queues and agents. In monitoring, time zone is applicable if you select to view data **from beginning of day**.

Enable Phone Connection Mode

8x8 Virtual Contact Center has improved call handling capability via Phone Connection Mode. With this feature, agents set up their voice connection before they start working on calls and remain connected throughout their working day. It allows them to respond to incoming and outbound phone calls with a simple click on the user interface improving their call handling efficiency.

Administrators can choose one of the following Phone Connection Modes for agents:

- **On Demand**: On Demand Connection Mode creates a temporary connection from the agent's workplace phone to the system. The agents have to manually accept the call in their soft or hard phone.
- **Persistent**: Previously referred to as off-Hook Connection Mode, Persistent Connection Mode creates a constant connection from the agent's workplace phone to the system. Once the connection is open, it will stay active until logged out. Any changes to the setting will remain in effect for the whole duration of the agent's Persistent connection. Agents set up their voice connection before they start working on calls and remain connected throughout their working day. It allows them to respond to incoming and outbound phone calls with a simple click on the user interface, improving their call handling efficiency.

Renaming Off-hook Connection Mode to Persistent Connection Mode

The Off-hook connection mode that was first introduced in 9.8 has been renamed to Persistent Connection Mode. There is no change to the functionality, just to the naming of the feature.

About Persistent Connection Mode

If your tenant is provisioned with Persistent Connection Mode, you can see this feature under Home > Profile. With Persistent Connection Mode, agents can instantly and seamlessly connect to customers and improve their productivity. Persistent Connection Mode provides a constant connection from the agent's device to Virtual Contact Center. It removes the need to connect the agent's workplace phone for every call handled. Agents set up their voice connection before they start working on calls and remain connected throughout their working day. It allows them to respond to incoming and outbound phone calls with a simple click on the user interface.

Without the Persistent Connection Mode, after agents log in to Virtual Contact Center and make themselves available, they have to accept the interaction for every call that comes through the queue. If they miss the ringing phone, they will no longer be available to take the interaction.

Note: There is no audio prompt or audio indication for Persistent Connection Mode.

Features

- Agents can immediately and seamlessly connect to customers.
- Offers a persistent connection from the agent's device to VCC that is ready for outbound dialing.
- Removes the need to connect the agent's workplace phone for every call handled.
- Increases productivity from a higher throughput of calls.

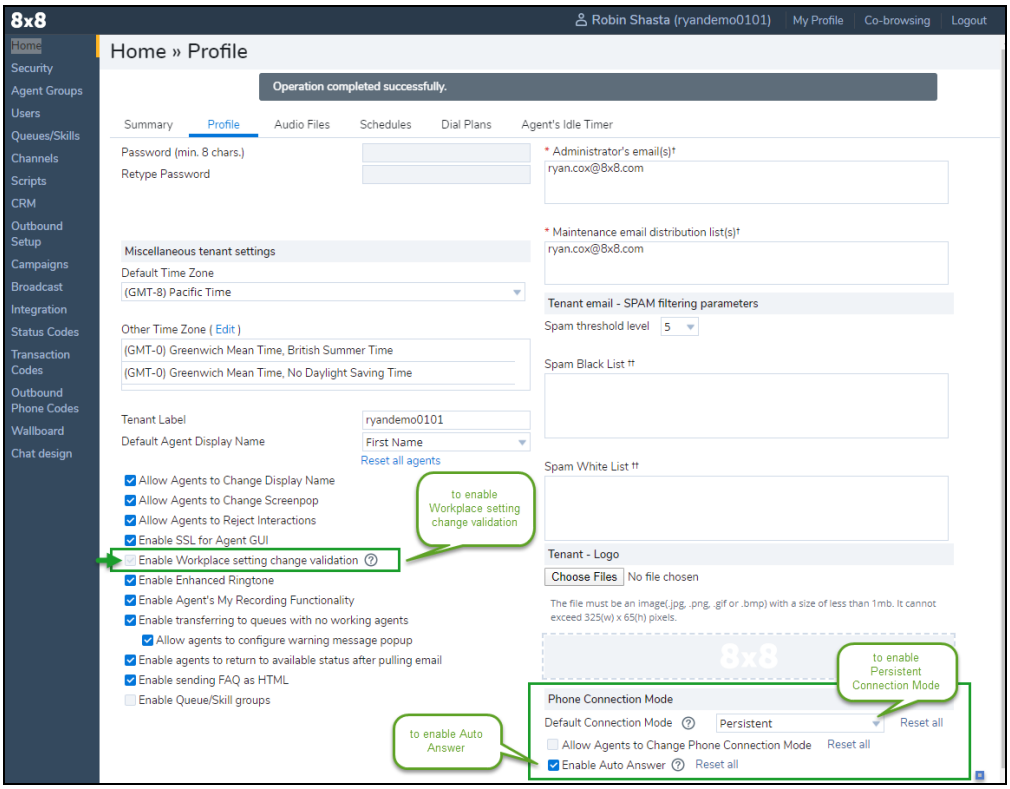
Enable Persistent Connection Mode

If Persistent Connection Mode is provisioned for your tenant, you can enable at the tenant, agent group, or the agent level:

Enable Persistent Connection Mode at the Tenant Level

1. In Configuration Manager, go to **Home > Profile**.
2. Select **Persistent** under **Phone Connection Mode**. It makes the Persistent Connection Mode available for all agents in that tenant.
   Reset all allows you to standardize the default connection mode when there are different settings for this feature within the tenant, for agents and agent groups.
3. Select **Allow Agents to Change Phone Connection Mode**. Agents are able to change their connection mode from within the Agent Console.
   Reset all allows you to reset all agents and agent groups to the tenant setting.

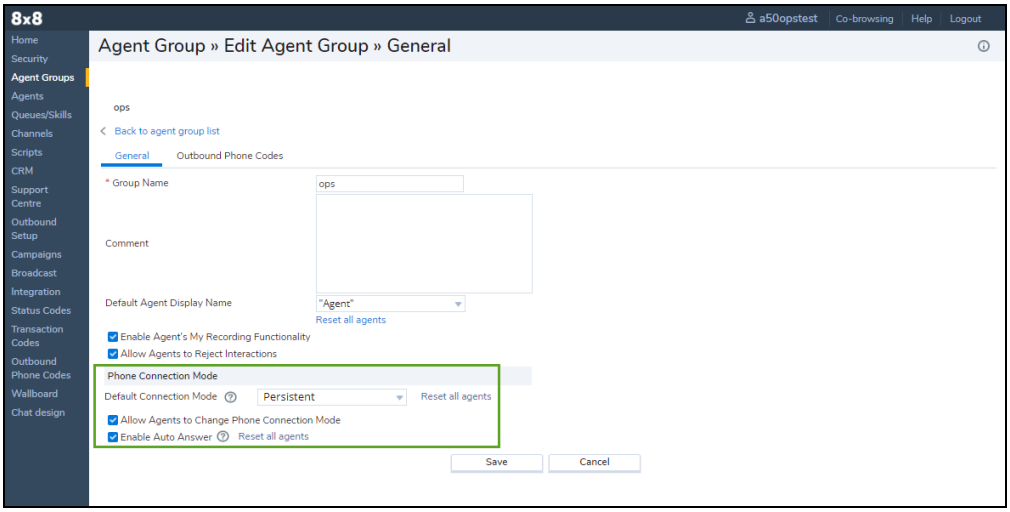
4. Click **Save**.



Note: The **Reset all** button shows when there are a mixture of settings for that mode or option at the Tenant level.

Enable Persistent Connection Mode at the Agent Group Level

1. In Configuration Manager, go to **Agent Groups** from the main menu.
2. Click to edit or create a new agent group.
3. Select **Persistent** under **Phone Connection Mode**.
   Reset all agents allows you to standardize the default connection mode for all agents when there are different settings for it within the agent group. For example, you see Reset all if you have enabled agents to choose their mode. Reset all is not available when all settings are the same.
4. Select **Allow Agents to Change Phone Connection Mode** if you want to enable all agents at the agent group to change their connection mode.

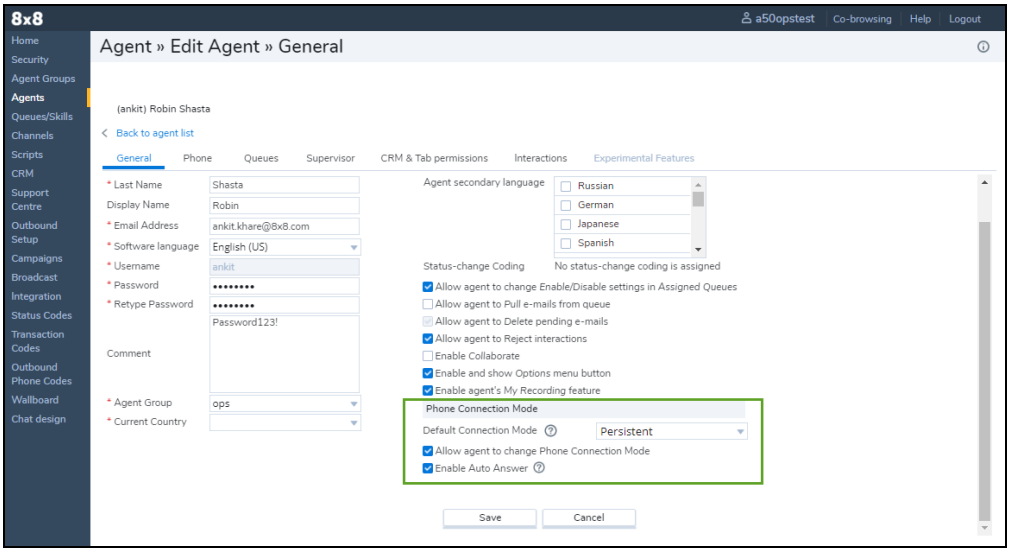


Note: The **Reset all agents** button only shows when there are a mixture of settings for that mode or option within the Agent Group.

Enable Persistent Connection Mode at the Agent Level

1. In Configuration Manager, go to the **Agents**page.
2. Click to edit or create a new agent and open the **General**tab.
3. Select **Persistent** under **Phone Connection Mode**.
4. Select **Allow Agents to Change Phone Connection Mode** if you want to enable this agent to change their connection mode.

5. Click **Save**.



Combinations for Persistent Connection Mode and Auto Answer Settings

Auto Answer can be combined with the Persistent feature to create an on/off combination of the two features. Auto Answer settings combined with Persistent can be configured at multiple levels depending on the features availability:

Connection	Behavior
Persistent Off, Auto Answer Off	Phone Connection Mode is On Demand and Auto Answer is off, so the agent needs to answer the phone for every phone interaction.
Persistent Off, Auto Answer On	Phone Connection Mode is On Demand and Auto Answer is on, so the agent phone automatically connects, and the interaction is auto answered when offered.
Persistent On, Auto Answer Off	Phone Connection Mode is Persistent, so the agent media path is always connected but for every phone interaction the agent needs to click the Accept button.
Persistent On, Auto Answer On	Phone Connection Mode is Persistent, so the agent media path is always connected, and the interaction is auto answered when offered.

Enable Auto Answer

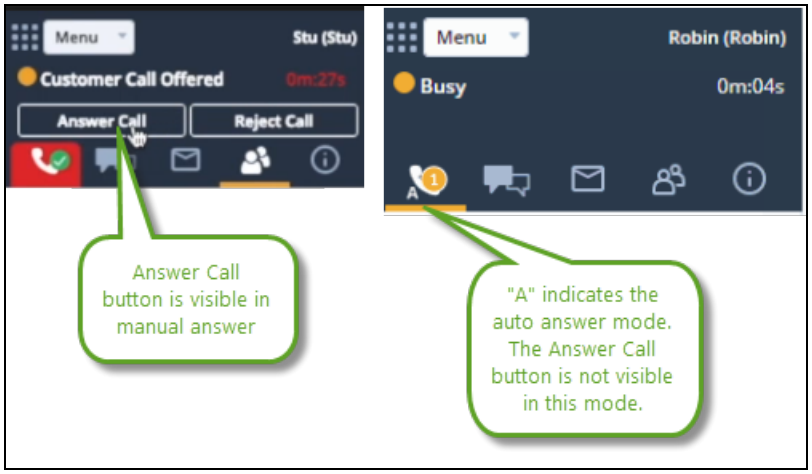
8x8 Virtual Contact Center has improved the call handling efficiency of agents via Auto Answer. Using Auto Answer, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually. This new configurable option enhances agents' efficiency by quickly connecting the calls and reducing the number of clicks an agent has to make. Auto Answer also helps prevent agents from rejecting or missing calls on their workplace phone. When in Auto Answer mode, agents receive an audio prompt to alert them of a call as it connects.

Note: Auto Answer is currently on limited availability. Contact 8x8 Support for more help.

Considerations when using Auto Answer:

- The agent's audio may be connected before any visual notification is made on the screen for the interaction or any screen pop can be enabled.
- Direct Agent Access (DAA) or Direct Agent Routing (DAR) calls are only sent in an Auto Answer mode to an enabled agent if they are on an Available state.
- An Auto Answer agent with a post-processing time set to zero could potentially find themselves with a non-stop succession of calls.
- If a supervisor is in Auto Answer mode monitoring an agent who is not, the supervisor may be connected first, but the customer will continue to hear queue music or the ring tone until the agent is connected.
- Auto Answer is supported by Virtual Office desktop app and Virtual Office mobile app. If the device is not supported, then the system defaults to the standard manual answer.

- The Auto Answer feature is visually indicated with an **A** in the phone tab which persists in all agent states.



Note: If Auto Answer is enabled, the **Answer Call** button is absent in the user interface when agents are offered calls.

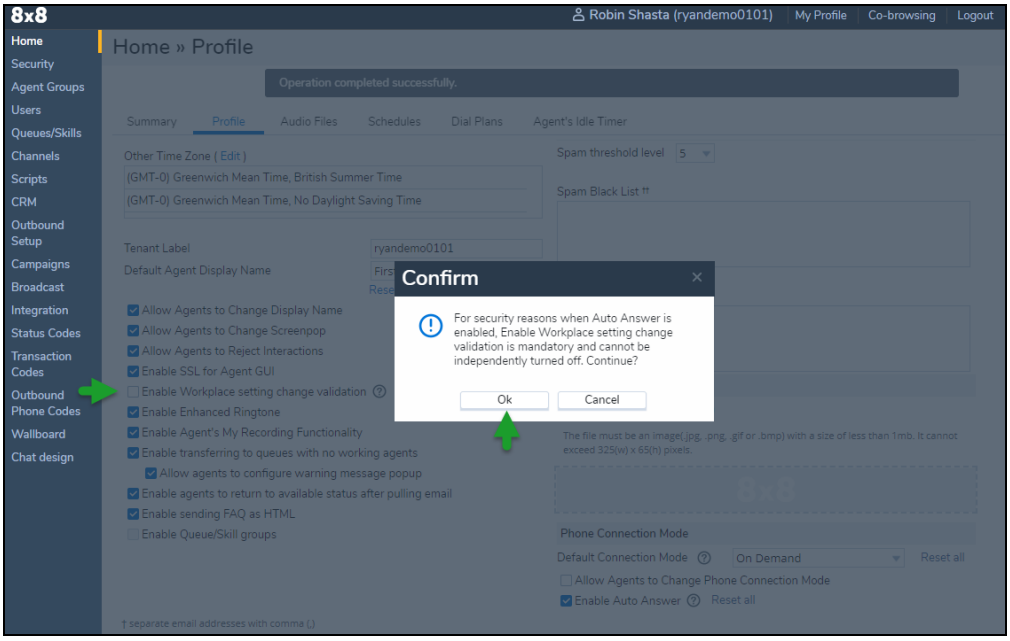
Note: Auto Answer is only supported on line **1** for phone interactions.

Enable Auto Answer

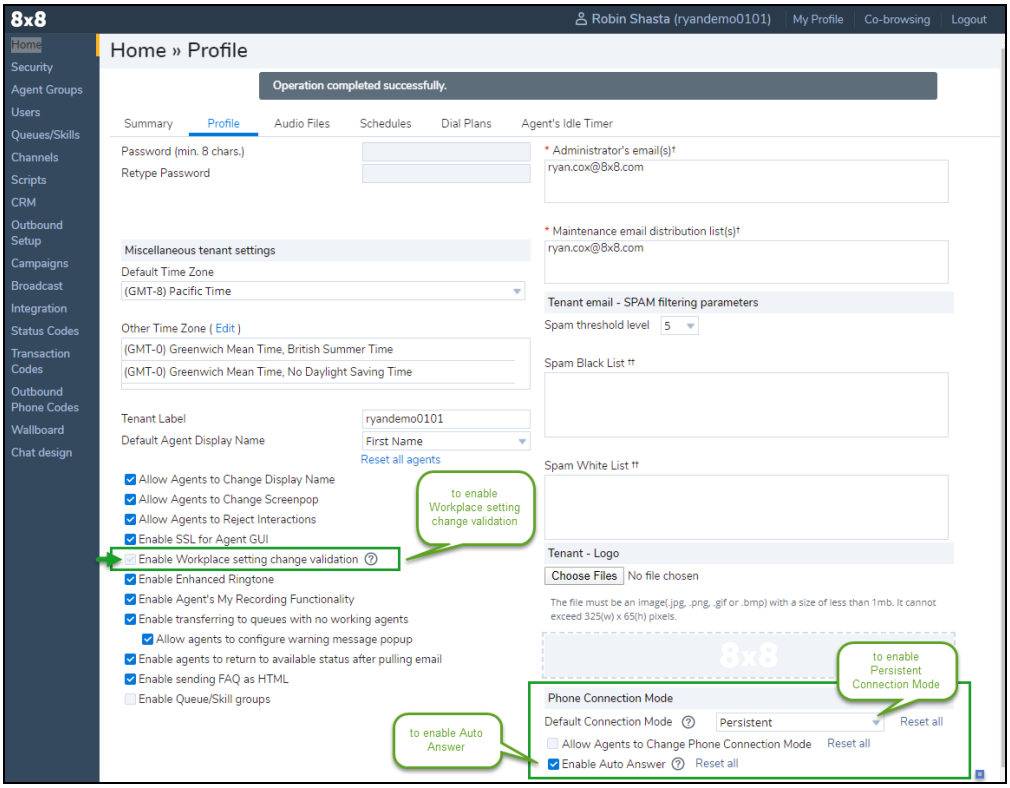
With Auto Answer, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually. If Auto Answer is provisioned for your tenant, you can enable it at the tenant level, agent group level, or agent level:

Enable Auto Answer at the Tenant Level

1. In Configuration Manager, go to **Home > Profile**.
2. Under **Phone Connection Mode**, select **Enable Auto Answer**. If you are enabling this feature for the first time, a confirmation dialog box prompts notifying you that a mandatory validation will also be turned on for security reasons.



3. Click **Ok** to continue. Auto Answer is enabled at the tenant level for all agents. By accepting the mandatory validation, **Enable Workplace setting change validation** is selected and cannot be changed.



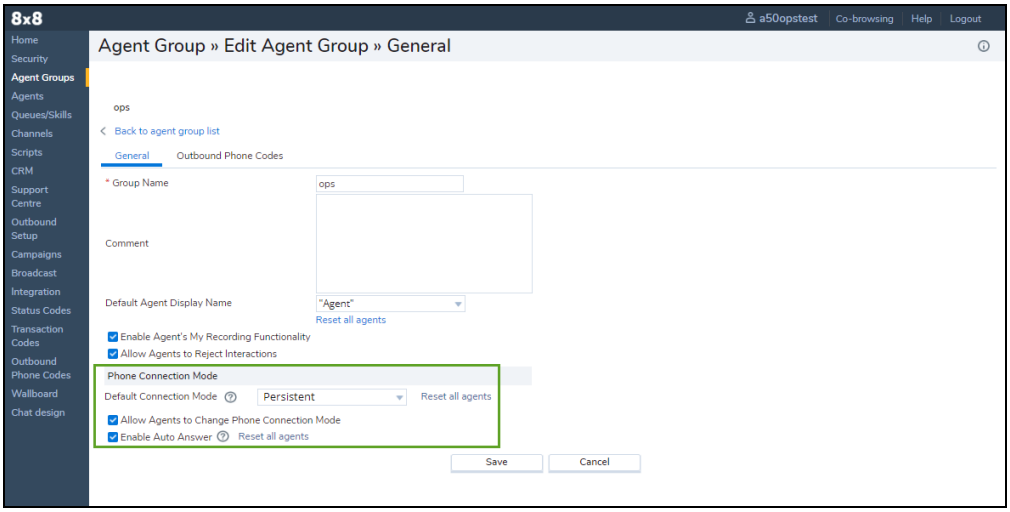
4. Click **Save** to activate Auto Answer at the tenant level. You have also enabled the workplace setting validation.

Enable Auto Answer at the Agent Group Level

Note: Auto Answer is visible at the agent group level only if you have enabled it at the tenant level.

1. In Configuration Manager, go to **Agent Groups** from the main menu.
2. Click to edit or create a new agent group.
3. In the **General** tab, select **Enable Auto Answer** if not enabled already. Auto Answer is now enabled at the agent group level for all agents. A confirmation message notifies you when the operation is completed successfully.

4. Click **Save** to activate Auto Answer at the agent group level.

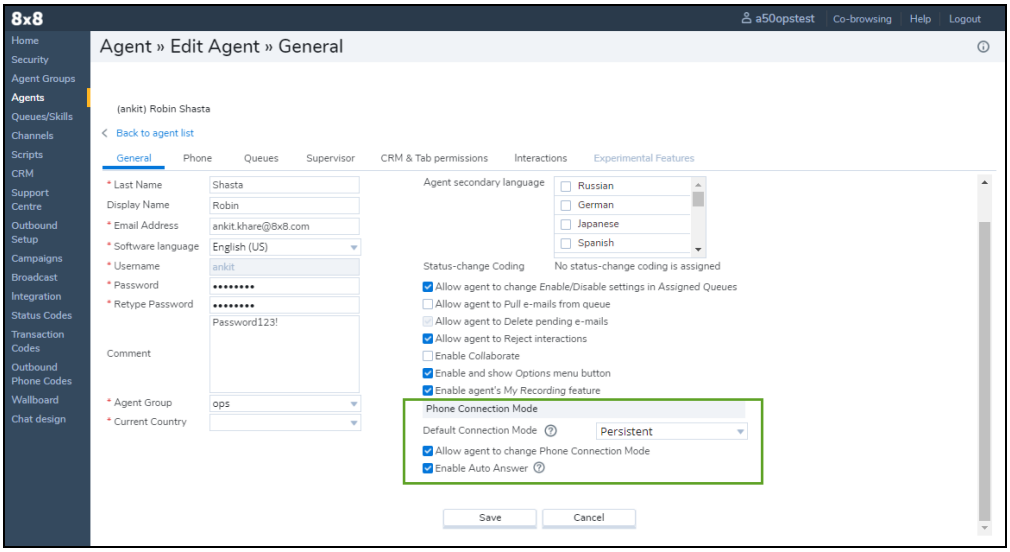


Enable Auto Answer at the Agent Level

Note: Auto Answer is visible at the agent level only if you have enabled it at the tenant and agent group level.

1. In Configuration Manager, go to the **Agents**page.
2. Click to edit or create a new agent and open the **General**tab.
3. Select **Enable Auto Answer** to allow agents answer their calls using the Auto Answer feature. Auto Answer is visible at the Agent level only if it is enabled at the tenant and Agent Group level.

4. Click **Save** to activate Auto Answer at the agent level.



Combinations for Persistent Connection Mode and Auto Answer Settings

Auto Answer can be combined with the Persistent feature to create an on/off combination of the two features. Auto Answer settings combined with Persistent can be configured at multiple levels depending on the features availability:

Connection	Behavior
Persistent Off, Auto Answer Off	Phone Connection Mode is On Demand and Auto Answer is off, so the agent needs to answer the phone for every phone interaction.
Persistent Off, Auto Answer On	Phone Connection Mode is On Demand and Auto Answer is on, so the agent phone automatically connects, and the interaction is auto answered when offered.
Persistent On, Auto Answer Off	Phone Connection Mode is Persistent, so the agent media path is always connected but for every phone interaction the agent needs to click the Accept button.
Persistent On, Auto Answer On	Phone Connection Mode is Persistent, so the agent media path is always connected, and the interaction is auto answered when offered.

Introducing Workplace Setting Validation

When changing workplace setting (Workplace Phone and Workplace SIP URI), agents must validate their changes to be able to handle the calls. When they click to validate the change, it triggers a phone call to the updated phone number. A PIN code is then communicated to the agent. The agent must enter the PIN code to validate the changes and continue. If they are unable to confirm the PIN they must exit and revert to their last validated setting. The workplace setting validation is offered as a mandatory security feature with Auto Answer, or it can be deployed as a stand-alone feature.

Features

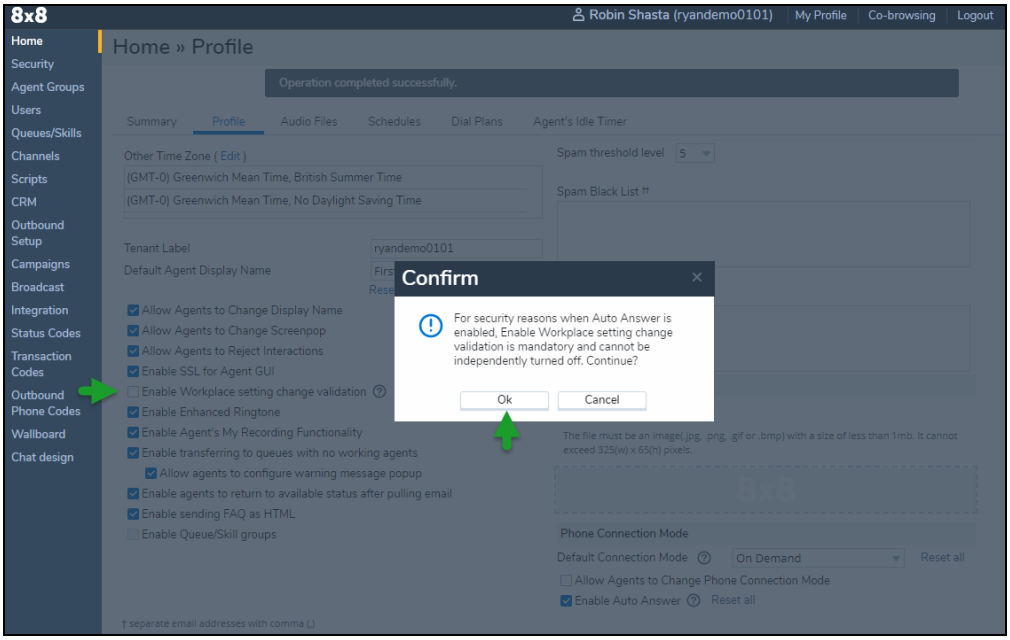
- Is mandatory while Auto Answer is enabled.
- Offered as stand-alone feature. Admins can remove or disable this feature in Configuration Manager with no restrictions.
- Reverts to the agent's last validated setting if unable to validate the new workplace setting.

Enable Workplace Setting Validation in Configuration Manager

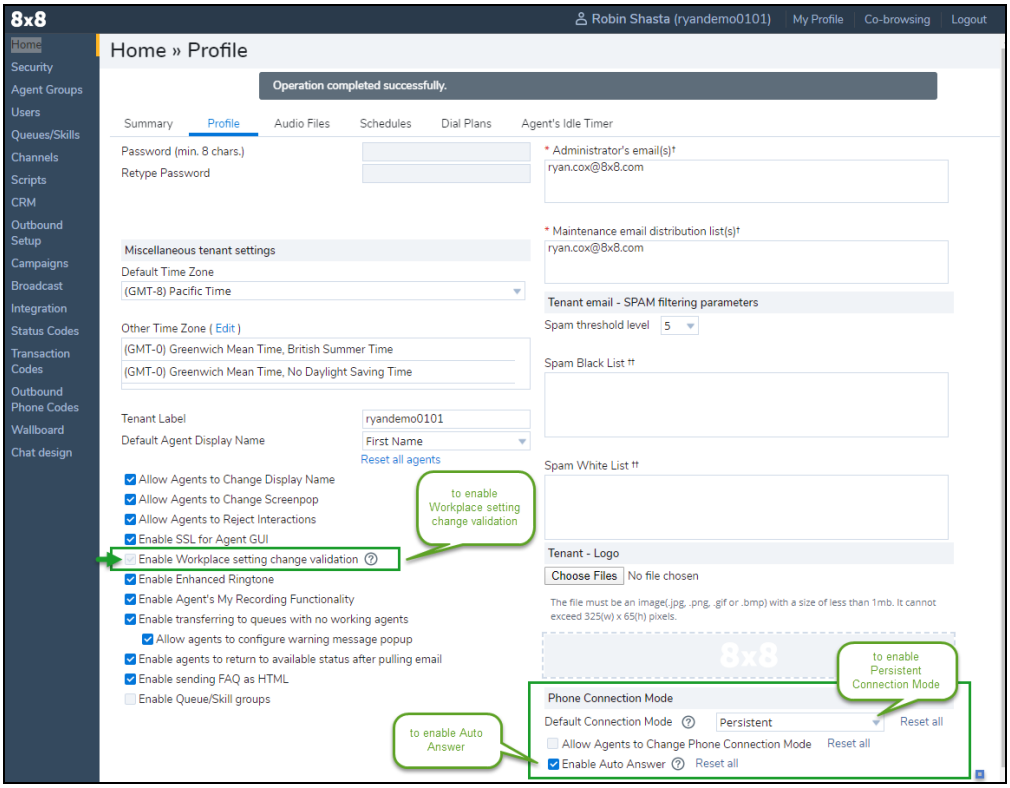
The workplace setting validation is applicable to a tenant for all agents and groups. To validate the workplace setting, agents require a phone and an audio access for the PIN code to be played to them. Moreover, the agents must be in Work offline status to change their workplace setting.

Enable Workplace Setting Validation Paired with Auto Answer

1. Log in to Configuration Manager.
2. Go to **Home > Profile**.
3. Under Phone Connection Mode, select **Enable Auto Answer**.
   If Auto Answer is enabled for the first time and without enabling the workplace security feature, a confirmation dialog box prompts notifying you that a mandatory validation feature will also be turned on for security reasons:



- If you click **Ok**, Auto Answer is enabled. By accepting the mandatory validation, **Enable Workplace setting change validation** is also turned on and cannot be changed independently while the Auto Answer feature is enabled. Workplace setting validation is enabled at the tenant level for all agents. You can configure Auto Answer at the agent group or agent level as well.



Note: If you disable Auto Answer. Workplace setting change validation is still enabled but can be disabled if required.

- If you click **Cancel**, Auto Answer is not enabled.

4. Click **Save**.

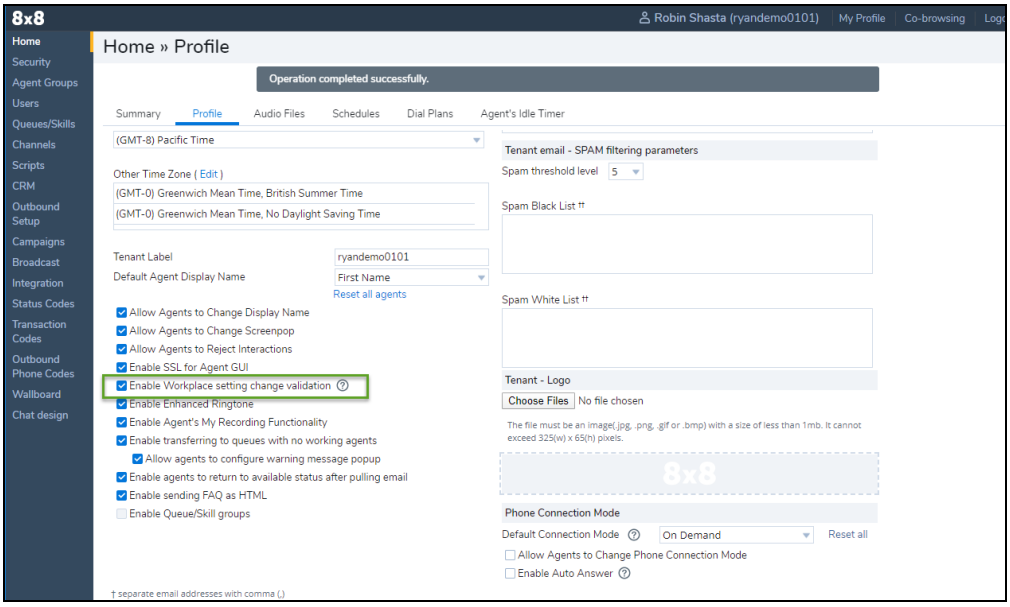
Enable Workplace Setting Validation as Stand-alone Feature

1. Log in to Configuration Manager.
2. Go to **Home > Profile**.

3. Select **Enable workplace setting change validation**.

> **Note:** If you have enabled Auto Answer, workplace setting validation is already enabled. You can disable Auto Answer, but keep the workplace setting change validation enabled.

4. Click **Save**. Workplace setting change validation is now enabled at the tenant level for all agents.



Configure Audio Files and Recorded Greetings

In a typical phone menu, callers direct themselves to the desired destination using choices from the menu. The phone menu is driven by pre-recorded audio messages. Audio files serve to automate a contact center's phone menu. Virtual Contact Center offers a number of pre-recorded messages to serve your business needs. You can also upload customized messages to suit your specific needs. Use the Audio Files tab to manage the recorded messages used by your phone channels.

To display the Audio Files tab:

1. From the Configuration Menu, open **Home**.
2. Go to the **Audio Files** tab.
   By default, each tenant includes a repository of pre-recorded audio files. You may use these readily available messages or record and upload customized messages.

Note: Virtual Contact Center supports the 8 KHz, 16-bit, monaural WAV file format only.

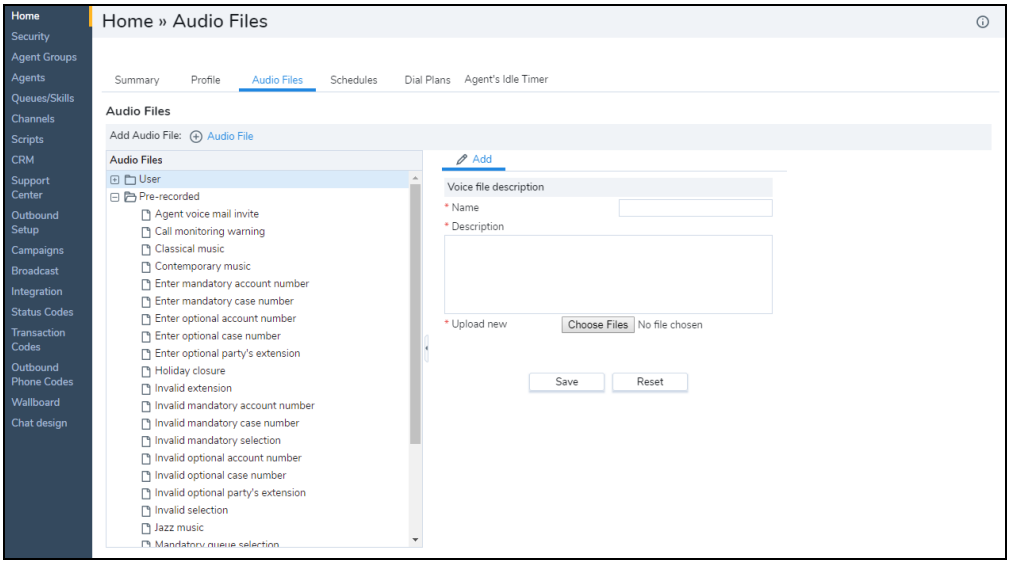
Upload Audio Files

In a typical phone menu, callers direct themselves to the desired destination using phone choices from the menu. The phone menu is driven by pre-recorded audio messages. Audio files serve to automate a contact center's phone menu. Virtual Contact Center allows you to upload customized messages to serve your contact center's needs.

To upload audio files:

1. From the Configuration Menu, open **Home**.
2. Go to the **Audio Files** tab.
3. Open the **User** folder under Audio Files.

4. Under **Voice File Description**, upload, edit, or review audio messages.



5. Enter a **Name** for the message you wish to upload.

   The following table summarizes file types listed in **Audio Files**.

Audio Files Option	Description
User folder	Lists the customized audio files uploaded by your Virtual Contact Center administrator into this tenant. When you initially configure a tenant instance, the User folder does not contain any audio files. When you use the Audio Files tab to upload your company's customized audio files into Configuration Manager, the uploaded files are stored in the User folder.
Pre-recorded folder	Lists the set of default placeholder audio files available for the tenant. By default, a new tenant includes a set of placeholder audio files. These files provide examples of Voice Channel greetings and messages used in a variety of contact center contexts. When you upload the customized audio files required by your contact center, you replace a pre-recorded audio file assignment so that it uses your customized audio file.

   The following table summarizes the options available under **Voice file description**.

Voice File Description Option	Description
Name	For a customized audio file under User, in the **Name** text entry area type a descriptive name for the contents of the audio file.
Description	For a customized audio file under User, in the **Description** text entry area type a description for the audio file.
Upload New	To upload a customized audio file to your tenant, click **Browse** under **Upload New**, then select a 8 KHz, 16-bit, monaural WAV file. After you upload an audio file, you must verify that Virtual Contact Center can play the audio file before referencing the file in an IVR script. Configuration Manager does not upload the file until you click **Save**. For details on playing uploaded IVR files, refer to Verify Audio Files Deployment.
Save	To upload the audio file specified in Upload New, click **Save**. Configuration Manager only allows users to save when working with audio files listed in the User folder.
Delete	To delete a customized audio file, under User, select a customized audio file then click **Delete**. Configuration Manager only allows users to delete when working with audio files listed in the User folder.
Type, File Name, Uploaded on, Size information list	To view details about a customized audio file, select a customized audio file in the User folder. Configuration Manager displays the file's details.

Note: For best practices, insert a special prefix at the front of the user-created audio names so they can be distinguished from the system audio files.

6. Enter a transcript or a brief description of the message in the **Description** box.
7. Click **Browse** to select an audio file in WAV format.
8. Click **Save**.
9. Click **Play Audio** to play back the uploaded message.
10. Click **Delete** to remove the message from the tenant.

Note: To order professionally-recorded messages, click the link at the bottom of the **Voice file description** area. You are sent to a service provider in professional voice recordings.

Verify Audio Files Deployment

You must verify the deployment of an uploaded audio file before referencing the file in an IVR[1] script.

Before you can place your Virtual Contact Center in production, you must go to **Home > Audio Files** to replace the placeholder Virtual Contact Center audio files with your own production-quality audio files.

Any time you upload an audio file to Configuration Manager, you must verify that the embedded audio player can play the file. Playing an uploaded audio file verifies that Virtual Contact Center has finished deploying the uploaded file to your contact center tenant. Audio files must be deployed before they can be referenced in an IVR script.

For details on IVR scripts, refer to Create a Phone IVR Script.

Edit Audio Files

You can edit custom audio files at any time. However, you cannot edit the default pre-recorded audio messages.

To edit custom audio files:

1. From the Configuration Menu, open **Home**.
2. Go to **Audio Files**.
3. Select the desired audio file in the **User** folder.
   The description of the voice file displays in the **View** tab.
4. Click the **Edit** tab and make the desired changes. You can also upload a new audio file from Edit mode.

[1] Interactive Voice Response is a technology that automates interactions with phone callers.

Define Business Hours and Schedules

You can define schedules for your contact center staff by going to the Schedules tab. Define business hours, holidays, and special events that are followed by your company's departments. For example, if your sales and support teams have different hours of operation, use the Schedules tab to create separate schedules for each team.

Limitations

- The Date Picker in the Special Events and Holidays calendar allows you to select a date up to three years ahead of the current year. To select a date beyond three years, enter it manually on the date field.
- Scheduling a campaign with an Intra Day Schedule with multiple recurring events follows the first Open schedule only and stops for the rest of the events for the day. If you configure a campaign to follow a schedule as shown in the example below, the campaign executes for the first open schedule from 7 AM to 12 PM, and ceases for the rest of the day. You then need to manually run the campaign for the rest of the day.

Weekly Schedule *

* In the Weekly Schedule below, all undefined intervals default to "Closed".

Monday	Open	08:00	12:30
	Choice #1	12:30	15:00
	Open	15:00	16:30
Tuesday	Open	08:00	16:30
Wednesday	Open	08:00	16:30
Thursday	Open	08:00	16:30
Friday	Open	08:00	16:30
Saturday	Closed for the day	00:00	24:00
Sunday	Closed for the day	00:00	24:00

Add a New Schedule

The Intra Day Scheduling feature provides you the flexibility to create multiple schedules within a day, and introduce multiple breaks without having to create nested schedules. You can select multiple call treatment choices to specify the desired call treatment in the IVR tree.

Creating a tenant schedule with the enhanced Intra Day Scheduler is simple and easy. The process involves:

1. Gathering your contact center business hours and breaks
2. Gathering your Special Events and Holidays schedule
3. Defining a weekly schedule calendar
4. Defining Special Events and Holidays calendars
5. Configuring call routing and call treatment choices

To better understand the process, let us create a sample schedule for our fictitious contact center; AcmeJets. The Sales team at AcmeJets observes the following schedule:

- Monday to Friday: 7 AM to 6 PM
- Monday to Friday: Lunch break 12 PM to 1 PM
- Saturday: 8 AM to 4 PM
- Sunday: Always Closed

Create Weekly Schedule

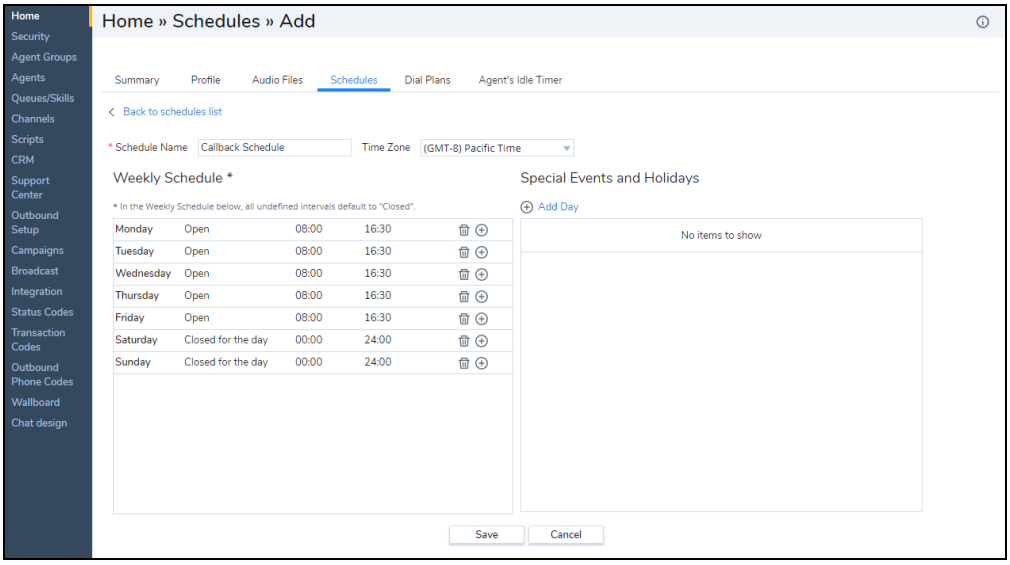
To create a weekly schedule:

1. From the Configuration Menu, open **Home**.
2. Go to the **Schedules** tab.
3. Click to add a new schedule, or to edit the **Default Schedule**.

   OR

   Click **Copy** to create a duplicate. You can make changes later.

The Weekly Schedule calendar opens. It also allows you to add a Special Events and Holidays calendar.



4. Enter a **Schedule Name** and select a **Time Zone** from the list.

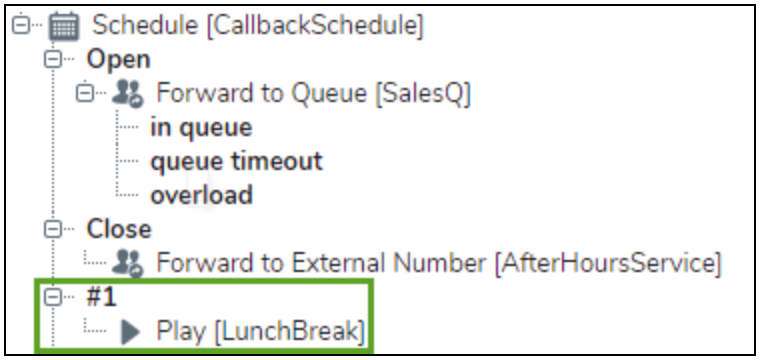
   The following table summarizes options under **Home > Schedules**:

Schedules Tab Option	Description
Schedule Name	Type a name that describes the part of your organization using a non-default schedule. You can associate a named schedule with a particular IVR script behavior. For example, if you plan to use your Virtual Contact Center to manage both sales and support interactions, and those two teams have different hours of operations, you can create two schedules for Sales and Support.
Weekly Schedule (Monday-Sunday, from-to)	For each day of the week, select a time that operation begins and ends, and a call treatment choice as defined in the script. A call treatment choice refers to a choice within a schedule which allows a time-based selection of treatment choices when interactions enter a tenant. The call treatment choices for a schedule include: ■ **Open**: Call treatment typically used when the business is open. ■ **Choice 1 to Choice 6**: Six alternate options that define more refined choices other than Open or Closed for the day. ■ **Closed for the day**: Call treatment when the business is closed for the entire day. When you design a Voice Channel's IVR script or an Email Channel's Email script, you can associate one or more schedules with the customer-facing behavior of the Channel.

Schedules Tab Option	Description
Add Day	Click **Add Day** to create exceptions to the days and times specified in the Monday-Sunday, from-to area. Exceptions enable you to specify alternative automated processing of phone and email interactions. More specifically, use schedule exceptions to modify the open and closed hours specified in the From and To areas. For example, for holidays or other periods when the schedules default hours of operation do not apply.
Special Events and Holidays	Click **Add Day** to create a new exception: ■ Enter the date of schedule exception. ■ From the drop-down menu, select: ○ **Open** to specify that the exception uses the contact center's open hours to process phone and email interactions. ○ **Closed** to specify that the exception uses the contact center's closed hours to process phone and email interactions. ○ A numeric scheduling label from **#1** to **#6**. ■ Choose the beginning and end day and times for the exception. ■ Click to remove the exception condition from the list of conditions. If you choose a numeric label, in the IVR or Email script that references the schedule, you can specify what the script should do during the period when the exception condition is in effect.

5. Under the **Weekly Schedule**, click each row to edit the call treatment and time.
6. Select business hours for the week. For example:
   a. For Monday, enter <7:00 to 12:00> and choose **Open** from the drop-down menu of call treatment choices.
   b. Click ⊕ to add a new row.
   c. Add lunch break hours from 12:00 to 13:00, specify an option from choice 1 through 6, and set up this choice with desired call treatment in the IVR. You can play a message for callers during the lunch hour: <Welcome to AcmeJets. We are currently closed for lunch between 12 pm and 1 pm. Please leave a message with your name and account number and we will get back to you as soon as possible. Thank you for your patience.>

The following IVR image shows an IVR tree with a call treatment choice #1 for the Sales schedule.



d. Click ⊕ to add another row.

e. Add after lunch hours from 13:00 to 18:00.

f. Repeat steps **a** to **e** to define the daily schedule until Friday.

g. Specify hours for Saturday with no lunch break.

h. For Sunday, a weekly holiday, choose **Closed for the day**.

7. **Save** your settings.

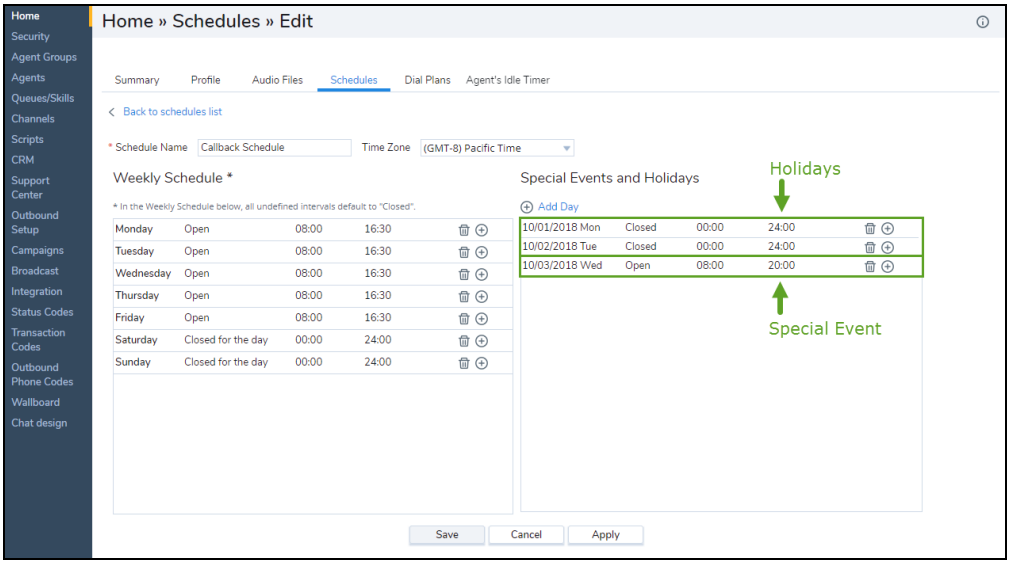
You have now successfully created your weekly schedule. The next step is to define exceptions to your weekly schedule in the Holidays and Special Events calendar on the right-hand panel of the Schedules tab. A holiday indicates the business closure, while a special event observes a schedule different from the regular weekly schedule.

Create Holidays and Exceptions

To create holidays and exceptions:

1. In the Holidays and Special Events calendar on the right-hand panel of the Schedules tab, select the desired date and specify the exception.
   - For holidays, select the date and create an event with exit point CLOSED from 0:00 to 24:00.

- For an exception to the schedule, specify the desired time intervals and the appropriate call treatment choices.



2. **Save** your settings.

Understand Tenant Dial Plans

A dial plan specifies how to interpret phone number sequences dialed by an agent using the phone tab, click-to-dial (or through API), and how to convert them into an ITU-T E.164 normalized outbound dial string. Dial plans can be used to include country codes and area codes, support extension-based dialing, correct the numbers from an external entity, and more.

Dial plans take numbers dialed by users, or numbers originating from other Virtual Contact Center components, IVR callback, web callback, click-to-dial, workplace phone, etc., and apply editing rules to yield one of the following:

- A valid global public phone number (known as E.164)
- A valid PBX number
- A call disallowed message number
- A warning tone generating number

Dial plans change the interpretation of dialed digits within a tenant to correspond to familiar national, local, or private phone switch dialing conventions. A dial plan establishes the expected number and pattern of digits for an outbound phone call, and validates the agent-dialed sequence. It consists of a collection of calling number patterns and treatment pairs. When a user dials a series of digits, each calling number pattern in the dial plan is tested as a possible match. If the agent-dialed sequence matches a pattern, corresponding treatment applies. The treated sequence is then transmitted to initiate a call or rejected as invalid.

For example, the dialing sequences to reach the Crystal Jade Restaurant in Shanghai, China from home phones in the United States, United Kingdom, Nigeria, and Beijing use different leading digits:

- New York City, USA dials 011862163858752 → North American Dial Plan = +862163858752
- London, England dials 008621 6385 8752 → UK National Dial Plan = +862163858752

- Abuja, Nigeria dials 009862163858752 → Nigerian National Dial Plan = +862163858752
- Beijing, China dials 02163858752 → Peoples Republic National Dial Plan = +862163858752

In each case, a different national dial plan is used to remove the local prefix digits and restore the country code when necessary to yield an unambiguous international number.

Previous Releases

8.4 Release

The following features and capabilities are added in this release:

- Ability to use private PBX numbers
- Ability to change the order of the custom rules
- Ability to use system variables and user-defined variables
- Dial plan editing results are no longer automatically prefixed with a plus (+) sign. All prior dial plans are automatically adjusted to compensate for the plus (+) sign change.

Backward Compatibility:
-All prior dial plans are automatically adjusted to compensate for the plus (+) sign change.
-The original International Numbering Plan (ITU-T E.164) allowed any digit sequence starting with a plus (+) sign to pass through without any digit modifications. The updated equivalent dial plan now includes E.164 number validity checks along with some special and premium number blocking. In some cases, users of this plan may experience a change of behavior if their customary dialing included non-E.164 number patterns.

8.1 Release

The following features and capabilities are added in this release:

- Ability to create and apply multiple dial plans within the same tenant:
  You can apply dial plans for each agent based on their location. If your contact center employs agents in different countries, you can create custom dial plans suitable for each country and apply the appropriate plan to agents. Each agent can dial from their familiar national dialing plan. Until now, you were limited to applying a single tenant-based dial plan to all agents based in different countries forcing them to manually dial out.
  Similarly agents in different domestic offices may have different dialing privileges or different in-house PBX, or in-state local dialing preferences which can be addressed using per agent dial plans.
- Ability to apply dial plans to an agent's dial out, verification call, forward to external call, and more:
  Tenant Dial Plans apply to the Make Verification call, web callback, or IVR forwarding a call to external number

scenarios. In these scenarios, the outbound calls must be dialed as defined in the ITU-T E.164 specification. For example, in the United States, the number +1 (650) 292-8618 can be dialed as 6502928618, and in the United Kingdom, the number +44 (0) 2088524140, can be dialed as 2088524140.

- Ability to apply dial plan editing to calls beginning with +:
  Dialing inputs regardless of the originating calling method (agent, agent profile, click-to-dial, campaigns, and web callback) are subject to dial plan editing including those beginning with "+".
- Ability to select a desired dial plan during click-to-dial or web callback:
  The click-to-dial and web callback APIs accept a new optional parameter to select a particular dial plan or if omitted applies the tenant default dial plan. These APIs cannot dial numbers without, at a minimum, filtering the number through the tenant default dial plan or a specific dial plan. No more API exposure to allow any number to be dialed without restrictions.
- The dial plan now applies to all outbound calls:

Call Type	Default Dial Plan	Overriding Dial Plan
Agent dial	Tenant dial plan	Agent dial plan
Click-to-dial	Tenant dial plan	Dial Plan specified as API parameter
Web callback	Tenant dial plan	Dial Plan specified as API parameter
Verification call	Tenant dial plan	Agent dial plan
Forward to external	Tenant dial plan	N/A
Campaign call	Tenant dial plan	Dial Plan specified in properties

- Ability to associate agents with a custom dial plan based on their location

Types of Dial Plans

Virtual Contact Center offers two types of dial plans:

- **System Pre-Configured Dial Plans**: Predefined national and international dial plans available to all tenants. They allow PBX dialing and local, long distance, and international calls. You cannot make any changes to these plans except for opting a default plan. You can select a national plan that best suits your needs or use the standard international plan. The System Pre-Configured dial plans are predefined and do not allow changes. Every tenant is required to select one and only one dial plan to suit their location. By default, your contact center may come with some system pre-configured dial plans, such as:

- **International Numbering Plan (ITU-T E.164)**: Allows tenants across the globe to place domestic and international calls. The International Numbering Plan does not allow unfiltered pass-through dialing.
- **US North American Numbering Plan (US NANP)**: Allows tenants across North America to place domestic and international calls. NANP identifies various calling number patterns and applies corresponding treatment to user-dialed numbers.

- **Custom Dial Plans**: In addition to system pre-configured dial plans, you can create your own custom dial plan if you have subscribed to this feature. Custom dial plans, in many situations, can mimic the abbreviated dialing conventions of a private office phone system or internal corporate dialing plan. You can configure multiple custom dial plans.

Notes:
-You can activate only one dial plan per tenant at a time.
-Virtual Contact Center reports present dialed numbers in the standard international format.

About the North American Numbering Plan (US NANP)

The North American Numbering Plan identifies various calling number patterns and applies the following treatment to user-dialed numbers:

- Filters international calls with country codes incorrectly entered starting from "0".

  Note: Country codes do not begin with 0.

- Removes the North American access code 011 if added to a North American phone number. For example, the number 01116505551212 is dialed out as 16505551212, removing 011.
- Filters local and long-distance calls with incorrect area codes starting from "0".

  Note: North American area codes do not begin with 0.

- Filters calls to emergency and special services, such as 911 in the US and 112 in the UK.
- Prefixes the country code "1" to all local and long-distance calls within North America.
- Requires country codes and area codes for international calls.

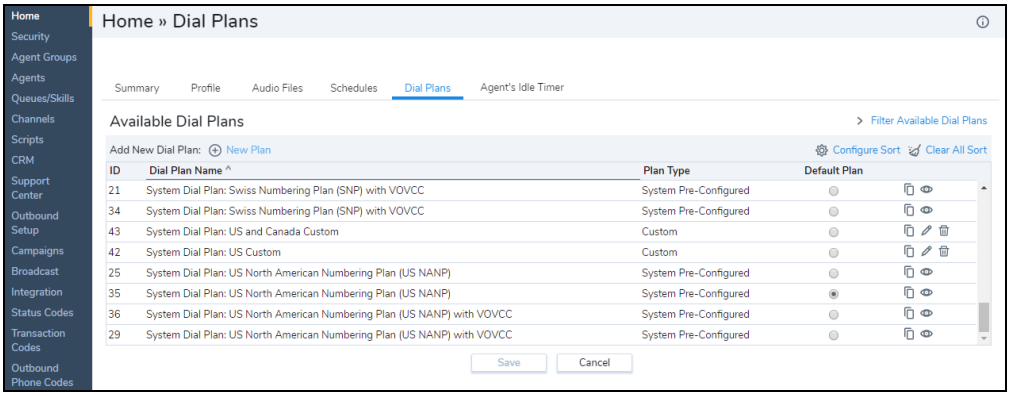
- Allows input of spelled-out numbers, and converts alphabetic characters to the telephone keypad equivalent digits according to North American Telephone standards.

Access a System Dial Plan

System Pre-Configured dial plans are provided by Virtual Contact Center. You can use the view option to change a default plan on your tenant.

To view or edit a system dial plan:

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.



3. Select a dial plan and double-click to view the details.
4. In the details view, you can see the following information:

Dial Plans	Description
Dial Plan Name	Enter a name for the new dial plan.
Test Number	Enter a telephone number to test your plan. A indicates which rule is being applied.
Default Plan	Check the option to mark this as the default dial plan.
Order	Indicates the order of the rules applied to each number. You can change the order of the rules in custom plans by dragging and dropping them in the desired location.

Dial Plans	Description
Dialed String Match Pattern	Define a calling number pattern to apply the dial plan using regular expressions. A regular expression provides a concise and flexible means for matching strings of text, or patterns of characters. Most commonly used regular expressions are: **^** - Matches the starting position of the string. **.** - Matches any single character. ***** - Matches the preceding element 0 or more times. **$** - Matches the ending position of the string. **[ ]** - Matches a single character contained within the brackets. For example, [2-9] specifies any digit from 2 through 9. **( )** - A marked sub-expression within which you define a string to match. For example, the pattern ^([2-9][0-9][0-9][0-9][0-9][0-9][0-9])$ defines a 7-digit sequence where the first digit is not 0 or 1. **Note:** Defining a dial plan requires sound knowledge of regular expressions.
Rewrite Translation	Define the treatment for the number that matches the specified calling number pattern. For example, the pattern ^([2-9][0-9][0-9][0-9][0-9][0-9][0-9])$ and treatment 1650$1 prepends a 7-digit input with "1650". $1 represents pattern within the (). If you input 5551212, the treatment converts the number to 16505551212.
Rule Comment	Gives a brief description of the treatment received by the rule.
Delete Rule	Allows you to delete the rule. This applies to user-defined rules only.
Test Match	Indicates if the rule applies to the test number.

How do I copy a system pre-configured rule?

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.
3. Click next to a default system rule that you wish to modify.
   A message appears asking you to click **Save** to keep a copy.
4. Click **OK**.
   The dial plan creates a copy of the default plan.

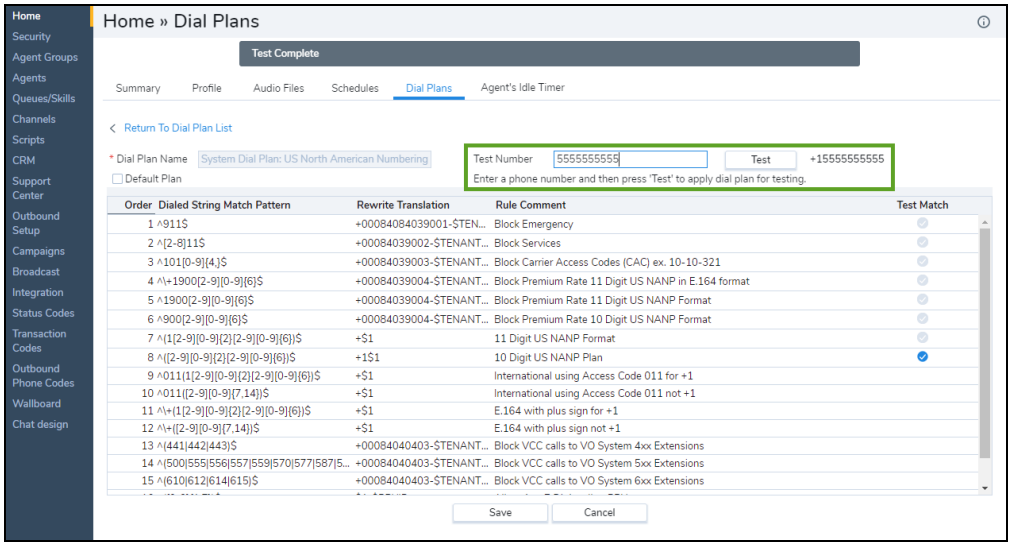
5. Enter a new name for the **Dial Plan**.
6. Click **Save**.
   A copy of the default dial plan is created and added to the list of available dial plans. You can modify the new dial plan according to your tenant needs.

How do I test a dial plan?

You can test a dial plan to check how the plan treats user-dialed sequences, and to learn the sequences identified by the dial plan.

To test a dial plan:

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.
3. Select a dial plan and click to edit.
4. In the edit screen, enter a phone number sequence in the **Test Number** text box and click **Test** to validate.



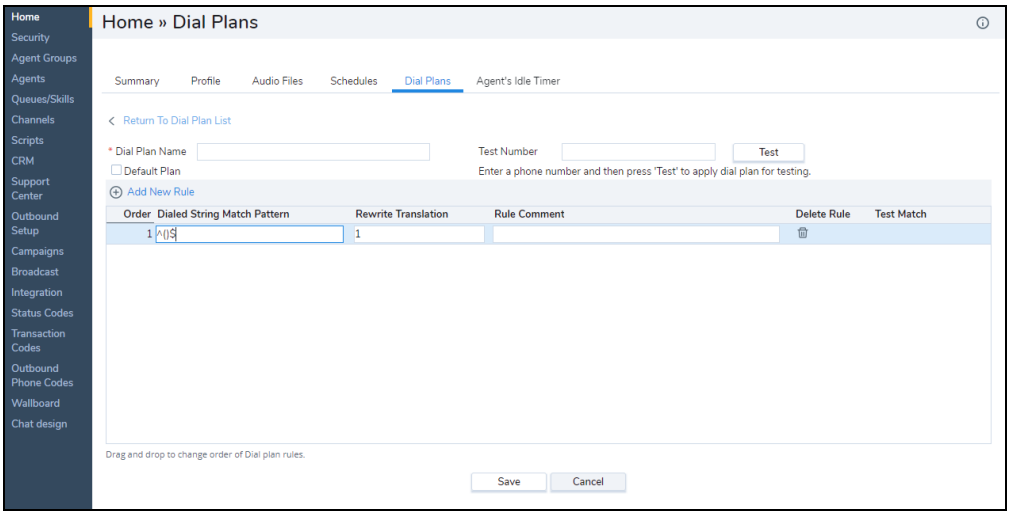
A indicates what dial plan is being used. If the dialed phone number matches a calling number pattern, the corresponding treatment is applied.

Create Custom Dial Plans

Creating a custom dial plan requires a good understanding of regular expressions. This section gives a brief overview of creating a custom plan. You may seek guidance from professional services for creating a custom plan from scratch.

To create a custom dial plan:

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.
3. Click ⊕ to add a new dial plan.



4. In the **Add New Dial Plan** window, enter the following information:

Dial Plans	Description
Dial Plan Name	Enter a name for the new dial plan.
Test Number	Enter a telephone number to test your plan. A ✓ indicates which rule is being applied.
Default Plan	Check the option to mark this as the default dial plan.

Dial Plans	Description
Order	Indicates the order of the rules applied to each number. You can change the order of the rules in custom plans by dragging and dropping them in the desired location.
Dialed String Match Pattern	Define a calling number pattern to apply the dial plan using regular expressions. A regular expression provides a concise and flexible means for matching strings of text, or patterns of characters. Most commonly used regular expressions are: **^** - Matches the starting position of the string. **.** - Matches any single character. ***** - Matches the preceding element 0 or more times. **$** - Matches the ending position of the string. **[ ]** - Matches a single character contained within the brackets. For example, [2-9] specifies any digit from 2 through 9. **( )** - A marked sub-expression within which you define a string to match. For example, the pattern ^([2-9][0-9][0-9][0-9][0-9][0-9][0-9])$ defines a 7-digit sequence where the first digit is not 0 or 1. **Note:** Defining a dial plan requires sound knowledge of regular expressions.
Rewrite Translation	Define the treatment for the number that matches the specified calling number pattern. For example, the pattern ^([2-9][0-9][0-9][0-9][0-9][0-9][0-9])$ and treatment 1650$1 prepends a 7-digit input with "1650". $1 represents pattern within the (). If you input 5551212, the treatment converts the number to 16505551212.
Rule Comment	Gives a brief description of the treatment received by the rule.
Delete Rule	Allows you to delete the rule. This applies to user-defined rules only.
Test Match	Indicates if the rule applies to the test number.

5. Click to add a new rule. Click to delete a rule.

Examples of dial plan rules shown above can be interpreted as follows:

a. The pattern ^([2-9][0-9][0-9][0-9][0-9][0-9][0-9])$ and treatment 1650$1 converts a 7 digit input to 10 digits. For example, if you input 5551212, the number gets prefixed with the area code and converts to

16505551212.

b. The pattern ^(55[0-9][0-9])$ and treatment 1650292$1 converts all 4 digit extension number starting with 55 to 165029255XX, where X is a mandatory single digit.

6. Enter a sequence of digits and click **Test** to validate the calling number pattern and treatment you defined. The first matched rule shows to indicate a match.
7. Click **Save**.

Variables

We have two types of variables in dial plans:

System Variables

The following set of new variables are introduced in dial plan. The system variables cannot be edited.

System Variable	Used for
$TENANT	Tenant name
$AGENTLOGIN	Agent username, if available for the call
$ORIGNUMBER	Original dialed number

Note: The E.164 system dial plan is no longer a pass-through. A new rule is added to validate the dialing number.

User-Defined Variables

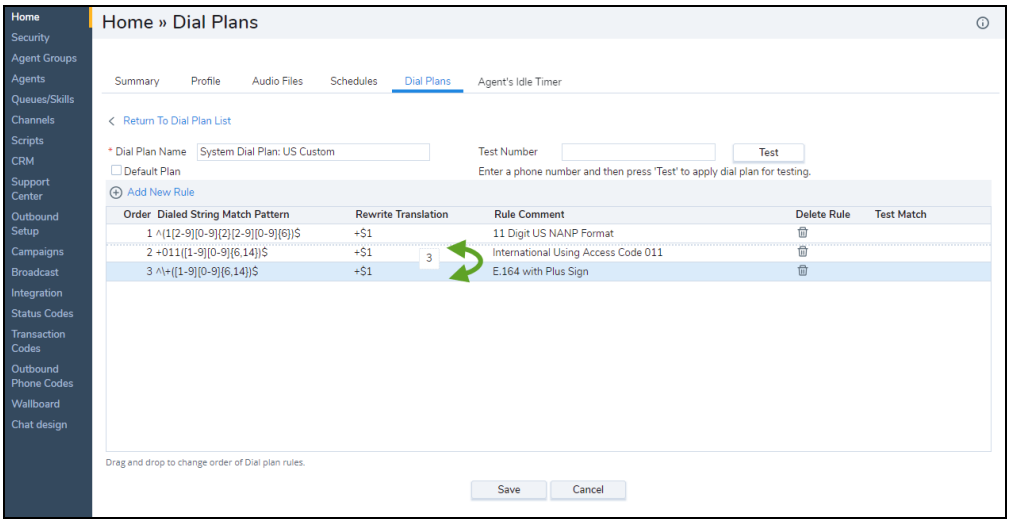
Users can create variables based on their specific needs. For example, a user defines the variable *SET MYAREACODE* for their area code. When they enter a telephone number, the system dials the area code (1510) first, and then dials the number.

Dialed String Match Pattern	Rewrite Translation	Rule Comment
SET MYAREACODE	1510	my area code
^([1-9][0-9][0-9][0-9][0-9][0-9][0-9])$	$MYAREACODE$1	add area code

How do I change the order of my custom rules?

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.

3. Click or **Edit** to open a rule.
4. Click to select the custom rule, and drag it to the desired location.



5. Click **Save**.

Note: You cannot edit system dial plans.

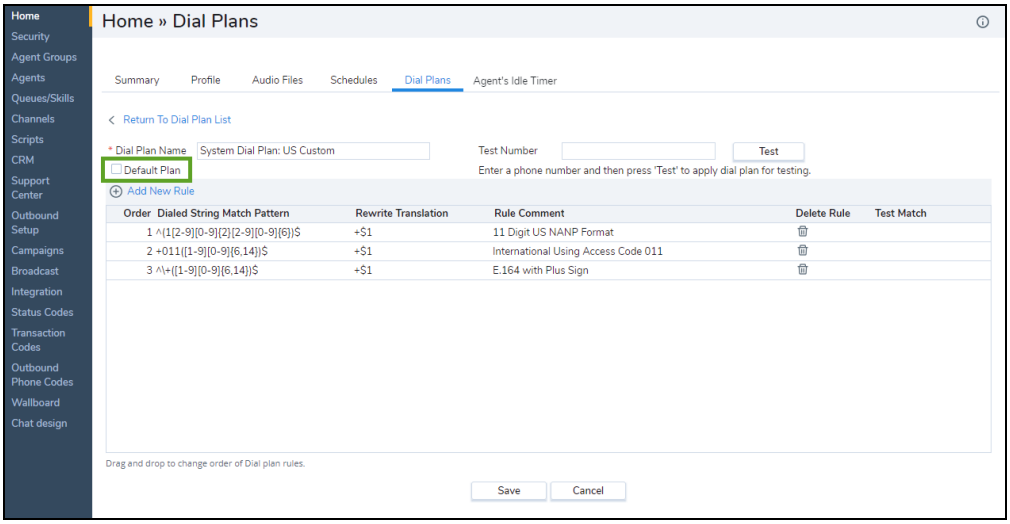
Select a Default Dial Plan

One of the pre-configured dial plans is selected as default for your tenant. You cannot edit the default dial plan unless you have created a custom dial plan and would like to select it as the default instead. To revert to a pre-configured dial plan, select the desired plan and edit it.

To select a default dial plan in the tenant:

1. From the Configuration Menu, open **Home**.
2. Go to the **Dial Plans** tab.
3. Choose the dial plan you want to make the default, and double-click to open.

4. Select the **Default Plan** check box to mark it as the default.



5. Click **Save**.

Reset Agent's Idle Timer

In Virtual Contact Center, idle time refers to the length of time agents have been idle and is measured for each agent by the agent's idle timer. By default, an agent is considered idle from the time he ends post processing of a system-delivered interaction and becomes available. When multiple agents with the same queue and skill level assignments are idle, the system routes the call to the agent who has been idle the longest. The agent's idle timer is reset every time they end post processing of a system-delivered interaction. This reset persists until the same scenario is repeated. Agent-initiated interactions do not reset the idle timer.

To supplement the default behavior, we have introduced a tenant-wide setting which allows resetting the idle timer when agents transition from one status to another. For example, in addition to the default reset, you can configure the idle timer to reset when agents change their status from On Break to Available.

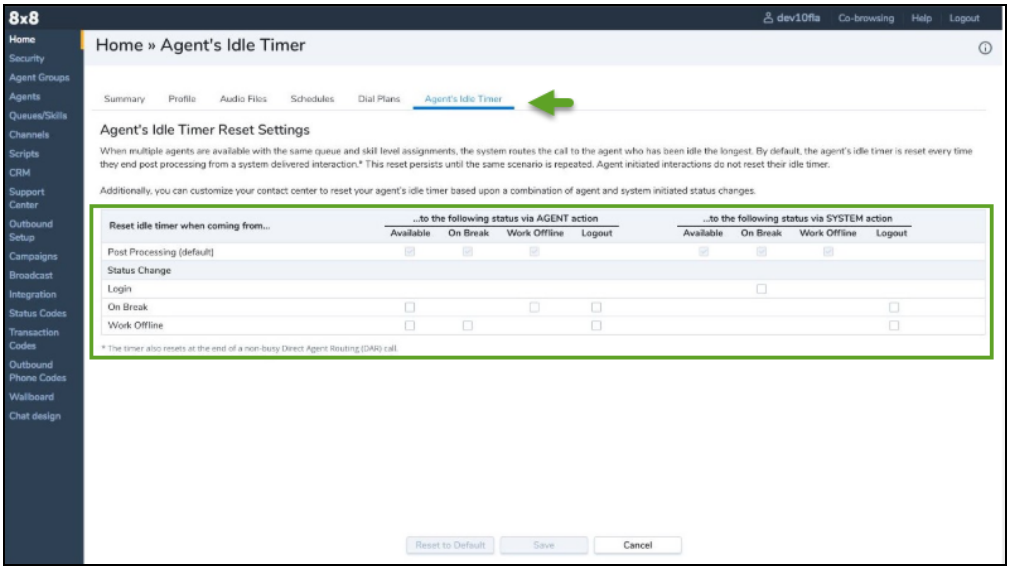
Assumptions

- This additional configuration does not change the underlying default behavior, it simply adds an overlay and when selected they additionally update the timer setting when an agent changes status. An example is when the agent returns from On Break to Available or from Login to On Break each morning.
- This additional configuration does not change the interactions that reset in the default behavior, or inbound and outbound that are system-generated. Calls that are excluded from the reset, such as manual dials and agent-to-agent calls, remain excluded.
- Agent skill level is a default behavior. An agent with a higher skill level takes precedence over any lower-skill-level agent with a more recent status transition that has reset their timer.

Access the Idle Timer Setting

To enable the supplementary settings for agent idle timer:

1. Log in to Configuration Manager, go to **Home > Agent's Idle Timer** tab.
2. Select the transitions for which you want the timer to reset.
   These changes are immediate and do not require agents to log out and log back in.

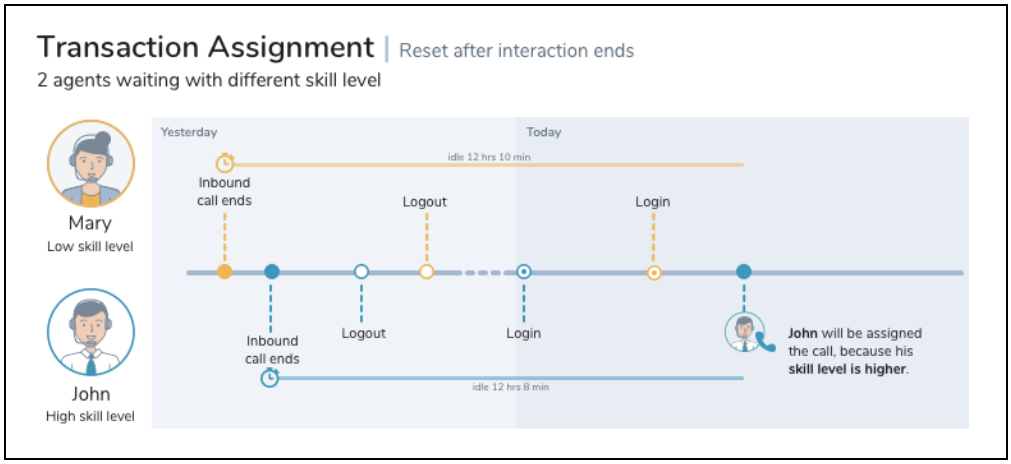


3. Click **Save**.

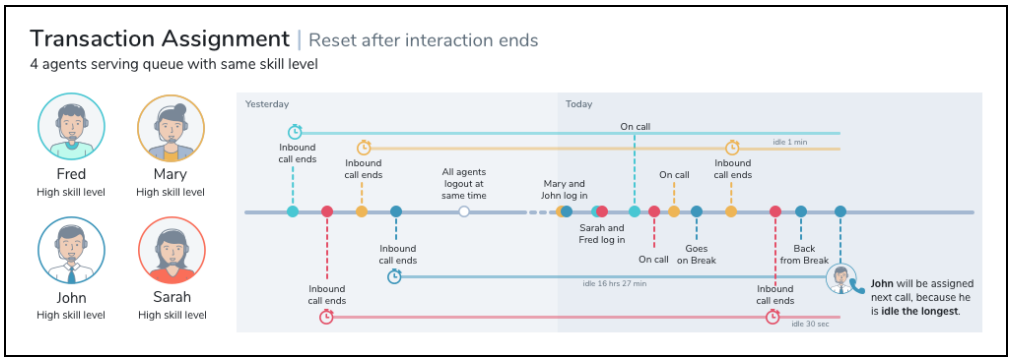
Use Cases

The following use cases provide an insight into the default behavior as well as the new extended capability.

- **Use Case 1:** Idle timer resets after an interaction ends (Agents with varying skill levels)
  The default behavior resets the idle timer after an interaction ends. In the following scenario, Agent John has a higher skill level than Mary. They both process an inbound call, end the call and make themselves available. Mary ends the call two minutes before John. Mary is idle for 12 hours and 10 minutes while John is idle for 12 hours and 8 minutes. Even though Mary is idle 2 minutes longer than John, the next inbound call is offered to John since he has a higher skill level.



- **Use Case 2**: Reset idle timer after an interaction ends (Agents with varying skill levels)
  In this scenario, Fred, Mary, John, and Sarah serving the same queue have identical skill levels. After processing the inbound calls at varying times, they all log out. Mary and John log in first followed by Fred and Sarah. John goes on break while the rest of the team get on calls. Sarah ends the call and becomes available. A few minutes later, John returns from break. The incoming call is now offered to John, but not Sarah since John has been idle the longest. The default behavior resets the idle timer after an interaction ends.

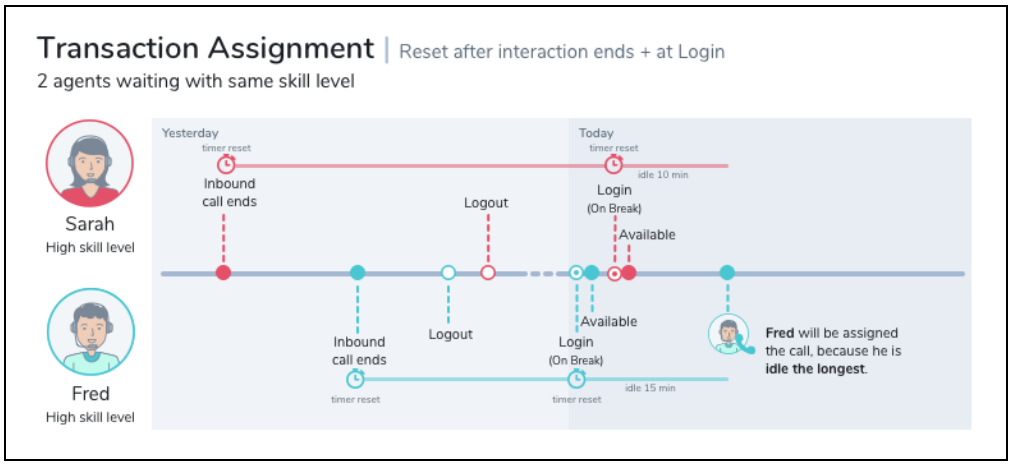


- **Use Case 3**: Reset idle timer after a status change
  In this case, the idle timer resets after an interaction ends and again after an agent logs in.

Reset idle timer when coming from...	...to the following status via AGENT action				...to the following status via SYSTEM action			
	Available	On Break	Work Offline	Logout	Available	On Break	Work Offline	Logout
Post Processing	☑	☑	☑		☑	☑	☑	
Status Change								
Login						☑		
On Break	☐		☐	☐				☐
Work Offline	☐	☐		☐				☐

Sarah and Fred, with the same skill level, process an incoming call and end the call at varying times. The idle timer

resets. Later they log out. Fred logs back in (Idle timer is reset). He goes on break and then changes his status to available. Later Sarah logs in and changes her status to available. The next incoming interaction is offered to Fred since he logged in before Sarah and the idle timer is reset at login.



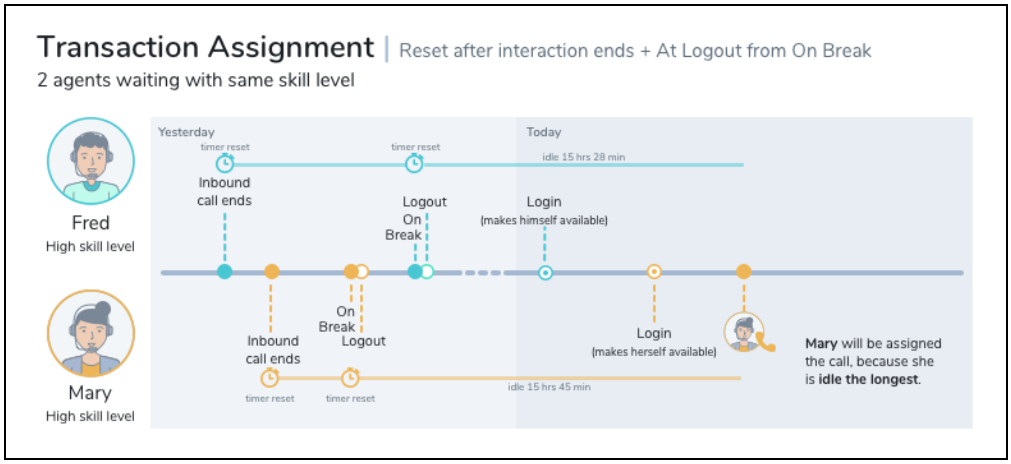
- **Use Case 4**: Reset idle timer after a status change

  The idle timer is reset after an interaction ends by default. Additionally, the idle timer is configured to reset when an agent logs out from On Break status.

Reset idle timer when coming from...	...to the following status via AGENT action				...to the following status via SYSTEM action			
	Available	On Break	Work Offline	Logout	Available	On Break	Work Offline	Logout
Post Processing	☑	☑	☑		☑	☑	☑	
Status Change								
Login						☐		
On Break	☐		☐	☑				☐
Work Offline	☐	☐		☐				☐

* The timer also resets at the end of a non-busy Direct Agent Routing (DAR) call.

Mary and Fred process an inbound call. Fred ends the call first (the idle timer is reset) followed by Mary. Mary goes on break and logs out shortly after (the idle timer is reset). Fred follows suit. Later in the day Fred logs back in followed by Mary. The incoming interaction is now offered to Mary, since she logged out before Fred and the idle timer is reset at logout.



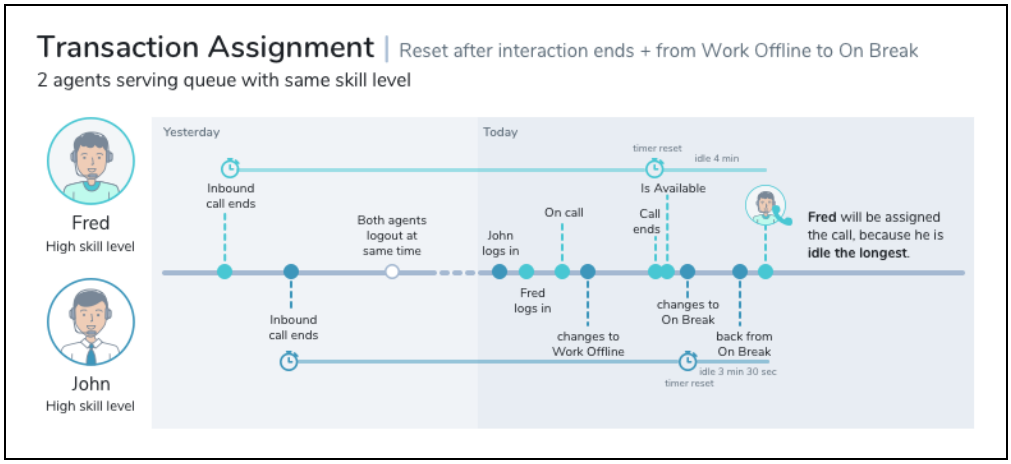
- **Use Case 5**: Reset idle timer after a status change

  The idle timer is reset after an interaction ends by default. Additionally, it resets when agents change their status from work offline to On Break.

Reset idle timer when coming from...	...to the following status via AGENT action				...to the following status via SYS		
	Available	On Break	Work Offline	Logout	Available	On Break	Work Off
Post Processing	☑	☑	☑		☑	☑	☑
Status Change							
Login						☐	
On Break	☐		☐	☐			
Work Offline	☐	☑		☐			

* The timer also resets at the end of a non-busy Direct Agent Routing (DAR) call.

Fred and John, with the same skill level, process an inbound call, end the call. The idle time is reset. They then log out at the same time. John logs back followed by Fred. Fred is offered an incoming call while John changes his status to working offline. Fred ends the call (Idle timer is reset). Shortly after John goes On Break (idle timer is reset). The next incoming call is offered to Fred who is idle the longest.



- **Use Case 6**: Reset idle timer after a status change

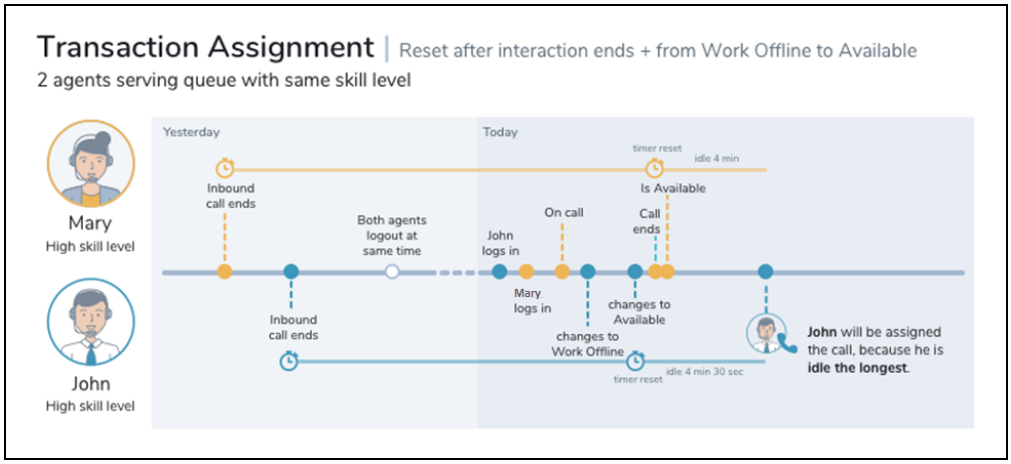
  The idle timer is reset after an interaction ends by default. Additionally, it resets when agents change their status from working offline to available.

Reset idle timer when coming from...	...to the following status via AGENT action				...to the following status via SYS		
	Available	On Break	Work Offline	Logout	Available	On Break	Work Offl
Post Processing	✓	✓	✓		✓	✓	✓
Status Change							
Login						☐	
On Break	☐		☐	☐			
Work Offline	☑	☐		☐			

* The timer also resets at the end of a non-busy Direct Agent Routing (DAR) call.

Mary and John process an inbound call, end the call at varying times. The idle timer is reset for Mary followed by John. They both log out and log back in. The next incoming call is offered to Mary since she has been idle the longest. John then goes to work offline, makes himself available (Idle time is reset) shortly after. Mary who is on a call ends the call, makes herself available. The next incoming call is offered to John who has been available the

longest.


Transaction Assignment | Reset after interaction ends + from Work Offline to Available
2 agents serving queue with same skill level
Mary
High skill level
John
High skill level
Yesterday
Today
timer reset
idle 4 min
Inbound call ends
Is Available
Both agents logout at same time
On call
Call ends
John logs in
Mary logs in
changes to Available
Inbound call ends
changes to Work Offline
idle 4 min 30 sec
timer reset
John will be assigned the call, because he is idle the longest.

Define Password Policies

Password policies allow the contact center administrator to define rules to enhance tenant security by encouraging users (administrators, agents, and supervisors) to employ strong passwords and ensure proper usage. Password policies define a mechanism to secure user accounts.

Note: Administrators cannot create passwords for new users. Account information such as the system-generated password is automatically communicated with new users via email. Administrators, however, can help users reset their passwords during lockout by sending a system-generated email that contains the password reset link.

Features

The following features in password policies allow users to define passwords and increase their account security:

- Timed password expiration forcing a periodic password change.
- Password history to remember a specified number of previously used passwords and prevents re-use.
- Minimum password length of 5, 8, or 10 characters.
- Password complexity requirements, such as a mix of alphanumeric characters or a mix of upper and lowercase alpha with numeric characters.
- Security questions to reset a forgotten password. You can prevent agents from answering the security question with a password.
- Password reset for any user at any time. An administrator can initiate the password reset that is automatically communicated with users via email.

- Account lockout for a specific time or until unlocked by administrator in case of invalid login attempts.
- Lockout alert notification for administrator.

Configure Password Policies

The Security page in Configuration Manager allows you to define password policies. As an administrator, you can set rules on password length, formation, password duration, and common password practice for users to follow while creating their passwords. These rules are enforced on users to protect their accounts from being hacked.

To configure password policies:

1. From the Configuration Menu, open **Security**.
2. Go to the **Password Policies** tab.
3. Configure the desired settings.
   The following options are available for password policies:

Password Policies - General	Description	Policy Options
Password Expires (In days)	Defines how long a password is alive. After the specified duration, the password expires and needs to be changed. **Note:** Selecting **Never Expires** keeps the password alive as long as you desire.	■ 30 days ■ 60 days ■ 90 days ■ 180 days ■ One Year ■ Never expires
Enforce Password History	Defines the number of previous passwords (or no passwords) to be remembered by the system. It prevents users from using the previous passwords when creating a new one.	■ No passwords remembered ■ 3 passwords remembered

Password Policies - General	Description	Policy Options
		■ 5 passwords remembered ■ 10 passwords remembered
Minimum Password Length	Defines a minimum length for a password. Restricts agents from choosing a password less than the specified length.	■ 8 characters ■ 10 characters ■ 12 characters
Password Complexity Requirement	Defines if a password must be set with a certain complexity.	■ Must mix alpha and numeric ■ Must mix upper and lower case alpha and numeric ■ Must contain 3 out of 4: ○ upper case alpha ○ lower

Password Policies - General	Description	Policy Options
		case alpha ○ numeric ○ symbols (*@&#!?)
Email system generated passwords for new agents/admins and reset	Determines if a system-generated password is sent to the agents or Secondary Administrators to reset their passwords. The system default is **No**. If you select **Yes**, the **Reset Password** button appears under **Agents > General**. If you click Reset Password, an email containing a temporary username and password is sent to the user.	■ Yes ■ No
Password Question Requirement	Defines if the answer to a security question in the agent profile can be the same as the password or not. **Note:** Selecting **None** lets an agent answer the security question same as the password.	■ Answer cannot be same as password ■ None

4. Click **Save**.
   For Lockout policy, see Lock and Unlock User Accounts.

Note: The minimum password length is 8 characters. Existing agents and supervisor accounts with passwords shorter than 8 characters are not impacted until the next password change.

Lock and Unlock User Accounts

The Security page in Configuration Manager allows you to define lockout policy. As an administrator, you can set rules for maximum invalid login attempts before the system locks you out. These rules are enforced on users to protect their accounts from being hacked. An administrator can also unlock a user account to give immediate access to the locked-out user. This prevents the user from being idle during an accidental lockout.

Lock a User Account

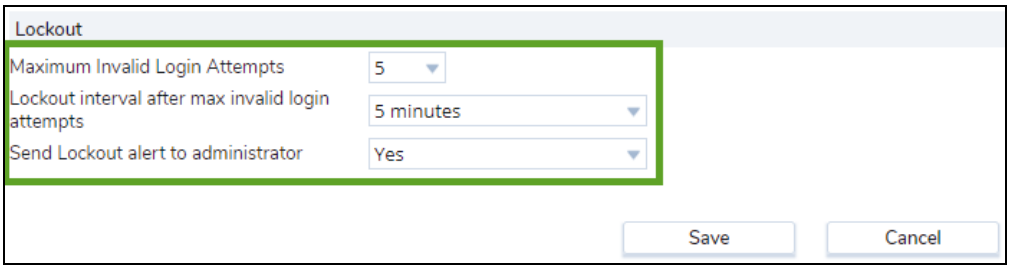
Locking out a user account is a mechanism to ensure account security. When you set password lockout policies, you can specify:

- the number of invalid login attempts that locks out an account.
- the duration of the lockout.
- an email lockout alert to the administrator.

Specifying the number of invalid logins and lockout duration locks an account for the specified duration when the number of invalid login attempts is reached. For example, you can set lockout policy to lock an account with three invalid login attempts for a period of 30 minutes.

To define agent Lockout settings:

1. From the Configuration Menu, open **Security**.
2. Go to the **Password Policies** tab.
3. Configure the desired settings under **Lockout**.



The following options are provided by the password lockout policies:

Password Policies - Lockout	Description	Policy Options
Maximum Invalid Login Attempts	Defines the number of invalid login attempts to lockout an administrator/agent/supervisor account.	■ 3 attempts ■ 5 attempts

Password Policies - Lockout	Description	Policy Options
		■ 10 attempts (default)
Lockout interval after max invalid login attempts	Specifies the duration for which an account is locked out after invalid login attempts. After the specified time, the agent is allowed to login. **Note:** Selecting **Forever (must be reset by admin)** requires the administrator to unlock an account and/or reset the password.	■ 2.5 minutes ■ 5 minutes ■ 10 minutes ■ 15 minutes ■ 30 Minutes ■ 60 Minutes ■ Forever (must be reset by admin) (default)
Send Lockout alert to administrator	Enables sending an email alert of an account lockout to the administrator.	■ Yes ■ No (default)

Lockout behavior disables the login and password fields and prevents user's further attempts to log in. After the lockout duration, the login screen allows the user to log in again with the right credentials, or to reset the password. The reset password is communicated to the email address specified in the account.

Unlock a User Account

During a lockout, a user is prevented from logging in to the account for a specified period of time. An administrator can unlock a user account to give immediate access to the locked-out user. This prevents the user from being idle during an accidental lockout.

- Any administrator in the Super User role or a role with full privileges to Agents object is capable of unlocking an agent/supervisor account.
- Any administrator in the Super User role or a role with full privileges to the Security tab is capable of unlocking an administrator role.

Note: To unlock the Primary Administrator role, you must contact Virtual Contact Center support staff.

To unlock a user account:

1. From the Configuration Menu, open **Agents**.
2. Locate the user account with that requires unlocking.
3. Click to open user details.
4. Open the **General** tab. Depending on whether you have enabled **Email system generated passwords for new agents/admins and reset** under **Security > Password Policies**, you must do the following:
   - **If enabled**: Click **Reset Password**. An automatic email is generated and sent to the user's email address on file. The user then has to click the link in the email to reset the password.
   - **If disabled**: Enter a new password for the user, and save. From the list of users, click next to the user to unlock them. Notify the user of their new password so that they can log back in.

Roles and Administrators

Role-based management allows a tenant to distribute the configuration management functionality among multiple roles. Role-based management in Virtual Contact Center allows you to create roles, define privileges or permissions to manage varying scope of tenant configuration, and add and assign administrators to the roles. For example, you can define a campaign manager role with exclusive permissions to create, edit, delete, and control campaigns, and restrict access to any other functionality in Configuration Manager. To create a campaign role, you must grant permissions to Campaigns only.

Features

Role-based management offers the following features:

- Ability to distribute tenant configuration among multiple roles and administrators.
- Ability to create and manage multiple administrator roles.
- Availability of predefined Super User role with unrestricted access to the tenant configuration. The tenant's Primary Administrator inherits the Super User role.
- Ability to assign multiple administrators to the Super User role.
- Ability to assign administrative privileges to selective groups, or queues, or channels.
- Each administrator can assume a single role at a given time.
- Each role can have multiple administrators assigned to it.
- Password security policies common to agents and administrators.
- Ability to filter and sort roles list by different fields facilitating quick access to data.
- Ability to filter and sort administrators list by different fields.

Type of Roles

- **Super User**: Every Virtual Contact Center tenant has a predefined **Super User** role that has unrestricted administrative rights to configure and manage all objects in Configuration Manager. The Primary Administrator assumes the Super User role. You cannot edit or revoke permissions of the Super User role, but you can assign multiple administrators to the role. Any administrator in the Super User role inherits configuration rights to all administrative areas. When they log in to Configuration Manager, they have access to all the functionality available to the tenant.
- **Custom Role**: Any administrator with permissions to the **Security** tab is capable of creating roles and administrators. You can create a custom role with custom privileges and assign administrators to that role. A custom role is any role defined by an administrator, while the Super User role is system-defined. An administrator assigned to a custom role may be referred to as the Secondary Administrator. Based on the permissions, a Secondary Administrator may have full or partial configuration rights. When this administrator logs in to Configuration Manager, they have access to areas granted for the role only. For example, a campaign manager who is granted privileges to create campaigns only sees Campaigns in the Configuration Menu.

Create Roles and Assign Administrators

To take advantage of role-based management, the Primary Administrator must create a role, define permissions, add administrators, and assign one or more administrators to the role.
The process involves the following steps:

STEP 1: Create a Role and Define Permissions

A role allows administrative privileges or permissions in Configuration Manager. Creating a role requires definition of permissions to list, view, create, edit, delete, and/or control a specified configuration object. For example, you can define a Campaign Manager role with permissions to create, manage, and supervise wallboards or campaign functionality. Go to **Security > Roles** to add or edit roles.

By default, every tenant is bundled with a Super User role assigned to the tenant's Primary Administrator. A Super User role provides all permissions to configure tenant functionality. You can assign any number of administrators to the Super User role.

To add a custom role:

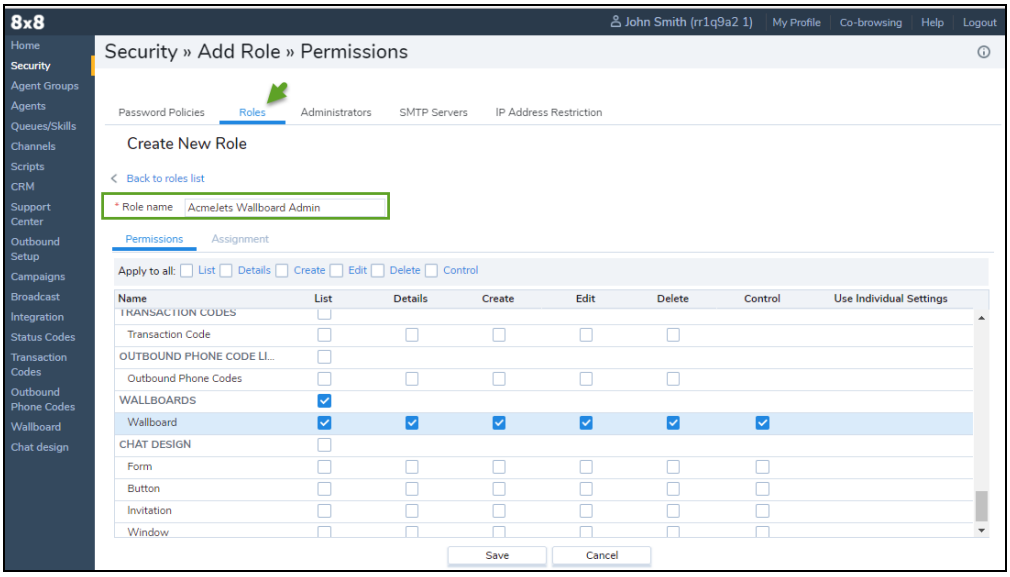
1. From the Configuration Menu, open **Security**.
2. Go to the **Roles** tab.

> **Note:** You can assign the role of an administrator when creating a new user. As soon as you choose a user to be an administrator, the option to select a specific role appears. You can continue to define the Roles and Administrators in Security tab.

3. Click **Add Role**.

> **Note:** By default, every tenant is bundled with a **Super User** role. A Super User has all permissions to configure tenant functionality. You can assign any number of administrators to the Super User role.

4. Enter a **Role Name**.



5. Determine the permissions to be given to the role.
6. Select functionality objects such as Wallboards and check the appropriate permissions.
   The available permissions are: list, details, create, edit, delete, and control a functionality. The following table

summarizes the role permissions:

Role Permission	Description
List	Lists all the entities pertaining to an object. For example, List permission in the Agents tab allows an administrator to list all existing agents in the tenant.
Details	Allows to view details of each entity. For example, with the permission to view details, you can view agent account details.
Create	Allows you to create a specific subset of a Menu Object functionality or an entire Menu Object. For example, you may create a role with permissions to create Inbound and Outbound queues, but not Email and Chat queues within the Queues Menu Object.
Edit	Allows you to edit a specific subset of a Menu Object functionality or an entire Menu Object.
Delete	Allows you to delete a specific subset of a Menu Object functionality or an entire Menu Object.
Control	Allows you to control a Menu Object based on its functionality. Control permissions are available to: ■ Start, schedule, stop, pause, purge, and resume campaigns ■ Import CRM data ■ Broadcast messages to agents and Supervisors

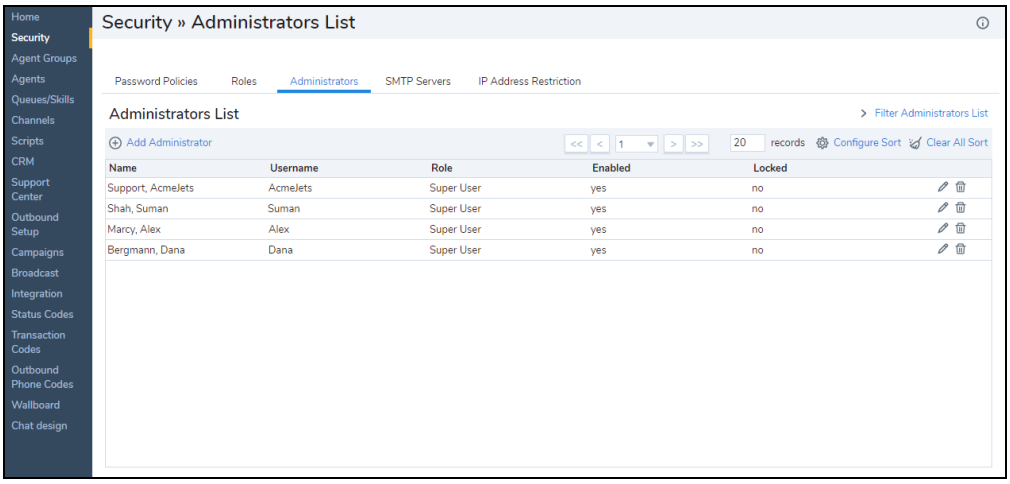
7. Click **Save** to add the new role.
   The next step is to assign an administrator.

STEP 2: Add Administrators

An administrator inherits permissions assigned to a role and can assume a single role at a time. You cannot assign multiple roles to an administrator, but multiple administrators may function in a single role.

To add an administrator:

1. From the Configuration Menu, open **Security**.
2. Go to the **Administrators** tab.



3. Click **Add Administrator**.
4. Fill in the following mandatory fields:

Field Name	Description
First Name	Enter the first name of the Administrator.
Last Name	Enter the last name of the Administrator.
Email Address	Enter an Email ID to communicate with the Administrator.
Role	Select a role from the list of defined roles.
User Name	Enter a username used to log in to the administrator role.
Password	Enter a password. **Note:** Password should match the password policy requirements.
Retype Password	Confirm the password.
Language	Enter a language of choice for the Administrator user interface.

Field Name	Description
Enabled	Select the check box to activate the Administrator.
Comment	Enter any comments.

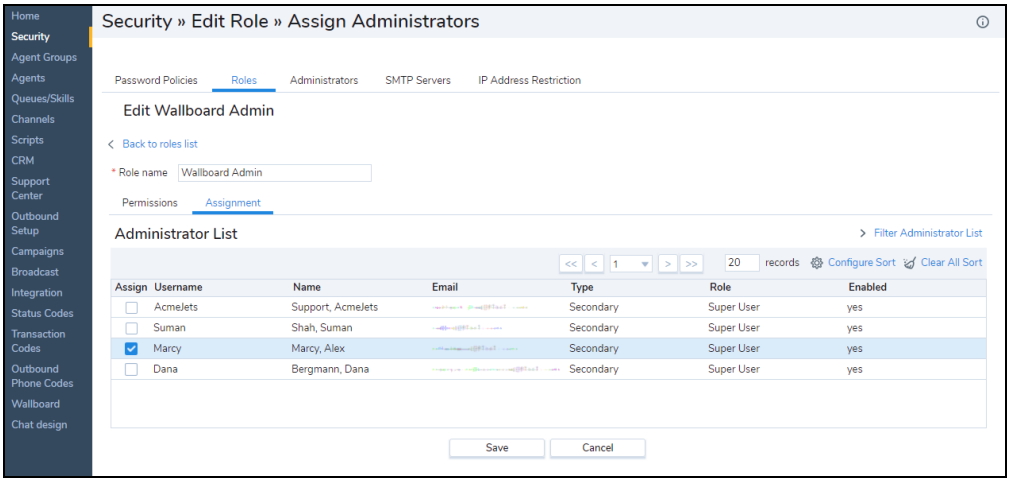
5. Click **Save** to create an administrator.

STEP 3: Assign Administrators to the Role

After creating a role, you can assign an administrator to the role. The administrator inherits all permissions assigned to the role. By logging in to Configuration Manager, the Secondary Administrator gets access to the functionality permitted for the role. You can also reassign an administrator to a new role.

To assign an administrator to a role:

1. From the Configuration Menu, open **Security**.
2. Go to the **Roles** tab.
3. From the Roles List, select a role to assign an administrator to.
4. Click or **Edit**.
5. Click the **Assignment** tab.
6. From the list of administrators, select and assign an administrator to the role. Click here to learn how to create administrators.



> **Note:** You can assign multiple administrators to a role, but assign only one role per administrator. Assigning a new role to an administrator removes him from the previous role.

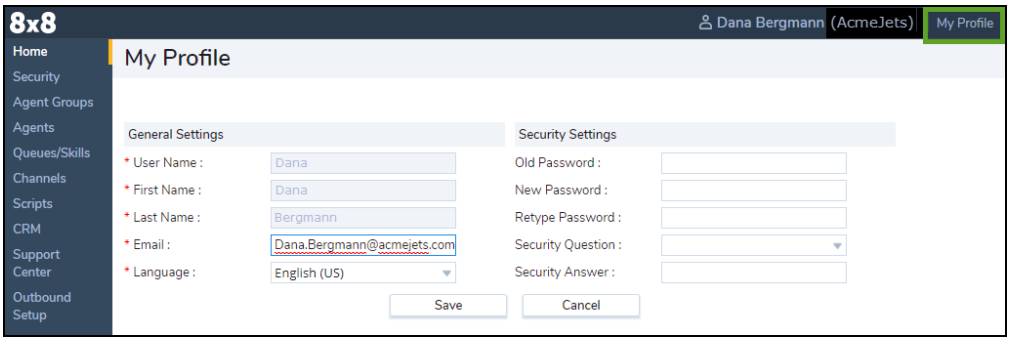
7. **Save** your changes.

STEP 4: Log in and Validate Role Permissions (Optional)

After assigning an administrator to a role, you can log in and validate that the Secondary Administrator account has the intended permissions. For details, refer to Log In.

Change the Administrator Password

A Secondary Administrator can change password and set up a security question by clicking **Profile** on the top bar of the Virtual Contact Center application.



1. Log in to Configuration Manager.
2. Click **My Profile** at the top of the screen.
3. Enter a new password or security question.
4. Click **Save**.

Define a Role with Granular Control

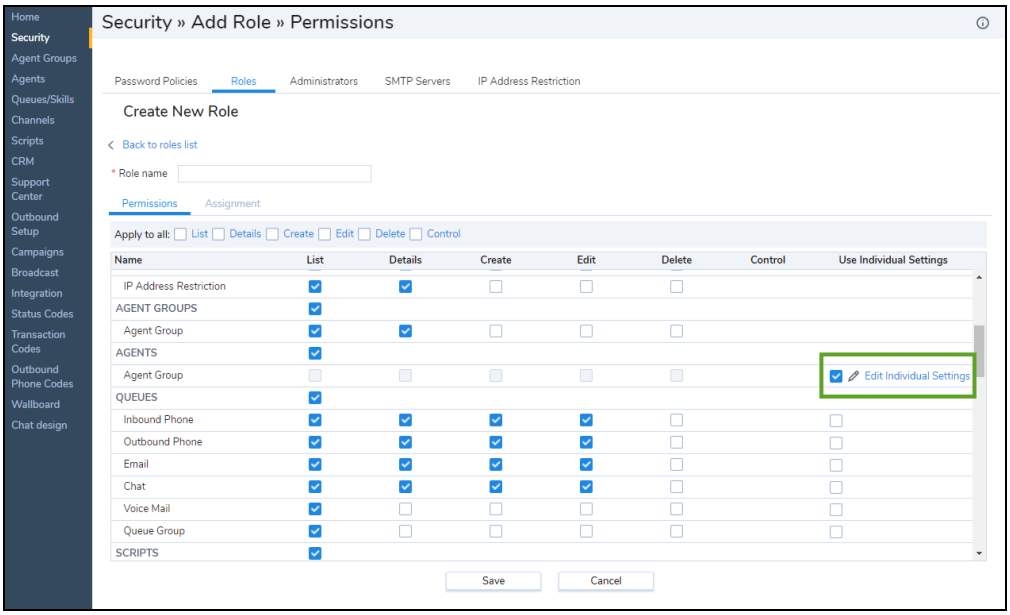
Managing a large number of agents and queues in a contact center can be challenging. You can define administrator roles with granular control to administer and manage an individual agents group, a queue, or a channel. For example, if your contact center experience large inbound call volume to the support queue, you can create an administrator role to configure and manage the support queue exclusively.

The following objects in Configuration Manager offer individual settings for role permissions:

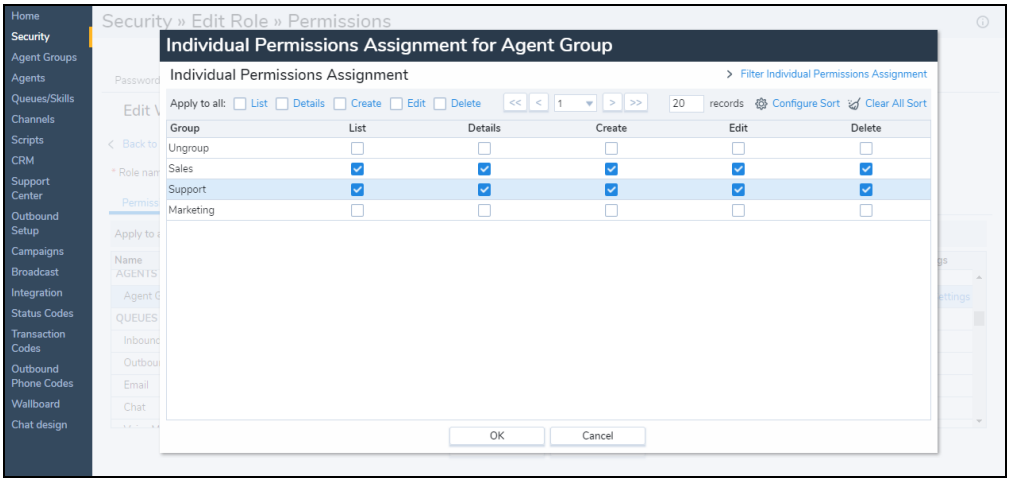
- **Agents**: allows you to control agents belonging to individual or selective groups
- **Queues**: allows you to control an individual queue or selective queues
- **Scripts**: allows you to control an individual script or selective scripts
- **Channels**: allows you to control an individual channel or selective channels

To define a role with granular control:

1. From the Configuration Menu, open **Security**.
2. Go to the **Roles** tab.
3. Create a new role, or edit an existing role.
4. In the Permissions tab of the role settings, select the **Edit Individual Settings** check box for Agents, Queues, Scripts, or Channels.



5. From the list of available items, assign individual permissions such as details, edit, or delete.
   The **Individual Permissions Assignment** window opens.



6. Click **OK**. The definition of individual settings is complete for the role.
7. Click **Save** to save the role and assign an administrator.

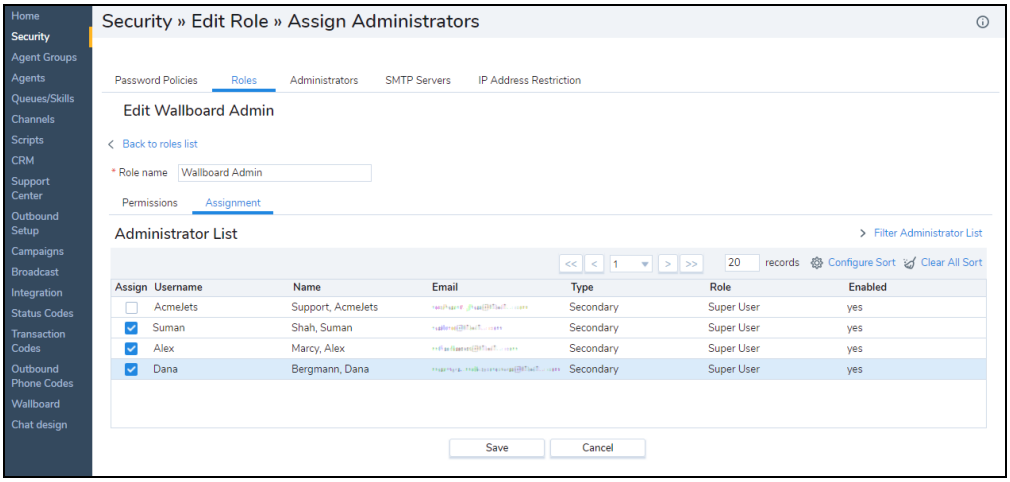
Change Roles for an Administrator

A Secondary Administrator can assume a single role at a given time. However, that role can be changed by the Primary Administrator at any time. Assigning a new role to an administrator removes them from the previous role.

To change roles for an administrator:

1. From the Configuration Menu, open **Security**.
2. Go to the **Roles** tab.
3. From the roles list, select a role.
4. Click **Edit**, or double-click to open the role details.
5. Go to the **Assignment** tab.

6. From the administrators list, find an administrator and assign to the role.



Note: You can assign multiple administrators to a role, but assign only one role per administrator. Assigning a new role to an administrator removes them from the previous role.

Filter and Sort Roles

If your Virtual Contact Center defines numerous roles and administrators, you may find it hard to track them in a scrollable list. Role-based management allows you to search and filter roles and administrators lists by specific criteria, such as Role ID, Role Name, and administrators.

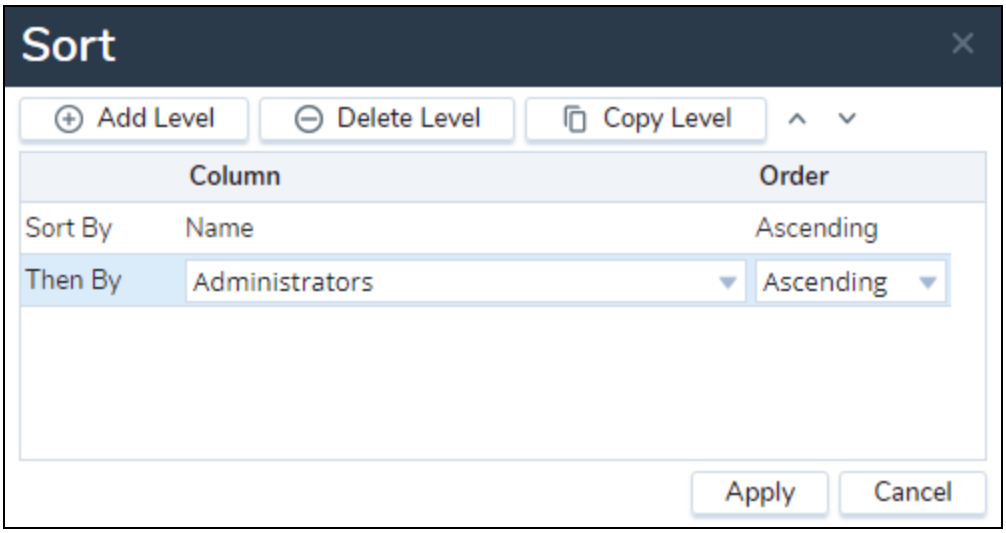
To filter roles:

1. From the Configuration Menu, open **Security**.
2. Go to the **Roles** tab.
3. Click **Filter Roles List**.
4. Specify the criteria to filter the roles from the drop-down menu.
5. Add the desired filtering criteria and select an appropriate parameter.
6. Click **Filter**.
   The search result shows.

Sorting Roles List

You can sort the Roles list in the desired order by applying sort parameters. You can sort by Role Name, Role ID, and the number of administrators assigned to a role by applying suitable parameters. You can sort the list in ascending or descending order with just a single click on the header bar. You have the option to sort by multiple fields by clicking **Configure Sort**.

- **To sort by a single field**:
  Click the header bar for the desired field to sort in the ascending or descending order automatically.
- **To sort by multiple fields**:
  a. Click the **Configure Sort** link.
     The Sort dialog box appears.
  b. Click **Add Level** to specify a field name and the order to sort by.
  c. Click **Delete Level** to eliminate the desired sorting criteria.



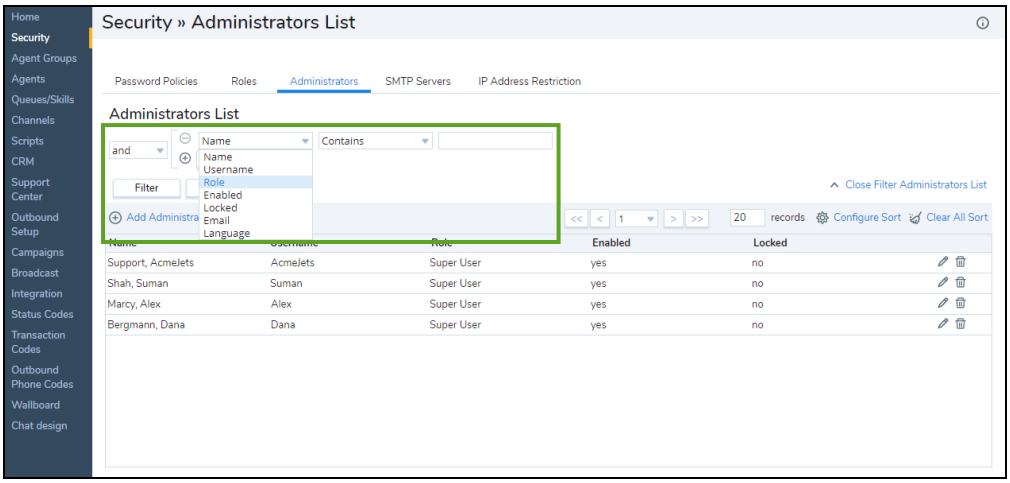
  d. Click **Apply**.
     The sorted list appears.

Filter and Sort Administrators

If your Virtual Contact Center defines numerous roles and administrators, you may find it hard to track them in a scrollable list. Role-Based Management allows you to search and filter the list of Secondary Administrators by specific fields, such as Name, Username, Role, Email, Language, and locked or enabled administrators.

To filter the list of administrators:

1. From the Configuration Menu, open **Security**.
2. Go to the **Administrators** tab.
3. Click **Filter Administrators List**.

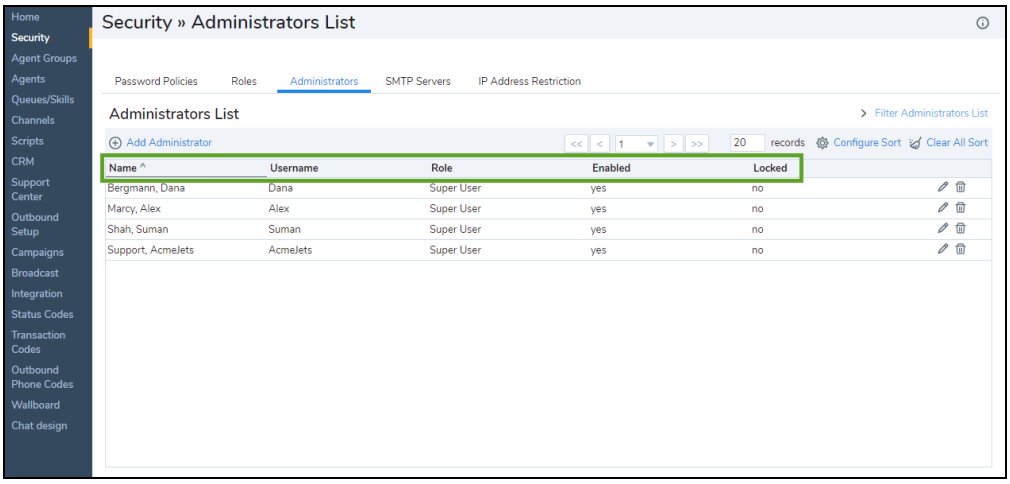


4. Specify the criteria to filter the administrators from the drop-down menu.
5. Add the desired filtering criteria and select an appropriate parameter, such as the combination <Role, Equals, Super User>.
6. Click **Filter**.
   The search result appears.

Sorting Roles List

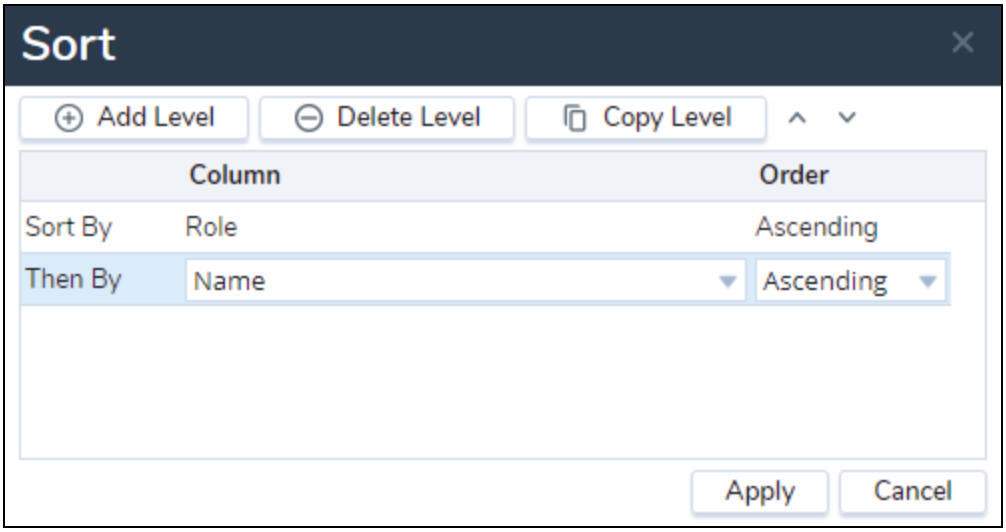
You can sort the administrators list in the desired order by applying sort parameters. You can sort by name, username, role, email, language, and enabled or locked administrators. You can sort the list in the ascending or descending order with just a single click on the header bar. You have the option to sort by multiple fields using the Configure Sort option.

To sort by a single field, click once on the header bar above that field to sort in the ascending or descending order automatically.



To sort by multiple fields:

1. Click **Configure Sort**. The Sorting dialog box appears.
2. Click **Add Level** to specify a field name and the order to sort by.
3. Add or delete levels to sort as you desire.



4. Click **Apply**.
   The sorted list shows.

Define a Custom SMTP Server

By default your tenant outbound email communication is routed via the pre-configured Virtual Contact Center internal SMTP servers. Virtual Contact Center also offers the flexibility to configure a custom SMTP server for better security and HIPAA compliance. The tenants can leverage their own infrastructure and ensure the delivery of emails to the final recipient. Virtual Contact Center establishes a secure connection with the tenant SMTP server. The SMTP server must be configured with authentication and STARTTLS to ensure emails are not hijacked on their way to the tenant facilities.

To configure a custom SMTP server:

1. From the Configuration Menu, open **Security**.
2. Go to the **SMTP Server** tab.

> **Note:** By default, your outbound email communication is routed via the pre-configured Virtual Contact Center internal SMTP servers.

3. Click ⊕ or **SMTP Server**.
4. Enter the following information:

SMTP Server Definition	Description
Name	Label for the SMTP server
Server Name	Name of the SMTP server as registered

SMTP Server Definition	Description
Port	Specific port number that varies with the choice of connection security method (the default port for SMTP server is 25)
Connection Security	Preferred way to encrypt communication, using SSL/TLS or STARTTLS
Authentication Method	Authentication method that decides how to bundle the password.
User Name	User name for the email address
Password	Password for the email address

5. Enter an email address to send a test mail and verify the SMTP server is configured correctly.
6. Click **Test** to verify the setup. If the configuration is correct, you receive a test email in the test email account.
7. Set up this SMTP server as the default server.

Note: If Virtual Contact Center fails to deliver emails when the remote SMTP server is down or when configuration parameters are invalid, Virtual Contact Center attempts to determine the reason for failure, and retries a few times before sending a failure notification.

Enhanced System Access Authentication

Virtual Contact Center allows users to connect to the tenant from anywhere in the world. We offer the ability to limit the access to a white list of IP addresses. A white list identifies secure IP addresses from which agents, supervisors, and administrators can connect to the Virtual Contact Center network. Any login attempt outside of the white list is denied access and triggers a notification to the administrator about the unauthorized access attempt.

Features

- Ability to authorize specific IP addresses.
- Ability to list, add, edit, and delete allowed IP ranges.
- Ability to validate IP ranges (non-duplicate, valid start and end IP addresses, and non-negative range).
- Ability to enable/disable an individual IP address or a range of IPs.
- Ability to enforce IP address restriction to access Configuration Manager, Agent Console, and Wallboard.
- Ability to create an admin role and assign the IP address restriction permission to the administrator.
- Ability to notify administrators of an unauthorized access attempt by email. By default, this option is disabled.
- Extended support for Single Sign-On (SSO) in Salesforce, Zendesk, and NetSuite.

Limitations

8x8 supports IP version 4.0 (IPv4).

Create an authorized IP addresses

Configuration Manager allows administrators to create, edit, and delete white list entries using the **Security** page.

To add a white list entry:

1. From the Configuration Menu, open **Security**.
2. Go to the **IP Address Restriction** tab.
3. Click **Add Allowed IP Range**.

> **Note:** This feature only works with public IP addresses. If no IP address is selected, all IP addresses are allowed to access the tenant.

4. Enter **Start IP** and **End IP** address and type a **Description**.
5. Select **This IP address is enabled** to enable an individual IP address or a range of addresses.
   This feature is helpful if you need to grant access to an agent in a remote location or a temporary consultant.
6. Click **Save**.
   If the agent tries to log in with a different IP address, a message appears showing that access is denied.
7. Click or to edit and delete the IP addresses.

Access Virtual Contact Center when locked out

Contact the support team at 8x8, Inc. to help you regain access to your Virtual Contact Center.

Authorize IP Access via Email

8x8's Configuration Manager administrator is able to add or authorize an agent's IP address to Virtual Contact Center via email authorization. This feature enables agents using a new and unidentified IP address to connect to their tenant. The administrator controls the ability to send or block this email notification.

> **Note:** The authorization is supported for Configuration Manager, Agent Console, and Wallboard access tokens.

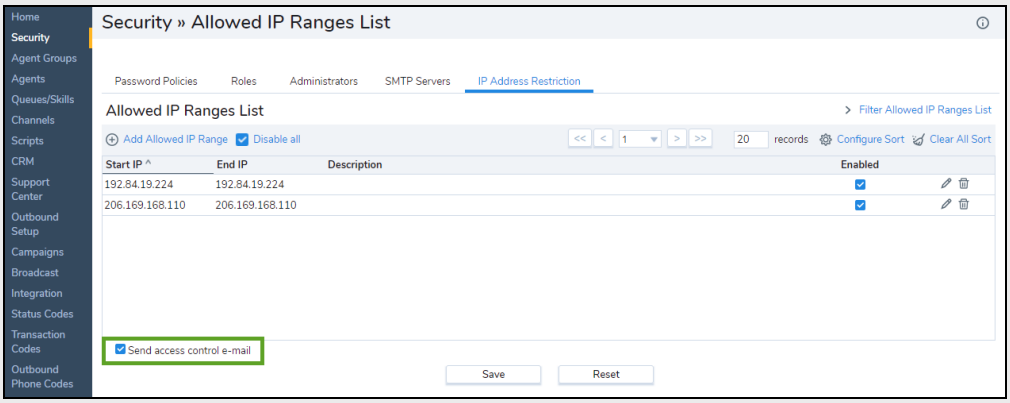
Features

- **Automatic email**: The administrator receives an automatic email when an agent is denied access.
- **Quick access**: The agent gains access as soon as the administrator clicks a URL in the email.
- **Prevent email spam**: Only one notification email is sent to the administrator per hour, irrespective of the number of login attempts.
- **Improved security**: The authorization URL expires in 24 hours, whether the administrator has authorized the address or not.
- **Description**: A description added for the IP address allows the administrator to keep a reminder for future references.

How the process works

1. The agent tries to access Virtual Contact Center from an unauthorized IP address, but access is denied.
2. An email notification is sent to the administrator, containing information such as the agent's username, IP address, and the date of attempted access. The email also contains a URL.

Note: Under **Security > IP Address Restriction**, the administrator must enable **Send access control e-mail** to receive the email.



3. The administrator clicks the URL link in the email to authorize the IP address.

4. The administrator receives a confirmation that the IP address is authorized successfully.

> **Note:** For security reasons, the URL expires after 24 hours. If the administrator uses the URL the second time or after the expiry, a message indicates the token has expired.

5. The agent can now log in using the IP address.

Create Agent Functional Groups

In Virtual Contact Center, an agent group is a collection of agents who report to a supervisor. A single group may serve your entire call center or may be dedicated to one or more products, services, queues, or to a specific communication channel such as phone, email, or chat. Use groups to organize agents on the basis of function, skill set, or media they use.

As an administrator, you can see the groups, number of agents in each group, outbound phone codes assigned to each group, and if the agent's recording is enabled. Outbound Phone Codes offer a means to set a specific calling line identifier (caller ID) and to set an optional outbound queue for outbound calls from your tenant. Outbound Phone Codes may also be used to track the purpose of an outbound call. For details on the functionality and configuration of Outbound Phone Codes, refer to Outbound Phone Codes Overview.

As a member of an agents group, you can view the status and availability of fellow group members in the status tab of your Agent Console.

Go to the Agent Groups tab in Configuration Manager to:

- Add a group and assign it to outbound phone codes
- Edit or delete a group

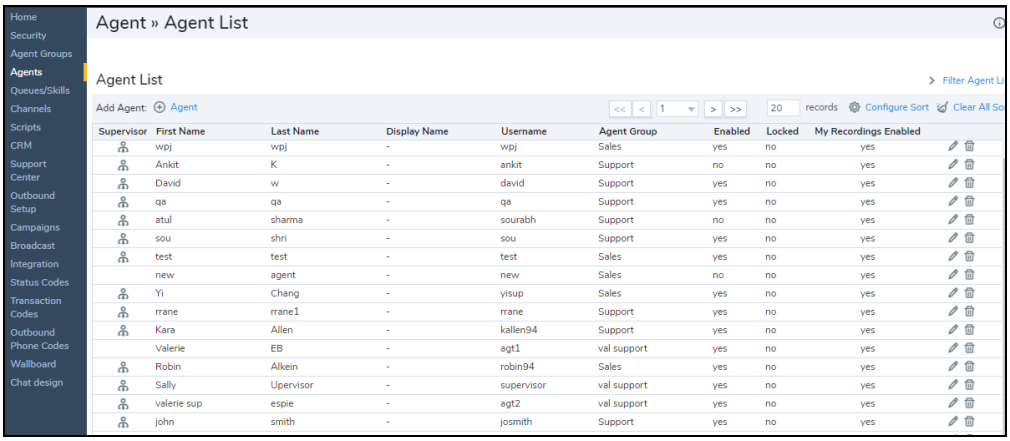
Add an Agent Group and Assign to Outbound Phone Codes

To add an agent group you need to complete a two-step process: define group properties, and assign outbound phone codes.

To add a new agent group:

1. From the Configuration Menu, open **Agent Groups**.

2. Click ⊕ to add an **Agent Group**.



3. In the **General** tab enter a **Group Name**.
4. Add a **Comment** and the **Default Agent Display Name**.
5. Select **Allow Agents to Change Display Name** if you wish to allows agents to change their login name for Agent Console.
6. Select **Enable Agent's My Recording Functionality** if you wish to allow agents access to My Recording feature from the Agent Console main menu. This option allows agents to record a voice message for the incoming calls.
7. Select **Allow Agents to Reject Interactions**. This option is enabled by default allowing agents to reject interactions. If disabled, the Reject button in Agent Console is disabled preventing agents from rejecting the interactions they are offered. The Reject button in Agent Console appears when an interaction is offered to the agent. You can set up this ability for an agent group, or individual agents. If you disable this option at the tenant level, this feature will not show up for agent groups or individual agents.
8. Configure the **Phone Connection Mode**. The Phone Connection Mode can be On Demand or Persistent. It only appears if it is provisioned for your tenant. With On Demand Connection, agents have to manually accept the call in their soft or hard phone. With Persistent Connection, a constant connection is open from the agent's phone to the system that stays active until the agent is logged out.
9. Enable **Auto Answer** to allow auto answering to all agents within the group.
10. Click **Save**.
    The **Outbound Phone Codes** tab opens.
11. Select the **Assign** check box to assign an outbound phone code list from the existing ones. Note that you need to

create an outbound code list before being able to assign it.

The following table summarizes the options found under **Agent Groups > General** and **Agent Groups > Outbound Phone Codes**:

Option	Description
General tab	
Group Name	Indicates the descriptive name for the group such as Sales or Support groups. Members of one group are not able to view members of any other group.
Comment	A description of the group's purpose of specialty.
Default Agent Display Name	Select whether you want to display the word "Agent" or the agent's first name. The agent display appears in the Agent Console.
Enable Agent's My Recording Functionality	Indicates if the agent can record the conversation.
Allow Agents to Reject Interactions	This option is enabled by default allowing agents to reject interactions. If disabled, the Reject button in Agent Console is disabled preventing agents from rejecting the interactions they are offered. The Reject button in Agent Console appears when an interaction is offered to the agent. You can set up this ability for an agent group, or individual agents. If you disable this option at the tenant level, the checkbox will not show up for agent groups or individual agents.
Phone Connection Mode	Default Connection Mode can be On Demand or Persistent: ■ **On Demand connection mode**: On Demand Connection Mode creates a temporary connection from the agent's workplace phone to the system. The agents have to manually accept the call in their soft or hard phone. ■ Persistent Connection mode: Persistent Connection Mode creates a constant connection from the agent's workplace phone to the system. Once the connection is open, it will stay active until logged out. Any changes to the setting will remain in effect for the whole duration of the agent's persistent connection.
Enable Auto Answer	If enabled, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually.

Option	Description
Outbound Phone Codes tab	
Assign	Select a check box to assign an outbound phone code to your tenant.
Active	Displays a read-only indication of the active outbound phone codes.
Outbound Phone list	Indicates the outbound phone name assigned to that group.
Number of Agents	Number of agents in that group.

12. Click **Save** to successfully create a new agent group.

Edit a Group

To edit a group:

1. Double-click the desired group from the list view or click .
2. Make the desired changes and **Save**.

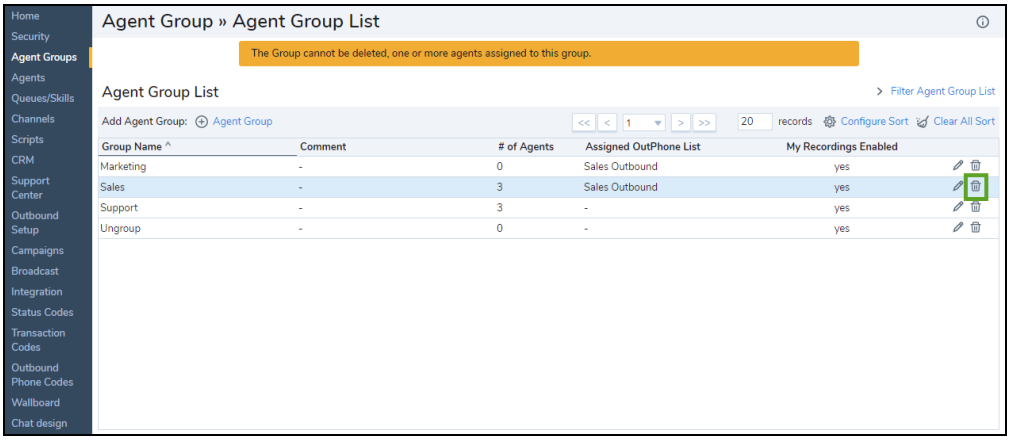
Delete a Group

Deleting a group with assigned members requires you to reassign the members of the group to another group.

To delete a group:

1. Select a group, and click .

   You are prompted to confirm your action. If the group has members, a message indicates the inability to delete the group.



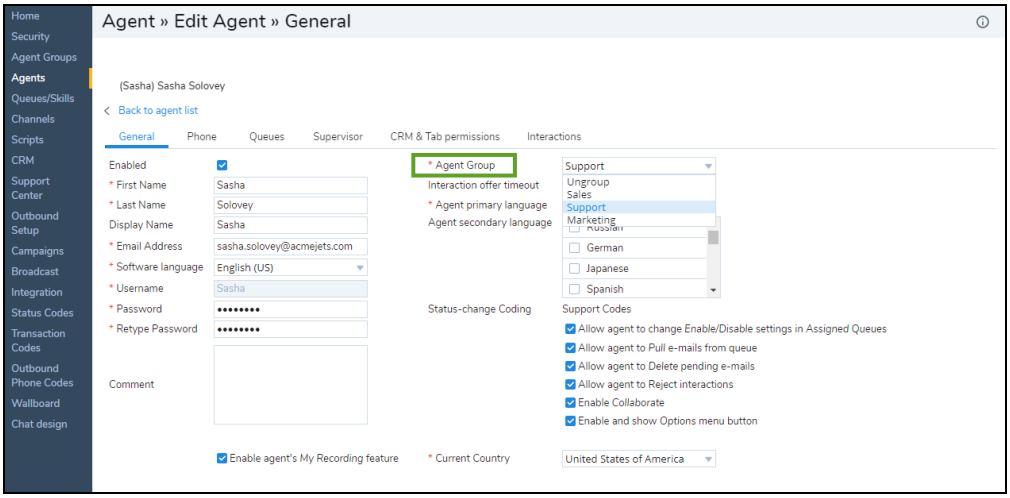
2. Reassign the members to another group and then delete the group.
3. Click **OK** to confirm the deletion.
   For details on how to reassign an agent to a different group, refer to Reassign an Agent's Group Membership.

Reassign an Agent's Group Membership

To reassign an agent to a different group:

1. From the Configuration Menu, open **Agents**.
   A list of agents and their groups appears.
2. Look for the group you are planning to delete, and click .
3. In the **General** tab, go to **Agent Group**.

4. Select a different group from the drop-down menu.



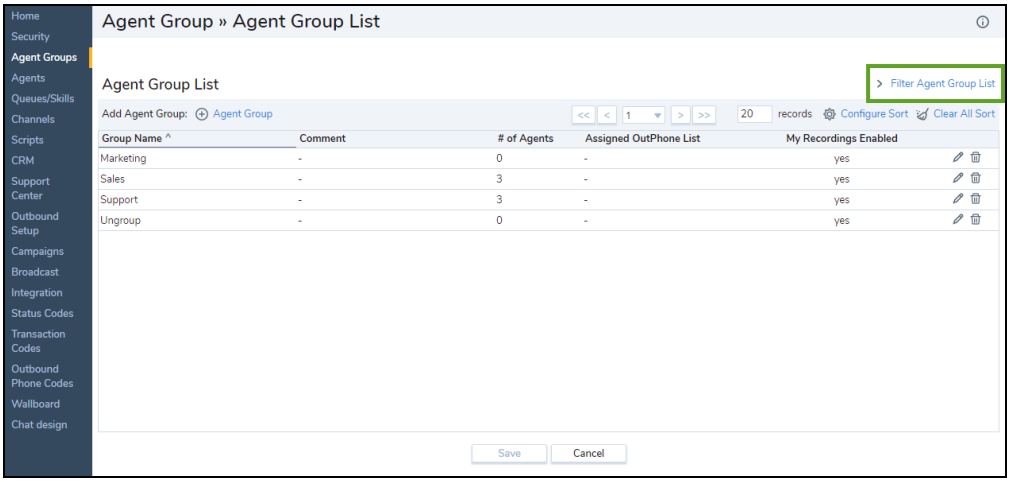
5. Click **Save** to assign the agent to the new group.
6. Continue the above search and reassignment for all the agents belonging to the group you are planning to delete.

Filter Group List

If your Virtual Contact Center has numerous groups, you may find it hard to track them in a single scrollable list. You can search and filter the Group list by specific fields such as Group Name, Comment, Number of Agents, and Assigned OutPhone List.

To filter the Group list:

1. From the Configuration Menu, open **Agent Groups**.
   A list of existing agent groups appears.



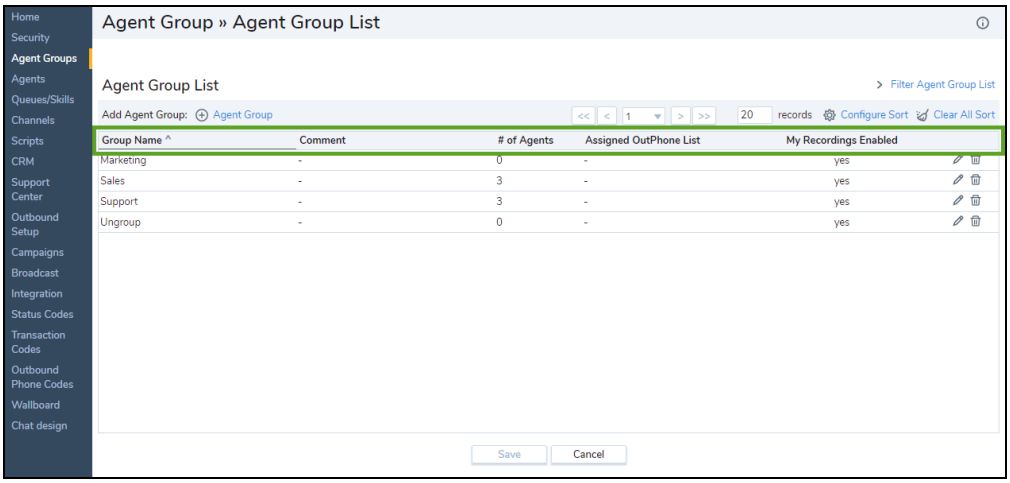
2. Click **Filter Agent Group List**.
3. Choose the desired filtering criteria from the drop-down menu to filter the group.
4. Click **Filter**.
   The filtered list appears.

Sorting Group List

You can sort the Group list in the desired order by applying sort parameters. You can sort by Group Name, Comment, Number of Agents, and Assigned OutPhone List by applying suitable parameters. You can sort the list in the ascending or descending order with just a click on the header bar. You have the option to sort by multiple fields using Configure Sort.

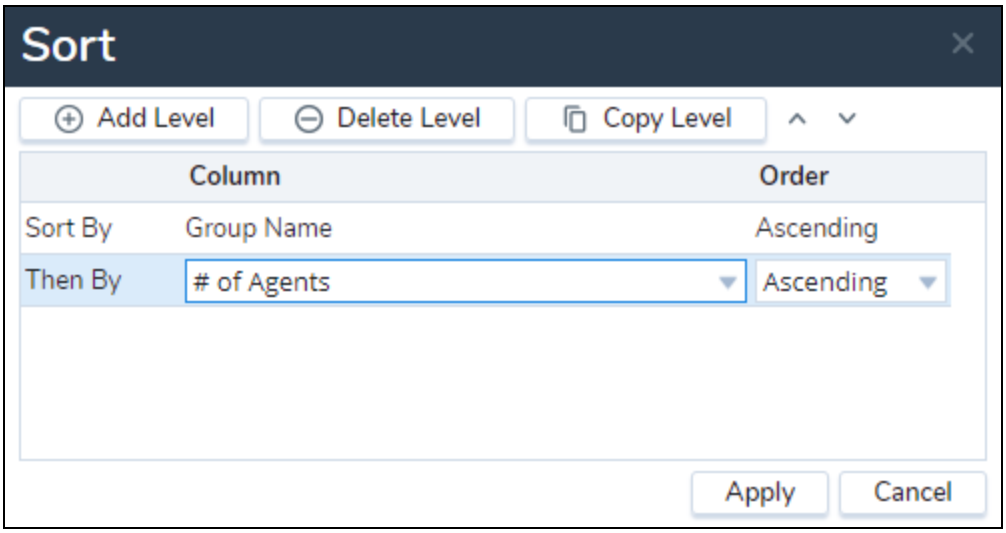
To sort by a single field:

Click the header bar of a field. The list sorts automatically in ascending or descending order based on the content of the field.



To sort by multiple fields:

1. Click **Configure Sort**.
   The Sorting dialog box appears.
2. Click **Add Level** to specify a field name and the order to sort by.
3. Add or delete levels to sort as you desire.



4. Click **Apply**. The sorted list shows.

Add Agents

To add or define a new agent in Virtual Contact Center, you require to set up an account, phone connectivity details, and outbound calling preferences. You also need to assign queues, supervisor privileges, and ability to view case and contact management data.

Use the Agents tab in the Configuration Menu to:

- Add new agents
- Edit and delete existing agents

Adding an agent involves:

1. Creating accounts and configuring properties
2. Configuring phone settings
3. Assigning agents to queues
4. Granting supervisor rights
5. Granting Local CRM and Tab permissions
6. Defining the number of concurrent chats

Create Agent Accounts

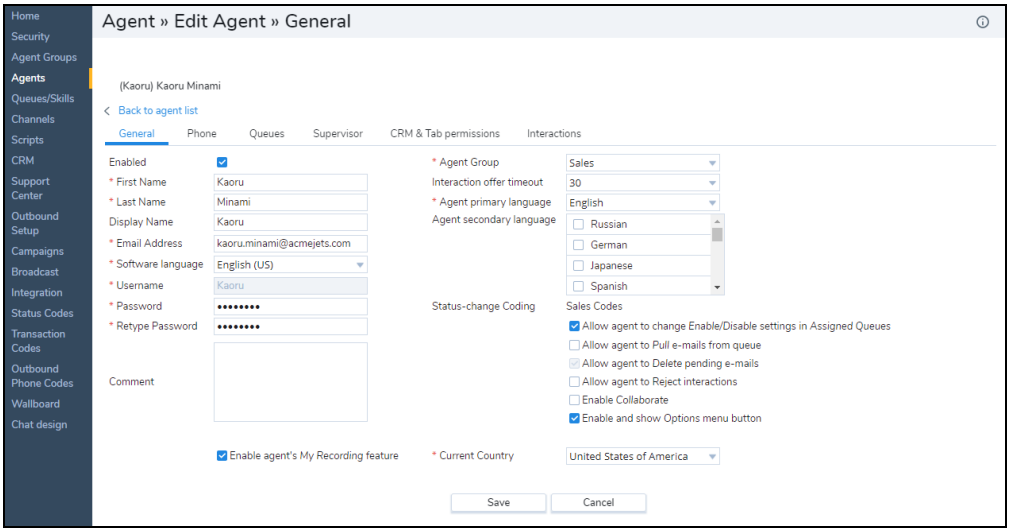
An agent requires login credentials to log in to Agent Console. The General tab allows the administrator to specify an agent's user information including login credentials, email address, group assignment, and more.

To create an agent account:

1. From the Configuration Menu, open **Agents**.

2. Click **Agent** to add a new agent.

   The **General** tab opens.



3. Enter the required information.

   The following table summarizes the options under **Agent > General**:

General Tab Option	Description
Enabled	If selected, allows the agent to log in to Agent Console using the agent's username and password.
First Name	Enter the agent's first name.
Last Name	Enter the agent's last name.
Display Name	Allows agents to present themselves with a customized display name. The display name can be modified by the Virtual Contact Center administrator here, or if permitted, by the agents in Agent Console. The changes immediately appear in the other application. To prevent agents from changing their display name at the tenant level, clear the **Allow Agents to Change the Display Name** checkbox under **Home > Profile**.
Email Address	Enter the email address Virtual Contact Center uses to send agents copies of their direct access voicemail messages. You can save email addresses with up to 254 characters.

General Tab Option	Description
Software Language	Choose the language used by the Agent Console interface.
Username	Enter the account name the agent must use to log in to Agent Console. Agent usernames are case sensitive: When an agent logs into their Agent Console, they must use the same combination of upper and lowercase characters as those in the Username text entry area.
Password, Retype Password	If enabled, enter the password the agent must use to log in to Agent Console. After logging in to Agent Console for the first time, an agent can use **My Profile** to change their password. Contact center administrators can use the Password text entry areas to change or reset an agent's password. **Note:** This field is disabled if you have turned on **Email system generated passwords for new agents/admins and reset** under **Security >Password Policies**. For details, refer to Configure Password Policies.
Comment	Enter a description for the agent account.
Agent Group	Select the agent's group assignment, such as Sales, Support, Marketing, etc.
Current Country	By selecting the country of an agent, you can optimize call quality and routing. It hints the system about the agent's location, and offers improved call quality.
Interaction Offer Timeout	Specify the duration (in seconds) for which an agent is offered an interaction before the interaction times out. After the specified time, the agent status changes to **Take Break** automatically. **Note:** If the interaction offer timer runs out for an agent and the caller is back to the queue, the caller's position in the queue will remain the same and not changed or reset.
Agent Primary Language	Select the agent primary language. If the agent speaks the same language as the customer does, they can choose to handle the conversation without the aid of the translation tool.
Agent Secondary	Select the agent secondary languages. If the chat request is in one of these languages, the agent can chat in the requested language.

General Tab Option	Description
Language	
Status-change Coding	Indicates the agent has no status code list assigned while defining a new agent. **Note:** If an existing agent is assigned with a code list, the code list name shows here.
Allow agents to change Enable/Disable settings in Assigned Queues	Control an agent's ability to change queue assignment from the agent profile.
Allow agents to pull e-mails from queue	By default, Virtual Contact Center presents emails to agents on the basis of first-in-first-out. To enable agents to selectively pull email messages from their email queues, select **Allow agents to pull e-mails from queue**.
Allow agents to Delete pending e-mails	If disabled, agents are prevented from deleting pending email in Agent Console. By default, agents have the privileges to delete pending email.
Allow Agents to Reject Interactions	This option is enabled by default allowing agents to reject interactions. If disabled, the Reject button in Agent Console is disabled preventing agents from rejecting the interactions they are offered. The Reject button in Agent Console appears when an interaction is offered to the agent. You can set up this ability for an agent group, or individual agents. If you disable this option at the tenant level, the check box will not show up for agent groups or individual agents.
Enable Collaborate	To enable the agent to use the Collaborate feature to connect to customer computers for purposes of providing hands-on assistance, select **Enable Collaborate**. If enabled, the Option menu is removed from the control panel during an interaction.
Enable and show options menu button	The Options menu in Agent Console gives access to transaction codes, dial pad, and call recording options during a call. Select **Enable and show options menu button**. If selected, the Options menu shows during a call.

General Tab Option	Description
Hide Customer Email and Voice (Phone Number) in CRM	
Default Connection Mode	Administrators can choose one of the following Phone Connection Modes for agents: On Demand or Persistent. For details, see our content on enable phone connection mode.
Allow Agents to change Phone Connection Mode	Agents are able to change their connection mode from within the Agent Console. For details, see our content on how to change your phone connection mode.
Enable Auto Answer	With Auto Answer, every phone interaction that is offered to an agent is automatically connected eliminating the need to accept it manually. If Auto Answer is provisioned for your tenant, you can enable it at the tenant level, agent group level, or agent level. For details, see our content on how to enable auto answer.

4. Click **Save** before you move away from this tab.

Configure Phone Settings

Administrators can define agent workplace phone settings and outbound calling preferences, and specify direct agent access details and call recording settings via Agents > Phone.

The following table summarizes the Phone settings categories:

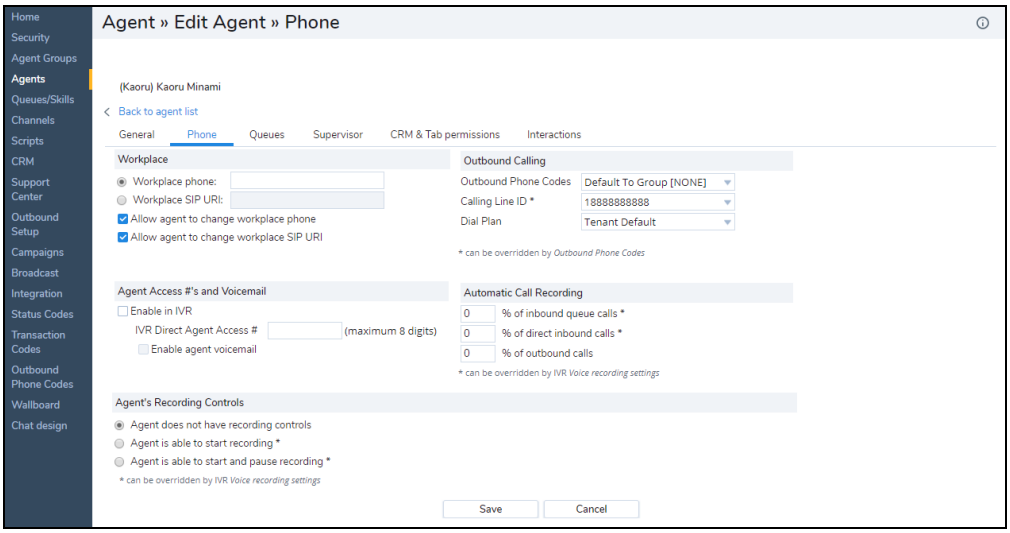
Phone Settings Category	Description
Workplace	Enter the agent's Workplace phone or Workplace SIP URI at which agent wishes to be reached. An agent requires a standard wired, cellular, or VoIP phone to process

Phone Settings Category	Description
	phone interactions. The workplace phone number can be set to any dedicated extension number or a DID number as needed. The workplace SIP URI is used when the agent has a soft phone approved by 8x8 installed on their workstation. Note that the agent's extension number appears in the **Workplace Phone** field when you first assign an extension to a user. You can also control the ability of agents to change their phone number or SIP Phone URI from the **Profile** tab in Agent Console. The agents are granted the permission to change their workplace phone or SIP URI by default.
Outbound Calling	Outbound Calling preferences let you select a dial plan per agent to translate outbound dialing numbers. It allows you to define a custom Calling Line ID for all calls placed by the agent.
Agent Access Number and Voicemail	The settings allow you to activate direct agent access for an agent, enter an extension number to reach an agent directly by passing the IVR, and activate the agent's voicemail.
Automatic Call Recording	If call recording is permitted for the tenant, you can specify the desired percentage of inbound, outbound, and direct agent access calls to record.
Agent's Recording Controls	These settings determine whether or not an agent can record calls.

To configure phone settings:

1. From the Configuration Menu, open **Agents**.

2. Click ⊕ or ✎ to add or edit an agent's account.



3. Enter or select the desired settings from the available options.
The following table summarizes the options under **Agents > Phone**:

Phone Tab Option	Description
Workplace	
Workplace phone	If the agent uses a standard wired or cellular telephone, then in the Workplace phone enter the full telephone number. Virtual Contact Center uses that number to connect Phone interactions to the agent's telephone: ■ In the United States, phone numbers must be 1+(three-digit area code)+(seven-digit phone number). When typing numbers in Agent Console text entry areas, always preface the area code with 1. **Note:** The NANP dial plan translates phone numbers without the prefix as well. ■ Outside the United States, phone numbers must be (Country Code)+(phone number).

Phone Tab Option	Description
	If enabled by the administrator, agents may use the **My Profile** tab in Agent Console to change their phone number later.
Workplace SIP URI	If the agent uses a VoIP telephone, then in the SIP phone URI text entry area, type the VoIP phone's full URI. Virtual Contact Center uses that URI to connect phone interactions to the agent's VoIP telephone. If enabled by the administrator, agents may use the **My Profile** tab in Agent Console to change their phone number later.
Allow agent to change phone Number	Control agents' ability to change their phone number. If selected, agents can change their workplace phone number in the **My Profile** page of Agent Console.
Allow agent to change SIP Phone URI	Control agents' ability to change their phone number. If selected, agents can change their SIP Phone URI phone number in the **My Profile** page of Agent Console.
Outbound Calling	
Outbound Phone Codes	By default, an agent inherits the Outbound Phone Code List assigned to the group they belong to. You can change the selection here.
Calling Line ID	Select an Outbound Phone Code list or None from the drop-down menu to indicate a calling Line ID for outbound calls. Select a Calling Line ID for all outbound calls placed by the agent. You can select from: ■ Channel numbers ■ Agent's phone number ■ Anonymous **Note:** The agent's Calling Line ID is overridden by Calling Line ID set by Outbound Phone Codes.
Dial Plan	Choose a Dial Plan to translate outbound dialing numbers. Select from the International

Phone Tab Option	Description
	Numbering Plan, North American Numbering Plan, or any custom plan defined for the tenant. For details on dial plans, refer to Understand Tenant Dial Plans.
Agent Access # and Voicemail	
Enable in IVR	If enabled, allows the agent extension number to be recognized in the IVR during a Menu or Get Value input operation. You can reach the agent directly by entering a two- to eight-digit extension.
IVR Direct Agent Access # (Maximum 8 digits)	Allow a caller to use an extension number to directly contact this agent. Enter a two- to eight-digit extension number that callers can use to reach the agent directly.
Enable Agent Voicemail	If enabled, activates an agent's voicemail and routes direct agent access calls to the agent's voicemail if the agent fails to accept an interaction within the interaction offer timeout period. Virtual Contact Center uses the email address specified under **Agents > General** to email Direct Agent Access voicemails to the agent. **Note:** If the agent's telephone has a private voicemail box, ensure that the Virtual Contact Center voicemail timeout threshold occurs before the agent's voicemail box seizes the call.
Automatic Call Recording	
■ % of inbound calls ■ % of outbound calls ■ % of direct agent	Specify the percentage of automatic call recording for the agent. Enter a percentage of inbound, outbound, and direct agent access calls.

Phone Tab Option	Description
access calls	
Agent Recording Controls	
Agent does not have recording controls	Prevents an agent from recording a call by taking away the recording control in the Control Panel. A call may still be recorded based on the automatic call recording settings.
Agent is able to start recording	While on a call, an agent can start recording the call anytime. The recording ends on terminating the call.
Agent is able to start and pause recording	An agent can start and pause recording a call any number of times. An agent may be denied recording rights with certain IVR settings. Visual feedback in the Agent Console Control Panel always reflects the true recording status.

4. Click **Save** to save the settings.

The next step is to assign queues to the agent.

Access Agent Recorded Calls

Configuration Manager administrators can use any secure FTP client to download agents' recorded calls from the tenant. You can determine the percentage of the automatic call recording via **Agents > Phone**. For details, refer to Configure Phone Settings.

Configure a Secure FTP Client

You can use any secure FTP client to download agents' recorded calls. The following FTP clients are available for download at no charge:

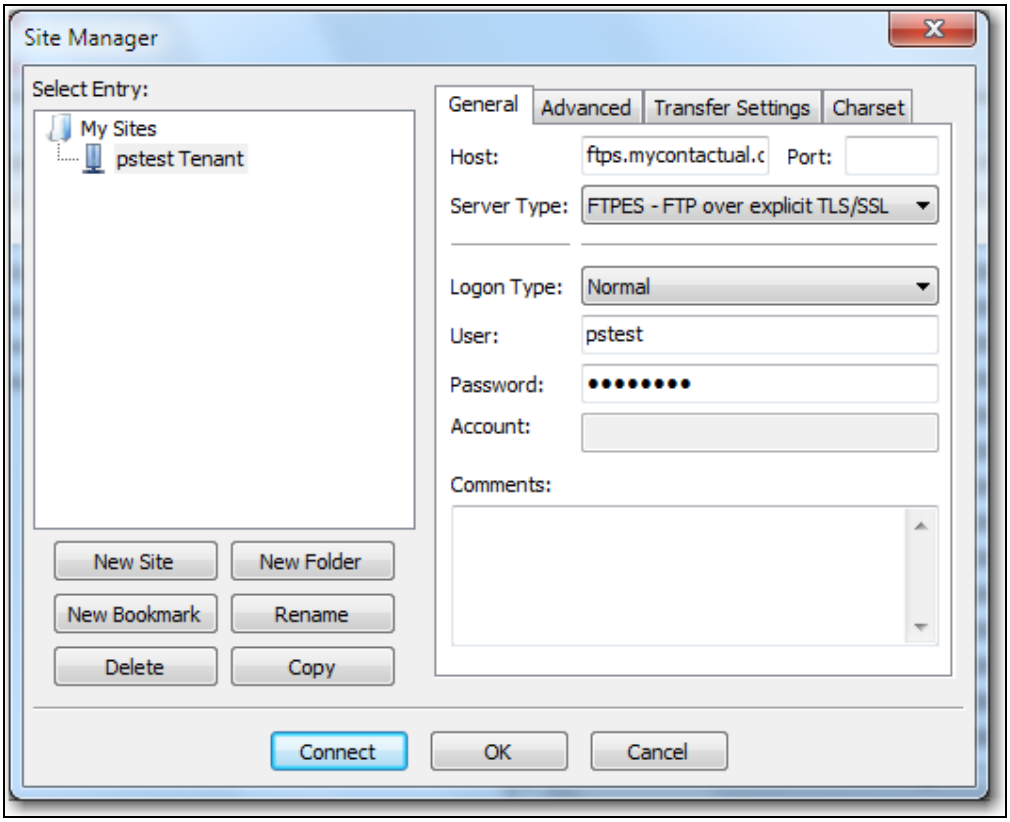
- **FileZilla**: available from http://filezilla-project.org/
- **Core FTP LE**: available from http://www.coreftp.com/

The following table summarizes the secure FTP configuration requirements for an FTP client to access the audio files directory on your tenant:

FTP Setting	Description
Host name	■ In US-West, enter <vcc-ftps-us1.8x8.com>. ■ In US-East, enter <vcc-ftps-us2.8x8.com>. ■ In Canada, enter <vcc-ftps-ca1.8x8.com>. ■ In United Kingdom EU2, enter <vcc-ftps-uk2.8x8.com>. ■ In United Kingdom EU3, enter <vcc-ftps-uk3.8x8.com> For a complete list of the available platform URLs, refer to the Platform URL Guide.
Username	For the username, enter the tenant name found in **Home > Profile > Tenant Name**. It is the username used by the tenant's Primary Administrator to log in the Virtual Contact Center. You may access this information from the initial communication email that shares the tenant login credentials. For example, if the Primary Administrator logs in to Configuration Manager with the username <AcmeJets>, then type the same username in your FTP client.
Password	Enter the same password you entered in **Home > Profile > SFTP Password**. For details, refer to Summary of Profile Settings.

Using FileZilla to Download Audio Files

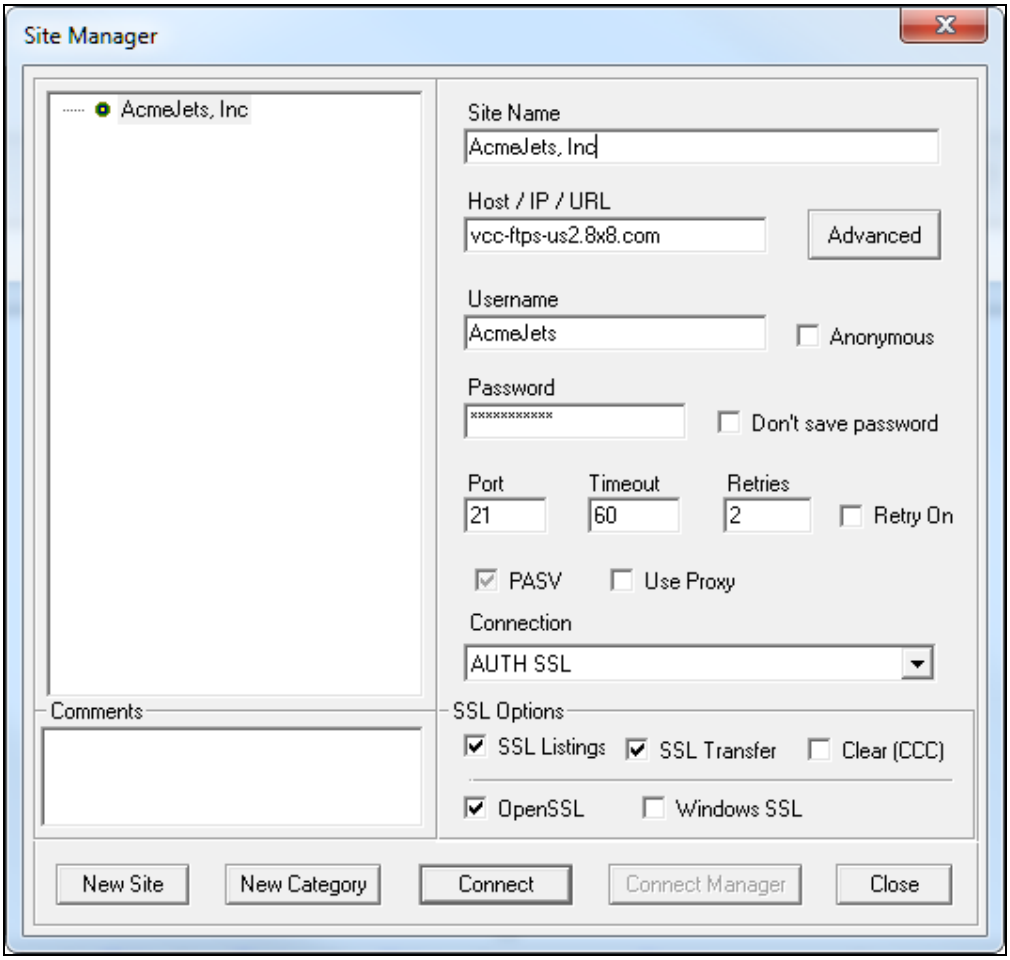
The following figure illustrates the FileZilla 3 settings used to connect to the Configuration Manager agent recording directory.



Refer to the above table for information about the User and Password text entry areas in your FileZilla Site Manager.

Using Core FTP LE to Download Audio Files

The following figure illustrates the Core FTP LE 2 settings used to connect to Configuration Manager agent recordings directory.



Refer to the above table for information about the **User** and **Password** text entry areas in your Core FTP LE 2 Site Manager.

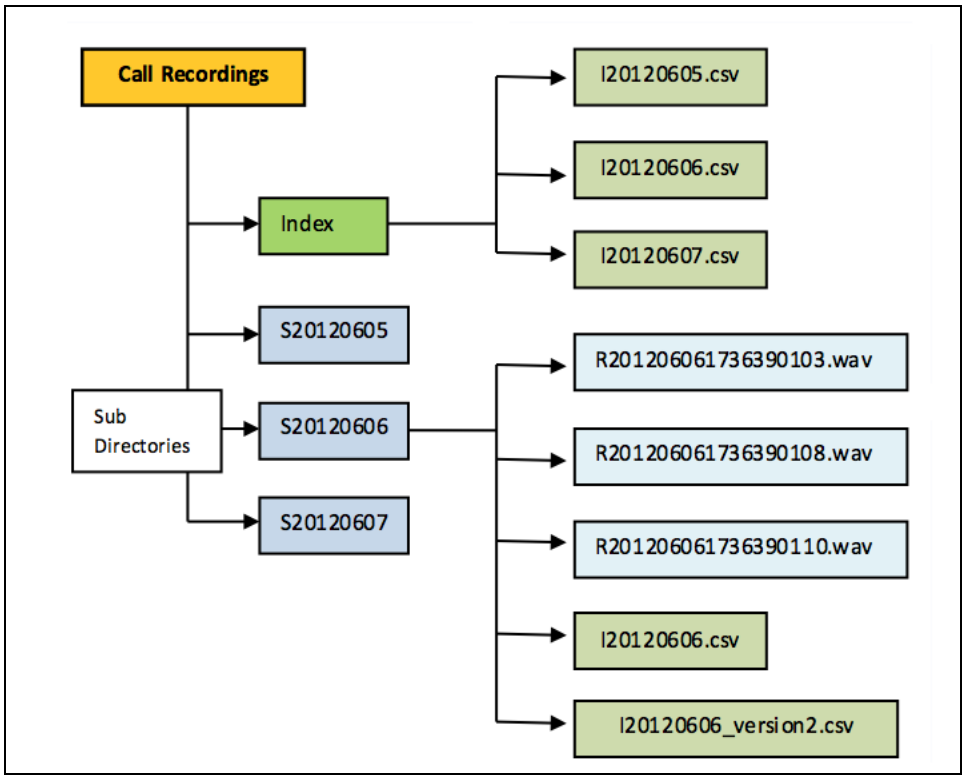
Browse and Locate Recording Files

You can browse and locate your contact center's recorded calls stored under your tenant directory. Your Virtual Contact Center tenant saves and stores each day's recording files in a time-stamped directory named **Syyyymmdd**, where **yyyy**specifies the year, **mm** specifies the month, and **dd** specifies the day. In addition, a date-stamped index file is generated at the local tenant time between 12 AM and 1 AM at the end of each day. Each index file contains metadata about the call recordings.

At the root level, the tenant directory contains:

- An Index directory which contains one or more date-stamped, comma-separated values (CSV) index files named **Iyyyymmdd.csv**, where **I** indicates index.

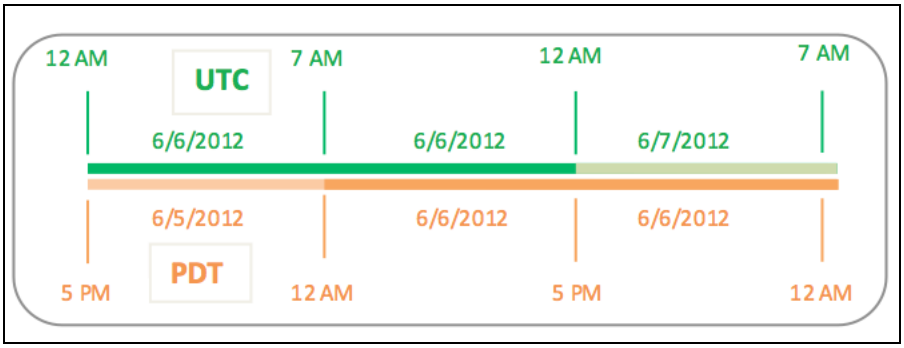
- Time stamped sub-directories grouped by day. Each sub-directory contains one or more time-stamped WAV audio files and index files with metadata about the audio files. Audio files are named **Ryyyymmddtttttttsss.wav**, where **R** indicates recording, and the timestamp includes the date (**yyyymmdd**) and 24-hour Coordinated Universal Time (UTC) **tttttt** when the file was recorded by hour, minute and second, and **ssss** indicates a sequence to differentiate multiple files recorded at the same second. The directory structure of call recordings may be represented as follows:



Note: The filenames and sub-directory names are time stamped by UTC and not by the local tenant time.

Locating Call Recordings

Locating your recorded calls requires understanding the time difference between your local tenant time and UTC. For example, if your tenant is located in the Pacific Daylight Time zone (PDT), you are behind the UTC by 7 hours. At 12 AM UTC, you local tenant time is 5 PM PDT.



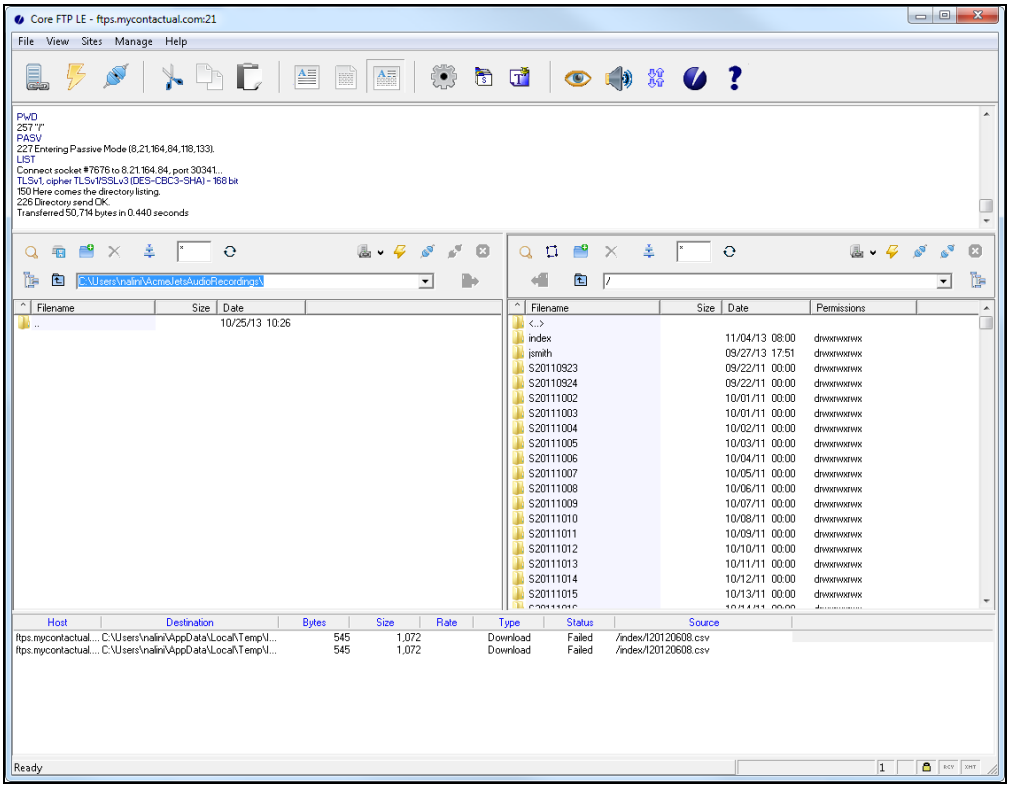
To obtain recordings of your tenant for 06/06/2016, download recordings in subdirectories S20160606 and S20160607. The calls recorded after 5 PM PDT on 06/06 are stored under the sub-directory S20160607.

Note: The daily recording batch index file created between 00:00 and 01:00 local tenant time references calls in two different UTC daily sub-directories unless your local tenant time happens to be UTC.

To access the Index files:

1. Double-click the Index directory. The directory consists of index files time stamped by day. You may view or download the index files in the directory.

Note: Index files for a specific day are stored under the relevant sub-directory as well as the index directory. Two types of index files exist. One file contains more details than the other.



Each CSV index file lists the following information about that day's agent recording files:

- CALL TYPE: Inbound Outbound, or Direct Agent Access call
- START TIME, STOP TIME: Local Tenant Time at which the call was answered and terminated by the agent
- AGENT NAME: Name of the agent who took the call
- CUSTOMER NUMBER: Phone number associated with the customer
- PHONE CHANNEL: Phone Channel number processing the call
- CALLED NUMBER: A phone number to which a call was placed (applicable to outbound calls)
- CASEID: Case number associated with the caller
- DURATION: Duration of the phone call
- FILENAME: Filename of the audio recording of the call
- DIRECTORY: The sub-directory in which the audio recording of the call is stored
- ACCOUNT: Account number associated with the caller
- START TIME UTC: Time represented in UTC at which the call was answered by the agent
- STOP TIME UTC: Time represented in UTC at which the call was terminated by the agent

- QUEUE: Queue type indicates outbound or inbound queue
- QUEUE NAME: Name of the queue the call was channeled to
- TRANSACTION ID: Unique number that identifies the phone call
- EXTERNAL VARIABLE 1&2: Data collected during the Interactive Voice Response
- OUTDIAL CODE: Codes associated with outbound calls
- WRAP UP CODE: Codes representing the call outcome

2. Go to the specified directory and download the call recording files.

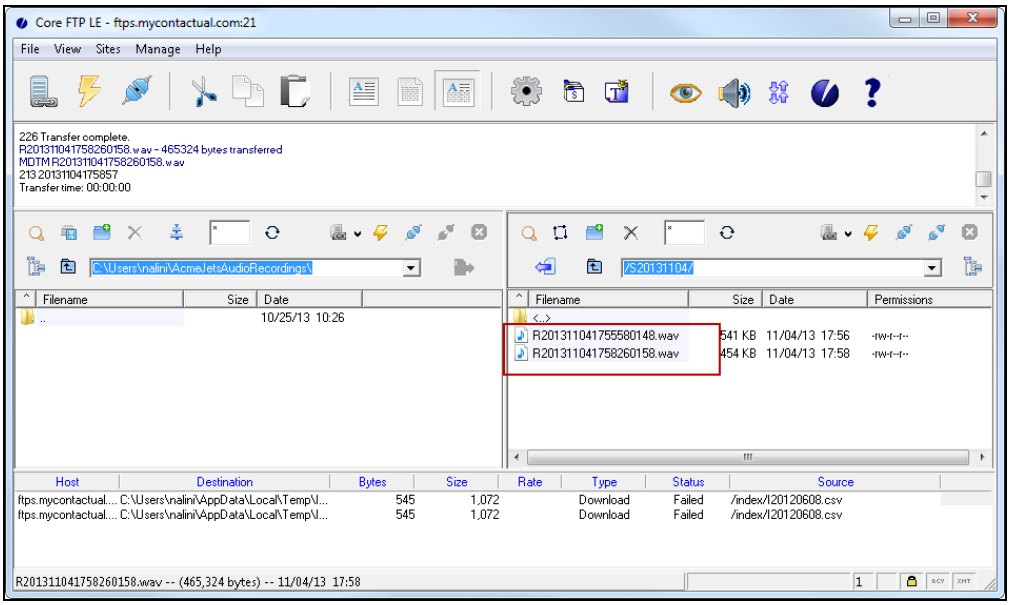
You can view the CSV index file in most spreadsheet programs including Microsoft Excel or OpenOffice Calc.

Download Agent Call Recordings

You can download the index files and the call recordings by folders or by individual files.

To download call recordings or index files:

1. Select a directory, and right-click to open the menu.
2. Select **Download** from the right-click menu.



The SFTP client indicates a successful transfer.

3. To play downloaded call recordings, select a WAV file, and double-click to play the recording.

Assign Agents to Queues

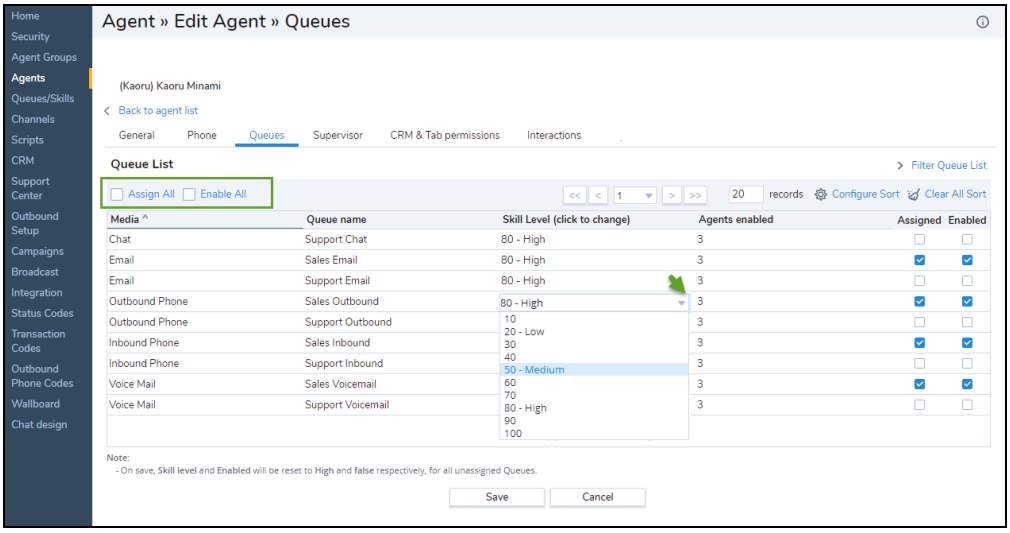
All interactions flowing to Virtual Contact Center are channeled through queues. The queues in turn direct them to agents based on their skill level and availability. An agent has to be a member of a queue to receive any interaction from the queue.

Virtual Contact Center provides sophisticated logic for matching customers to the agent who can best solve their problem. Queues direct interactions based on the skill level of agents serving the queue. If you have an agent with high skill level vs. an agent with low skill level, the interaction will be directed to the high skilled agent based on their availability.

As an administrator, you can assign the selected agent to previously defined phone, email, chat, and voicemail queues. Once assigned, the agent receives interactions channeled through these queues. You can access queues via Agents > Queues.

To define queue assignments:

1. From the Configuration Menu, open **Agents**.
2. Find an agent and click .
3. Open the **Queues** tab.
4. Select a **Skill Level** for the agent serving the queue.
   The skill level can be selected from 10 to 100 (lowest to highest).
5. Click **Assign All** to assign the agent to all queues, or select individual queues and click the check box to assign.
   You can disable any queues by clearing the **Enabled** check box.



The following table summarizes the options available under the **Queues** tab:

Queues Tab Option	Description
Assign All	Select the option to assign an agent to all the available queues defined in the tenant. For custom queue assignments, select individual queues, specify the agent's skill level, and assign. You can also assign agents to queues at the same time you create the queue. For details on assigning agents to a phone queue as part of queue creation, refer to Assign Inbound Phone Queue Members. The same concept applies to all other types of Virtual Contact Center queues.
Enable All	Enables interactions from all queues automatically on assigning.
Media	Displays the type of media queue such as Chat, Email, Outbound Phone, Inbound Phone, or Voicemail.
Queue Name	Displays the name of queue, such as Support or Sales.
Skill Level (Click to	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated by ten

Queues Tab Option	Description
change)	numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Enabled	Indicates the total number of agents in each queue whose accounts are enabled.
Assigned	If selected, assigns an agent to the selected queue and automatically enables interactions from that queue. You can assign agents to queues at the same time you create the queue. For details on assigning agents to a phone queue as part of queue creation, refer to Assign Inbound Phone Queue Members. The same concept applies to all other types of Virtual Contact Center queues.
Enabled	Allows the agent to receive interactions from a selected queue. You can assign a queue but choose to temporarily disable it.

6. Click **Save** to save your settings.

The next step is to define supervisor privileges for the agent.

Grant Supervisor Rights

You can grant special privileges to an agent, and allow agents to perform as Virtual Contact Center supervisors. A supervisor has all the rights of an agent in addition to the ability to:

- Create and delete FAQ categories and answers.
- Monitor agents, queues, groups, and campaigns.
- Create and run historical reports for contact center metrics.

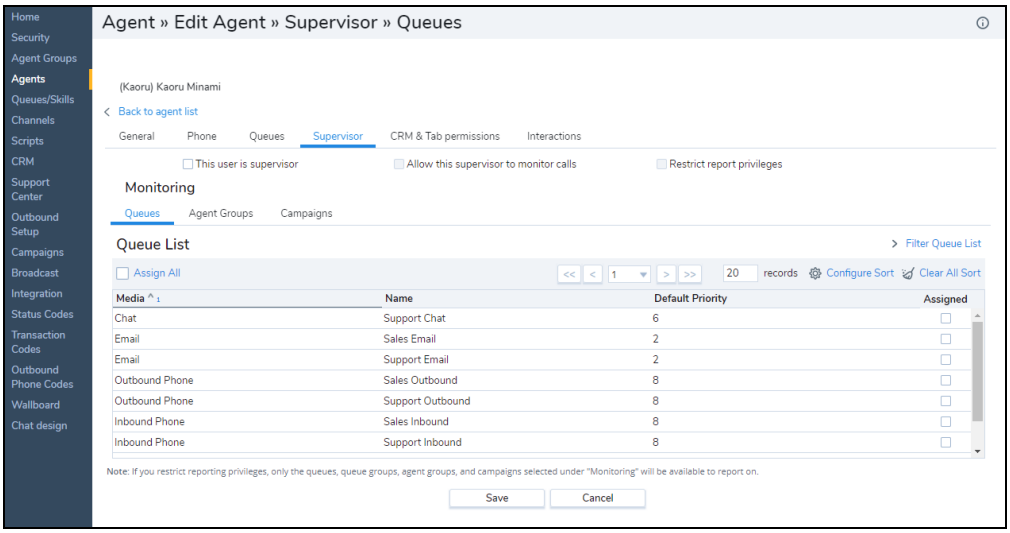
In addition to supervisory features, supervisors may choose to perform, or at least guide and validate the use of certain operations that agents have access to, such as agent profile configuration. These include the following optional features:

- Delete customer and case records from the Local CRM.
- Pull and delete pending email interactions from a queue.
- Use the Monitoring tab to remove agents from queue assignments.

Configuration Manager administrators can grant supervisor privileges to an agent and allow permissions to monitor groups, queues, and campaigns via **Agents > Supervisor**.

To enable supervising ability for an agent:

1. From the Configuration Menu, open **Agents**.
2. Find an agent and click .
3. Open the **Supervisor** tab.



4. Select **This user is supervisor**.
5. Open the **Queues**, **Groups**, and **Campaigns** tabs for more configuration.
   The following table summarizes the options available under the **Supervisor** tab in the Queues, Groups, and Campaigns pages:

Supervisor Tab Option	Description
This user is supervisor	If enabled, the user is granted supervisor rights.
Allow this supervisor to monitor calls	If enabled, the supervisor can join agents phone calls in progress for monitoring purposes.

Supervisor Tab Option	Description
Restrict report privileges	If enabled, restricts the data a supervisor views in historical reports. The supervisor views the groups and queues they monitor, or are a member of.
Assign All	If enabled, the agent is assigned to all available queues, groups, or campaigns defined in the tenant.
Media	Displays the type of media queue such as Chat, Email, Outbound Phone, Inbound Phone, or Voicemail.
Name	Displays the name of a queue, group, or campaign, such as Chat Channel or Support Queue.
Default Priority	Indicates the priority number of the queue as set under **Queues > Properties > Default Priority**. This number determines the priority of all interactions for a queue where 1 specifies lowest priority and 10 specifies highest priority. For details, refer to Define Inbound Phone Queue Properties.
Agent Count	Indicates the number of agents in a group.
Comment	Displays the description or comment of a group entered when creating a group and under **Group > General**.
Status	Shows the campaign status, such as completed, running, or stopped.
Enabled	Shows if the campaign is enabled.
Queue	Displays the queue associated to a campaign. You can specify the queue in **Campaign > Properties**.
Caller ID	Displays the campaign's caller ID specified when defining a campaign. The campaign's caller ID can be a channel number.
CRM Object	Displays the campaign's CRM Object, such as customer, specified when defining a campaign.
Assigned	If selected, assigns an agent to the selected queue, group, and campaign.

6. Click **Save**.

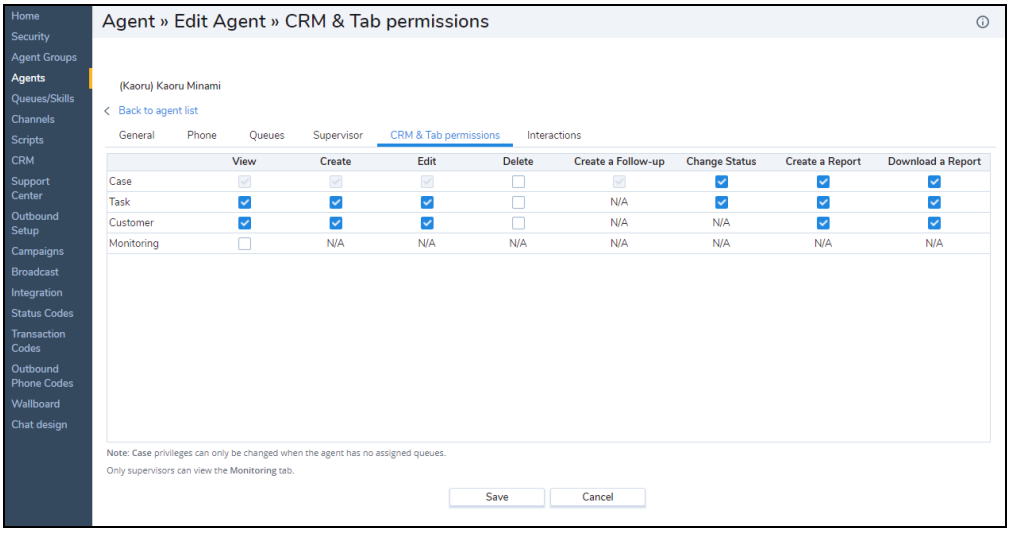
Grant Local CRM Permissions

Administrators can grant Local CRM permissions to agents and supervisors to manage customer data, such as cases, customers, and tasks accessible via Agent Console. Administrators can grant the permissions to view, create, edit, or

delete customer data via Users > CRM.

To grant Local CRM permissions to an agent or supervisor:

1. From the Configuration Menu, open **Agents**.
2. Find an agent and click or .



3. Grant the desired permissions to the agent.
   The following table summarizes the permissions:

CRM Tab	Description
Case	Select or change from the following permissions to define an agent's access to case data: ■ View ■ Create ■ Edit ■ Delete ■ Create a Follow-up ■ Change status ■ Create a report ■ Download a report: Agents can continue to run the report even if the ability to download a report

CRM Tab	Description
	is disabled. If you disable any of the above controls, the agent cannot see the corresponding feature in Agent Console. **Note:** To revoke or edit the case permissions, you have to unsubscribe the agent from all queues to avoid any conflict. Only supervisors can view a Monitoring tab.
Task	Select or change from the following permissions to define an agent's access to Task data: ■ View ■ Create ■ Edit ■ Delete ■ Change status ■ Create a report ■ Download a report If you disable any of the above controls, the agent cannot see the corresponding feature in Agent Console. **Note:** An agent is able to clone tasks in Agent Console if the administrator grants the permission to create and edit tasks to that agent.
Customer	Select or change permissions to view, modify, and delete customers data. ■ View ■ Create ■ Edit ■ Delete ■ Create a report ■ Download a report If you disable any of the above controls, the agent cannot see the corresponding feature in

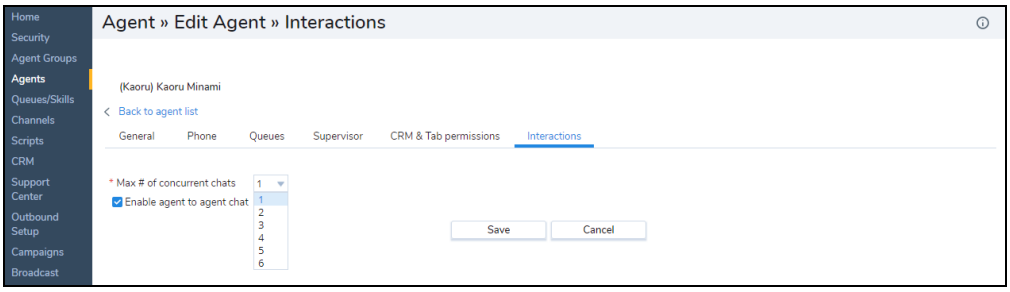
CRM Tab	Description
	Agent Console.
Monitoring	Select the permission to view monitoring.

Configure Multi-Chats

Multi-Chat allows an agent to handle up to six concurrent chats with customers at any time. Using the Interactions tab you can configure the maximum number of concurrent chats with customers for each agent. You can also enable agent-to-agent chat from within the Interactions tab. There is no limit on the number of agent-to-agent chats.

To define maximum number of concurrent chats with customers:

1. From the Configuration Menu, open **Agents**.
2. Find an agent and click .
3. Open the **Interactions** tab.



4. Select **Max # of concurrent chats** from the list.
5. Select **Enable agent to agent chat**.
   It allows this agent to chat with other agents. There is no limit on the number of concurrent chats among agents.
6. Click **Save**.

Create and Configure Queues

A queue is an ordered collection of interactions waiting to be served by agents who are qualified to respond to these interactions. The call center administrator can customize how incoming interactions are prioritized and routed. Moreover, queues ensure that interactions are never lost or discarded.

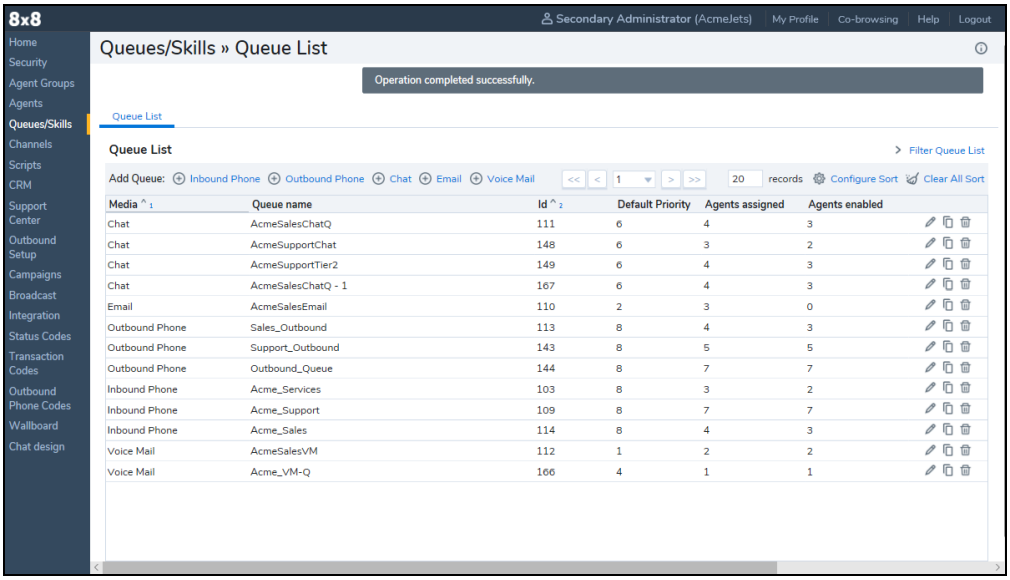
Queues serve to present interactions flowing into Virtual Contact Center to agents based on skill set and availability. Virtual Contact Center provides sophisticated logic for matching customers to the agent who can best solve their problem. Queues direct interactions based on the skill level of agents serving the queue. If you have an agent with high skill level vs. an agent with low skill level, the interaction will be directed to the high skilled agent based on their availability.

By going to the **Queues/Skills** tab, you can:

- Create, edit, copy, and delete queues of all media
- Assign members to queues
- Define targeted service level

To access Queues:

1. In the Configuration Menu, click **Queues/Skills** to display a list of queues.



2. In the list view:

   - Click **Add** to create a new queue for Inbound Phone, Chat, or Email.
   - Click **Edit** to view or modify an existing queue.
   - Click **Copy** to clone an existing queue.
   - Click **Delete** to delete an existing queue.

3. Configure the queue settings, and **Save**.

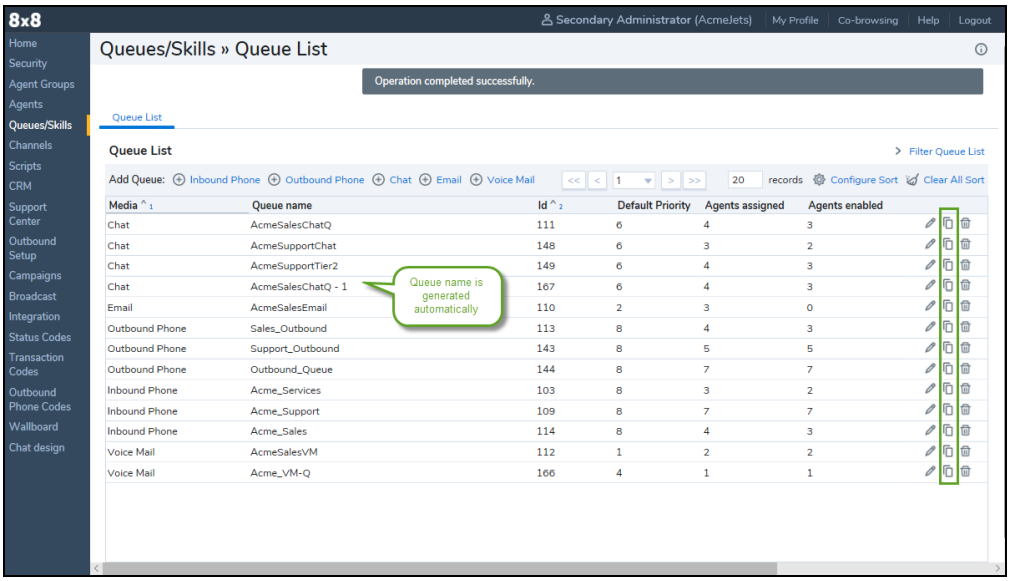
Clone Queues

Aministrators can copy inbound phone queues, outbound phone queues, chat queues, email queues, as well as voicemail queues with a simple click. Cloning queues allows Contact Center administrators to create multiple queues in a short time.

When you clone a queue, the queue properties, members, interactions, SLA, and email settings are copied. A queue name is automatically generated. You can modify or make changes to the new queue, if required.

To clone a queue:

1. Log in to Configuration Manager
2. Go to **Queues/Skills** to display a list of queues.



Media	Queue name	Id	Default Priority	Agents assigned	Agents enabled
Chat	AcmeSalesChatQ	111	6	4	3
Chat	AcmeSupportChat	148	6	3	2
Chat	AcmeSupportTier2	149	6	4	3
Chat	AcmeSalesChatQ - 1	167	6	4	3
Email	AcmeSalesEmail	110	2	3	0
Outbound Phone	Sales_Outbound	113	8	4	3
Outbound Phone	Support_Outbound	143	8	5	5
Outbound Phone	Outbound_Queue	144	8	7	7
Inbound Phone	Acme_Services	103	8	3	2
Inbound Phone	Acme_Support	109	8	7	7
Inbound Phone	Acme_Sales	114	8	4	3
Voice Mail	AcmeSalesVM	112	1	2	2
Voice Mail	Acme_VM-Q	166	4	1	1

3. Select a queue and click **Copy**.

   A single copy is generated. The cloned queue has the original queue name plus a number appended to the name. For example, AcmeSalesChatQ becomes AcmeSalesChatQ -1, AcmeSalesChatQ -2, and so on. You can rename the queue by going to the **Queues/Skills > Properties > Queue name**. The queues are listed in alphabetical order, but you can sort and change their order.
4. If required, modify the queue properties and **Save**.
5. Click to delete the queue.

> **Note:** To delete a queue, you must remove the agents from the queue first.

Configuring a queue varies based on the media of the queue. The following sections describe:

- Creating inbound phone queues
- Creating outbound phone queues

- Creating chat queues
- Creating email queues
- Creating voicemail queues

Create Inbound Phone Queues

Configuring an inbound phone queue involves:

- Defining inbound phone queue properties
- Assigning inbound phone queue members
- Configuring inbound phone queue voicemail
- Setting up inbound phone queue call priority
- Defining inbound phone queue SLA

Define Inbound Phone Queue Properties

Virtual Contact Center categorizes phone queues by the direction of the phone calls.

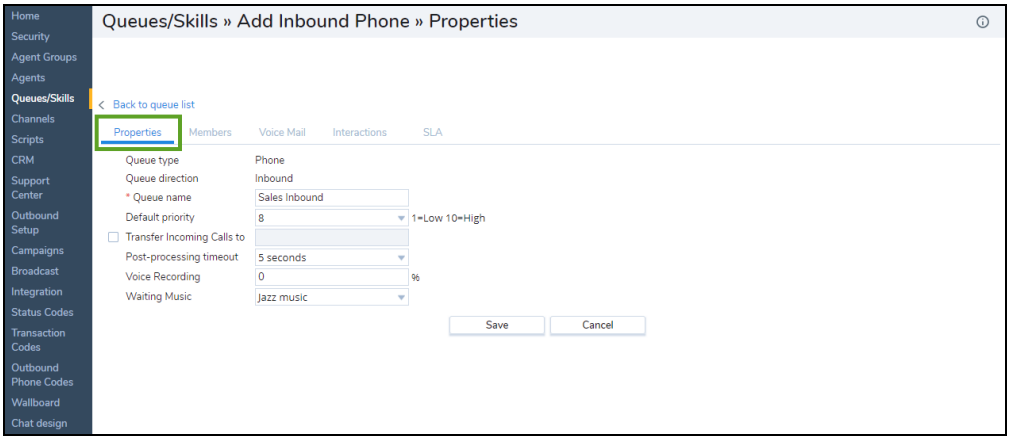
- An inbound phone queue accepts incoming phone calls and directs them to skilled agents. Agents either process these phone calls, or reject them, routing them back to the queue, thus ensuring calls are not discarded.
- An outbound phone queue processes all outgoing interactions including campaign calls, click-to-dial calls, and web callback calls.

To define an inbound phone queue, you need to define the primary properties, such as queue name, default priority, post-processing timeout, and more. The **Properties** tab allows you to define these properties.

To define inbound phone queue properties:

1. From the Configuration Menu, open **Queues/Skills**.
2. Click ⊕ or **Inbound Phone**.

3. Enter the desired properties in the **Properties** tab.



The following table summarizes the options under **Queues/Skills > Inbound Phone > Properties**:

Properties Tab Option	Description
Queue type	Read-only reminder of the type of queue.
Queue direction	Read-only reminder of the phone queue direction. Specifies if it is inbound or outbound. It is applicable to phone media only.
Queue name	Type a name for the queue.
Default Priority	Choose the priority for this queue, where <1> specifies the lowest priority and <10> specifies the highest priority. This defines the priority for interactions of all media. By default, Virtual Contact Center prioritizes the queues as follows: ■ Phone queue = 8 (highest default priority) ■ Chat queue = 6 ■ Voicemail queue = 4 ■ Email queue = 2 (lowest default priority) Based on your business needs, you can assign the desired priority for each queue.
Transfer Incoming	If enabled, Virtual Contact Center transfers phone interactions from this queue to an external telephone number (that is not managed by the contact center). The external telephone number must

Properties Tab Option	Description
Calls To	have the following format: ■ In the United States: 1 + three-digit area code + seven-digit phone number ■ Outside the United States: Country Code +phone number The telephone number may contain optional dashes, spaces, or parentheses.
Post-Processing Timeout	Choose how much time Virtual Contact Center must wait before assigning a new interaction from the queue to an agent who has just completed an interaction. The post-processing timeout enables agents servicing the selected queue to perform any necessary post-interaction tasks before receiving a new interaction. Choose **Manual** to enable agents assigned to this queue to use their Agent Console to explicitly make themselves available for new interactions. When there are multiple agents available with the same queue and skill level assignment waiting to receive the next interaction, Virtual Contact Center routes the call to the agent who has been idle the longest. See the Note and table below regarding resetting the agent's idle timer.
Voice Recording %	Specify the percentage of interactions from this queue recorded by Virtual Contact Center.
Waiting Music	Choose the audio file played when a caller must wait for an agent to become available. The Waiting Music lists all files defined in the Audio Files tab. For details on the Audio Files tab, refer to Configure Recorded Greetings.

4. Click **Save**.

Note: The agent's idle timer is reset every time an interaction comes to an agent via a queue, and as soon as the agent ends the post processing. Log in and log out or changing the status does not reset the agent's timer. Also, if the agent transfers a call that comes via a queue to another agent, it resets the timer for Agent A but not for Agent B. See the following table for the complete list of activities that may or may not

reset the agent's idle timer.

An agent's idle timer is reset by:	An agent's idle timer is not reset by:
Inbound Call via an Inbound Voice Queue	Accepting Direct-to-Agent Calls
Inbound Voicemail Call via an Inbound Voicemail Queue	Dialing Agent-to-Agent Calls
IVR Callback call via an Outbound Queue	Dialing a manual outbound call even if it makes the agent busy using an Outbound Phone Code (OPC) Queue
Web callback call via an Outbound Queue	Making a click-to-dial outbound call
Campaign call via an Outbound Queue	Agent-to-Agent Chat
Inbound Chat via an Inbound Chat Queue	Changing between logged in states such as Available, Working Offline, and On Break
Inbound Email via an Inbound Email Queue	Log in or Log out

After you define the queue properties, you are ready to assign members to the queue.

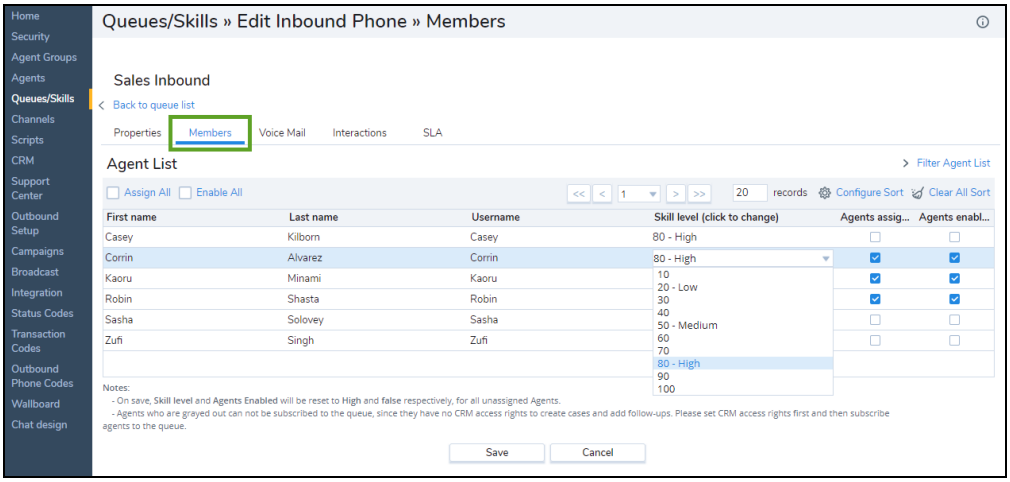
Assign Inbound Phone Queue Members

When you assign members to an inbound phone queue, you allow them to process the phone interactions that enter the queue. The queue uses skill-based routing to route the inbound phone calls based on the members' skill set. An agent with a higher skill level receives an interaction before an agent with a lower skill level.

Go to **Queues/Skills > Inbound Phone > Members** to add, modify, or remove agents.

To assign members to an inbound phone queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the inbound phone queue you wish to assign members to, and click .
3. Go to the **Members** tab.



4. Select **Assign All** to assign all agents to the queue.
   OR
   Select **Agents assigned** to choose the desired agents only.
5. Click the **Skill level** for the agent serving the queue.
   The skill level can be selected from 10 to 100 (lowest to highest).
   The following table summarizes the options under **Queues/Skills > Inbound Phone > Members**:

Members Tab Option	Description
Assign All	Assigns all existing agents to this queue.
Enable All	To activate routing of interactions from this queue to all agents assigned to the queue.
Agents	For the selected queue, in the list of agents: ■ Select **Assign All** to assign all agents to the queue. ■ Select an individual agent to add that agent to the queue.

Members Tab Option	Description
Skill Level	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated by ten numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Assigned	Assigns the selected agents to this queue.
Agents Enabled	Activates routing of interactions from this queue to selected agents assigned to the queue. You can assign but temporarily disable an agent.

6. Select **Agents enabled** or **Enable All** to activate routing of interactions from this queue to the selected agents.
7. Click **Save**.

Configure Inbound Phone Queue Voicemail

Stagnating calls in a queue for too long is not desirable to callers. You can direct calls that have been waiting in a queue longer than a specified time to voicemail, allowing callers to leave a message. By going to the voicemail tab, you can also:

- Enable voicemail for a queue.
- Specify a duration after which to direct the waiting calls to voicemail.
- Select a message for voicemail.
- Select a voicemail queue to direct the calls to.

To configure voicemail for a queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the inbound phone queue you wish to modify, and click .
3. Go to the **Voice Mail** tab and select or enable voicemail settings.

The following table summarizes the options under **Queues/Skills > Inbound Phone > Voicemail**.

Voicemail Tab Option	Description
Enable Voice Mail	Select to enable voicemail for this phone queue.
Force Voice Mail after	Choose how much time Virtual Contact Center permits a caller to wait before redirecting the call to a Virtual Contact Center voicemail queue.
Voice Mail Message (played to customer)	Choose the recorded message Virtual Contact Center plays when redirecting a caller to a voicemail queue. ■ Upload Custom: You can replace the current message with an existing WAV file from your picklist. ■ Play Audio: Click to listen to the audio voice message.
Route Voice Mail to queue	Choose a Virtual Contact Center voicemail queue.

4. Click **Save**.

Set up Inbound Phone Queue Call Priority

You can set custom priority for interactions in the queue based on the conditions you define. If an interaction meets the condition, it takes a higher or a lower priority than the default priority of the queue. To take advantage of this feature, you must use the Local CRM. Go to the Interactions tab to customize how the selected queue prioritizes specific types of interactions.

For example, AcmeJets has an inbound support queue with a default priority set to 6.

This queue handles support inquiries from all customers. To better serve its premium customers before others, AcmeJets can define a higher interaction priority for interactions from premium customers by setting a condition to determine the customer type. When an interaction meets the condition, the interaction priority overrides the default priority of the queue, allowing agents to serve the premium customers faster.

To define custom priority for interactions:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the inbound phone queue you wish to modify, and click .
3. Go to the **Interactions** tab.
4. Select a value for **Set Default Interaction Priority within the Queue**.
   The following table summarizes the options under **Queues/Skills > Inbound Phone > Interactions**:

Interactions Tab Option	Description
Set default interaction priority within the queue	To customize the priority for specific types of interactions within this queue, choose a non-default priority level, then in the condition area, specify the conditions that receive the non-default priority. In the list, 1 equals the lowest default interaction priority, and 100 equals the highest interaction priority.
Add Interaction Rule	Click ⊕ to create an interaction priority rule.
If the value of the field	Choose a Local CRM field to enable the options available in the equals list such as Case: Priority. For details, refer to Configure CRM Fields.
equals	The values in this field varies based on what field you choose for Local CRM. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
Set interaction priority to	Choose a priority level for the interaction from 1 (lowest) to 100 (highest).
Enable priority routing rule	Select to enable the routing rule in your Virtual Contact Center.

5. Define an interaction rule to specify a matching condition.
   a. Click ⊕ or **Interaction Rule**.
   b. Select a CRM field for **If value of the field**, such as Case: Priority.
   c. Select a value for **equals**. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
   d. Choose a value for **Set interaction priority to** from 1 to 100.
      This number sets the priority of the interactions that match the rule. For example, a platinum support customer gets a high priority, such as 90.
   e. Select the **Enable priority routing rule** check box to activate the rule.
   f. Click **Add this Rule**.
      The interaction rule appears in the list.
6. Repeat the above procedure to add more rules.

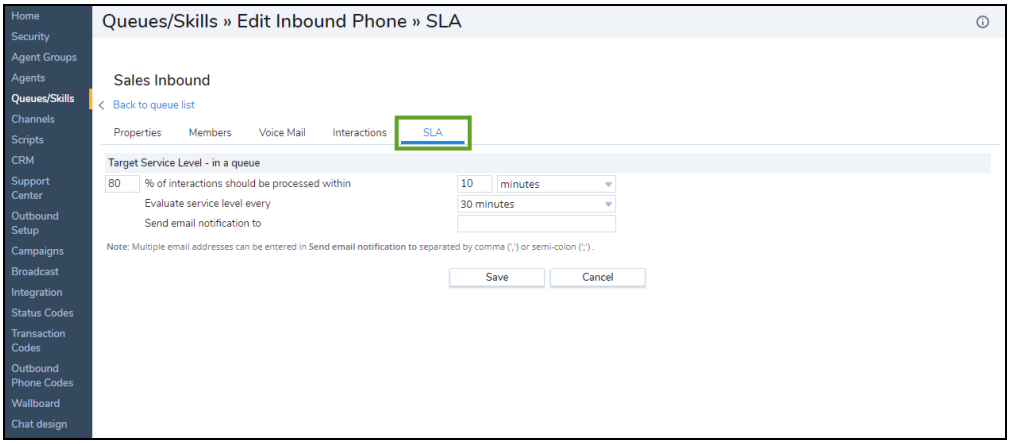
7. Click **Save**.

Define Inbound Phone Queue SLA

The Service Level Agreement (SLA) of a queue defines the target performance metrics of the queue. It includes the percentage of interactions processed within a specified time interval. You can set a target service level for each queue, and periodically evaluate the service level. You can also set up an alert notification to show if the service level falls below the specified threshold.

To define Service Level Agreement for a phone queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the inbound phone queue you wish to modify, and click .
3. Go to the **SLA** tab.



The following table summarizes the options under **Queues/Skills > Inbound Phone > SLA**:

SLA Tab Option	Description
% of interactions should be processed within	To specify the Service Level Agreement (SLA) threshold for the selected queue: 1. Type a percentage value as an integer from 0 to 100 percent, such as 40. 2. Type an integer number to indicate the time interval. 3. Choose the units of time specified by this value.

SLA Tab Option	Description
	The valid time intervals are: ■ For Phone and Chat queues: Seconds, Minutes, or Hours ■ For Email and Voicemail queues: Minutes or Hours
Evaluate service level every	Choose how frequently Virtual Contact Center compares the queue's performance to the SLA threshold defined for the queue.
Send email notification to	Type one or more comma-separated email addresses that should receive email notifications from Virtual Contact Center. The email is sent when the queue's performance level falls below the performance threshold specified for the queue.

4. Click **Save**.
   With this step, the queue configuration is complete.

Create Outbound Phone Queues

In Virtual Contact Center, an outbound queue is used to channel agent-initiated outbound calls to the destination. These calls may be:

- Agent-dialed from the Control Panel: Must be configured via Outbound Phone Codes.
- Requests for web callback: API accepts Queue ID as a parameter.
- Via click-to-dial: API accepts Queue ID as a parameter.
- Campaign calls: Must be directed via an Outbound Phone queue.

When an outbound call directs through a queue, an agent's status changes to busy preventing any calls being offered to the agent.

Configuring an outbound phone queue involves:

- Defining outbound phone queue properties
- Assigning outbound phone queue members
- Setting up outbound phone queue call priority
- Defining outbound phone queue SLA
- Viewing campaign assignments

Define Outbound Phone Queue Properties

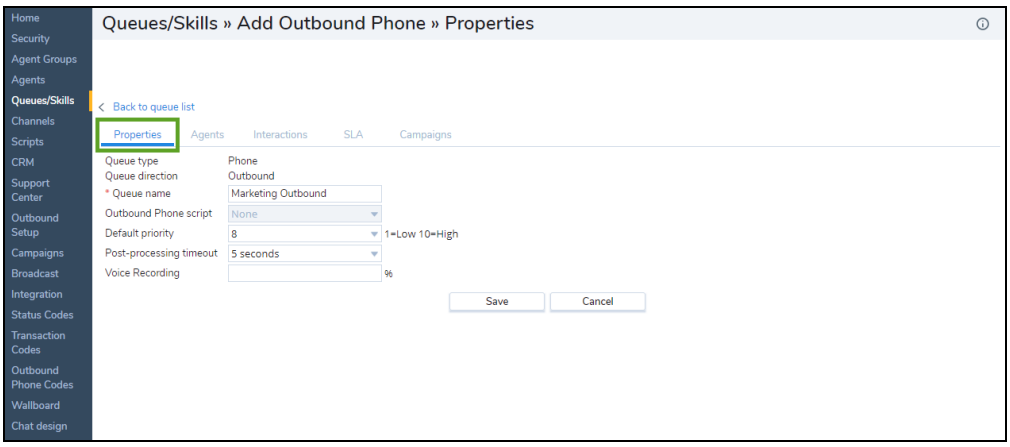
Virtual Contact Center categorizes phone queues by the direction of the phone calls.

- An inbound phone queue accepts incoming phone calls and directs them to skilled agents. Agents either process these phone calls, or reject them, routing them back to the queue, thus ensuring calls are not discarded.
- An outbound phone queue processes all outgoing interactions including campaign calls, click-to-dial calls, and web callback calls.

To define an outbound phone queue, you need to specify the primary properties, such as queue name, default priority, post-processing timeout, and more. The Properties tab under Outbound Phone queues allows you to define these properties.

To define outbound phone queue properties:

1. From the Configuration Menu, open **Queues/Skills**.
2. Click ⊕ or **Outbound Phone**.
3. Enter the desired properties in the **Properties** tab.



The following table summarizes the options under **Queues/Skills > Outbound Phone > Properties**:

Properties Tab Option	Description
Queue	Read-only reminder of the type of queue.

Properties Tab Option	Description
type	
Queue direction	Read-only reminder of the phone queue direction. Specifies if it is inbound or outbound. It is applicable to phone media only.
Queue name	Enter a name for the queue.
Default Priority	Choose the priority for this queue, where 1 specifies the lowest priority and 10 specifies the highest priority. This defines the priority for interactions of all media. By default, Virtual Contact Center prioritizes the queues as follows: ■ Phone queue = 8 (highest default priority) ■ Chat queue = 6 ■ Voicemail queue = 4 ■ Email queue = 2 (lowest default priority) Based on your business needs, you can assign the desired priority for each queue.
Post-Processing Timeout	Choose how much time Virtual Contact Center must wait before assigning a new interaction from the queue to an agent who has just completed an interaction. The post-processing timeout enables agents servicing the selected queue to perform any necessary post-interaction tasks before receiving a new interaction. Choose **Manual** to enable agents assigned to this queue to use their Agent Console to explicitly make themselves available for new interactions. **Note:** The agent's idle timer is reset every time an interaction comes to an agent via a queue, and as soon as the agent ends the post processing. Log in and log out or changing the status does not reset the agent's timer. Also, if the agent transfers a call that comes via a queue to another agent, it resets the timer for Agent A but not for Agent B. See the following table for the complete list of activities that may or may not reset the agent's idle timer.

An agent's idle timer is reset by:	An agent's idle timer is not reset by:
Inbound Call via an Inbound Voice Queue	Accepting Direct-to-Agent Calls
Inbound Voicemail Call via an Inbound Voicemail Queue	Dialing Agent-to-Agent Calls
IVR Callback call via an Outbound Queue	Dialing a manual outbound call even if it makes the agent busy using an Outbound Phone Code (OPC) Queue

Properties Tab Option	Description
Voice Recording %	Specify the percentage of interactions from this queue recorded by Virtual Contact Center.

4. Click **Save**.

After you define the queue properties, you are ready to assign members to the queue.

Assign Outbound Phone Queue Members

When you assign members to an outbound phone queue, you allow the members to process campaign calls and web callback requests that enter the queue. The queue uses skill-based routing to route the outbound phone calls based on the agents' skill sets. An agent with a higher skill level receives an interaction before an agent with a lower skill level. Go to Queues/Skills > Outbound Phone > Agents to add, modify, or remove agents.

As a member of an outbound queue, an agent is offered:

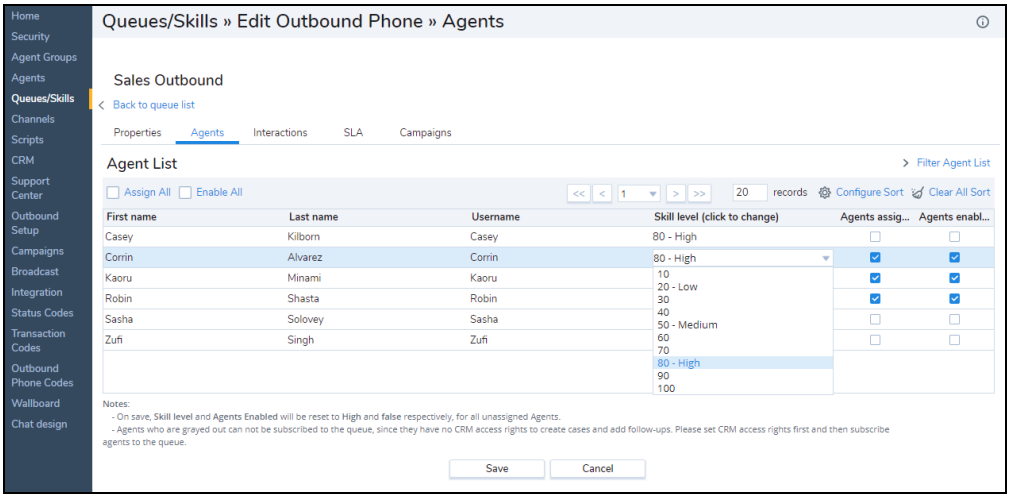
- Campaign calls
- Customer requests for web callback

To assign members to an outbound phone queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the outbound phone queue you wish to assign members to, and click .

3. Go to the **Agents** tab.

   A list of existing agents appears.



4. Select **Assign All** to assign all agents to the queue.

   OR

   Select **Agents assigned** to choose the desired agents only.

5. Click the **Skill level** for the agent serving the queue.

   The skill level can be selected from 10 to 100 (lowest to highest).

   The following table summarizes the options under **Queues/Skills > Outbound Phone > Agents**:

Members Tab Option	Description
Assign All	Assigns all existing agents to this queue.
Enable All	To activate routing of interactions from this queue to all agents assigned to the queue.
Agents	For the selected queue, in the list of agents: ■ Select **Assign All** to assign all agents to the queue. ■ Select an individual agent to add that agent to the queue.
Skill Level	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a

Members Tab Option	Description
	higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated by ten numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Assigned	Assigns the selected agents to this queue.
Agents Enabled	Activates routing of interactions from this queue to selected agents assigned to the queue. You can assign but temporarily disable an agent.

6. Select **Agents enabled** or **Enable All** to activate routing of interactions for the selected agents.
7. Click **Save**.

Set up Outbound Phone Queue Call Priority

You can set custom priority for interactions in the queue based on the conditions you define. If an interaction meets the condition, it takes a higher or a lower priority than the default priority of the queue. To take advantage of this feature, you must use the Local CRM. Go to the Interactions tab to customize how the selected queue prioritizes specific types of interactions.

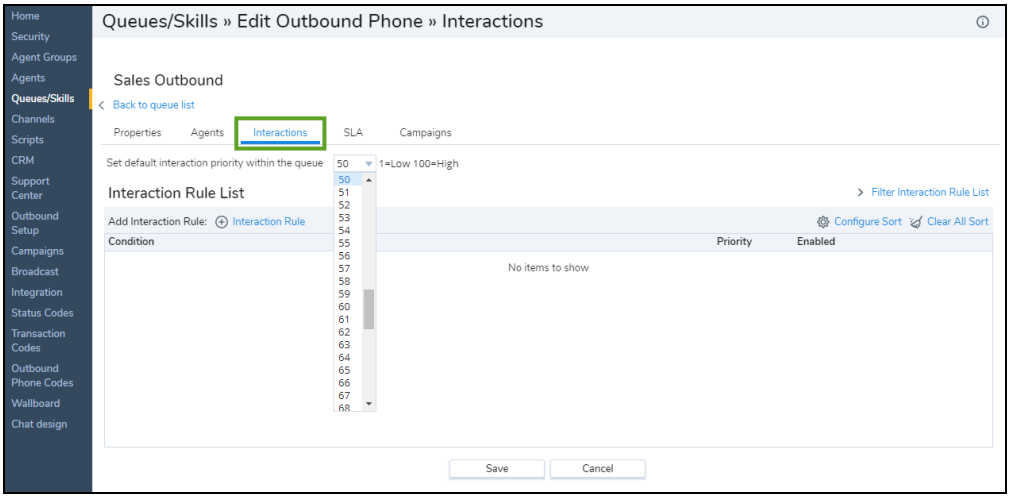
For example, AcmeJets has a web callback outbound phone queue with a default priority set to 20.

This queue handles support inquiries from all customers. To better serve its premium customers before others, AcmeJets can define a higher interaction priority for interactions from premium customers by setting a condition to determine the customer type. When an interaction meets the condition, the interaction priority overrides the default priority of the queue, allowing agents to serve the premium customers faster.

To define custom priority for interactions:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the outbound phone queue you wish to modify, and click .

3. Go to the **Interactions** tab.



4. Select a value for **Set Default Interaction Priority within the Queue**.

The following table summarizes the options under **Queues/Skills > Outbound Phone > Interactions**.

Interactions Tab Option	Description
Set default interaction priority within the queue	To customize the priority for specific types of interactions within this queue, choose a non-default priority level, then in the condition area, specify the conditions that receive the non-default priority. In the list, 1 equals the lowest default interaction priority, and 100 equals the highest interaction priority.
Add Interaction Rule	Click ⊕ to create an interaction priority rule.
If the value of the field	Choose a Local CRM field to enable the options available in the equals list such as Case: Priority. For details, refer to Configure CRM Fields.
equals	The values in this field varies based on what field you choose for Local CRM. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
Set interaction priority to	Choose a priority level for the interaction from 1 (lowest) to 100 (highest).

Interactions Tab Option	Description
Enable priority routing rule	Select to enable the routing rule in your Virtual Contact Center.

5. Define an interaction rule to specify a matching condition.
   a. Click ⊕ or **Interaction Rule**.
   b. Select a CRM field for **If value of the field**, such as Case: Priority.
   c. Select a value for **equals**. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
   d. Choose a value for **Set interaction priority to** from 1 to 100.
      This number sets the priority of the interactions that match the rule. For example, a platinum support customer gets a high priority, such as 90.
   e. Select the **Enable priority routing rule** check box to activate the rule.
   f. Click **Add this Rule**.
      The interaction rule appears in the list.
6. Repeat the above procedure to add more rules.
7. Click **Save**.

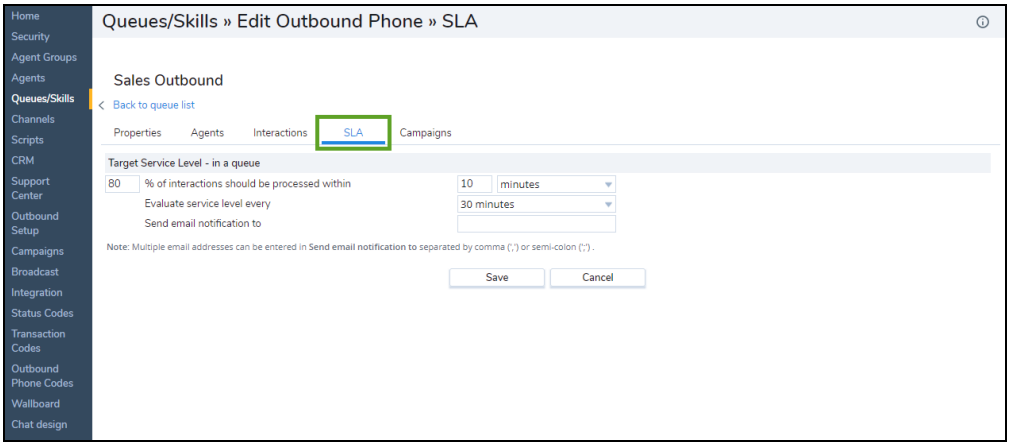
Define Outbound Phone Queue SLA

The Service Level Agreement (SLA) of a queue defines the target performance metrics of the queue. It includes the percentage of interactions processed within a specified time interval. You can set a target service level for each queue, and periodically evaluate the service level. You can also set up an alert notification to show if the service level falls below the specified threshold.

To define SLA for a phone queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the outbound phone queue you wish to modify, and click ✎.

3. Go to the **SLA** tab.



The following table summarizes the options under **Queues/Skills > Outbound Phone > SLA**.

SLA Tab Option	Description
% of interactions should be processed within	To specify the Service Level Agreement (SLA) threshold for the selected queue: 1. Type a percentage value as an integer from 0 to 100 percent, such as 40. 2. Type an integer number to indicate the time interval. 3. Choose the units of time specified by this value. The valid time intervals are: ■ For Phone and Chat queues: Seconds, Minutes, or Hours ■ For Email and Voicemail queues: Minutes or Hours
Evaluate service level every	Choose how frequently Virtual Contact Center compares the queue's performance to the SLA threshold defined for the queue.
Send email notification to	Type one or more comma-separated email addresses that should receive email notifications from Virtual Contact Center. The email is sent when the queue's performance level falls below the performance threshold specified for the queue.

4. Click **Save**.

View Campaign Assignments

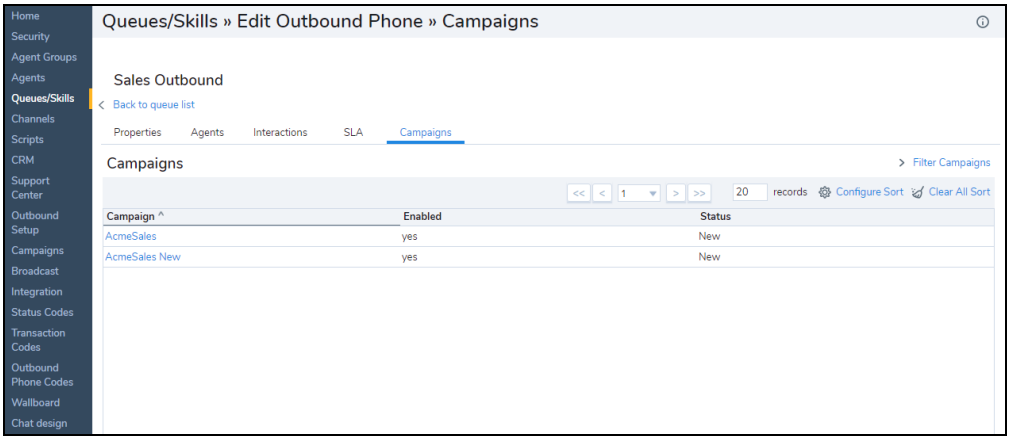
Virtual Contact Center requires you to direct all campaign calls through outbound queues. While defining a campaign, you must specify an outbound queue to direct the calls to. When a campaign executes, a target call list fetched from the

Local CRM is fed to an outbound phone queue. The queue offers calls to its members based on their skill set and availability.

The Campaigns tab for an existing outbound phone queue shows the campaigns assigned to the queue. The list shows all new, running, completed, purged, and stopped campaigns.

To view campaign assignments:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the outbound phone queue with a campaign assignment you wish to view, and click .
3. Go to the **Campaigns** tab.



All campaigns assigned to this outbound queue are listed. For details on creating and assigning campaigns to a queue, refer to Create a Campaign.

Create Chat Queues

Virtual Contact Center supports chat media, allowing agents to process chat interactions with its customers in a timed manner similar to processing phone calls. Chat interactions directed to your contact center enter a chat queue. In turn, the queue offers these interactions to its members based on their skill set and availability.

Configuring a chat queue involves:

- Defining chat queue properties
- Assigning chat queue members
- Configuring chat queue greetings

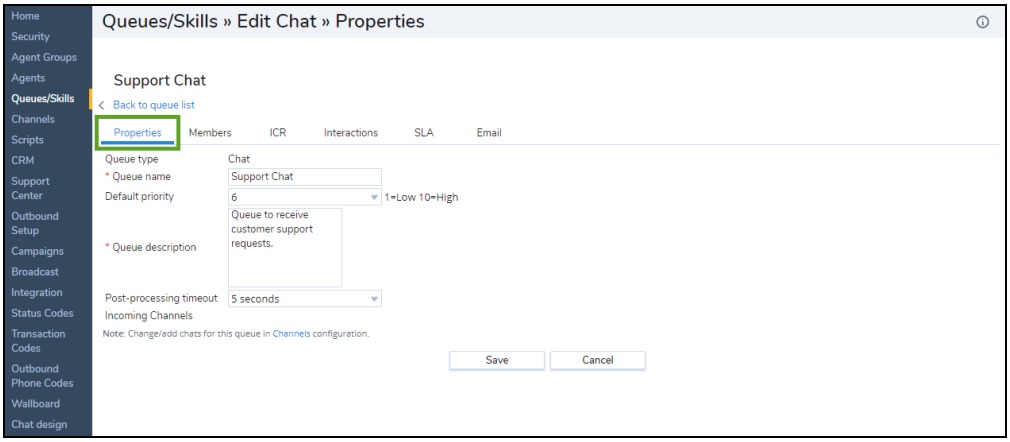
- Setting up chat queue message priority
- Defining chat queue SLA
- Configuring chat queue email fallback

Define Chat Queue Properties

Defining a chat queue begins with specifying primary properties such as queue name, default priority, post-processing timeout, and more. The Properties tab allows you to specify these properties.

To define chat queue properties:

1. From the Configuration Menu, open **Queues/Skills**.
2. Click ⊕ or **Chat**.
3. Enter the desired properties in the **Properties** tab.



The following table summarizes the options under **Queues/Skills > Chat > Properties**:

Properties Tab Option	Description
Queue type	Read-only reminder of the type of queue.
Queue name	Type a name for the queue.

Properties Tab Option	Description
Default Priority	Choose the priority for this queue, where 1 specifies the lowest priority and 10 specifies the highest priority. This defines the priority for interactions of all media. By default, Virtual Contact Center prioritizes the queues as follows: ■ Phone queue = 8 (highest default priority) ■ Chat queue = 6 ■ Voicemail queue = 4 ■ Email queue = 2 (lowest default priority) Based on your business needs, you can assign the desired priority for each queue.
Queue Description	Enter a description or note to remind you of the purpose of this queue.

Properties Tab Option	Description
Post-Processing Timeout	Choose how much time Virtual Contact Center must wait before assigning a new interaction from the queue to an agent who has just completed an interaction. The post-processing timeout enables agents servicing the selected queue to perform any necessary post-interaction tasks before receiving a new interaction. Choose **Manual** to enable agents assigned to this queue to use their Agent Console to explicitly make themselves available for new interactions. **Note:** The agent's idle timer is reset every time an interaction comes to an agent via a queue, and as soon as the agent ends the post processing. Log in and log out or changing the status does not reset the agent's timer. Also, if the agent transfers a call that comes via a queue to another agent, it resets the timer for Agent A but not for Agent B. See the following table for the complete list of activities that may or may not reset the agent's idle timer.

An agent's idle timer is reset by:	An agent's idle timer is not reset by:
Inbound Call via an Inbound Voice Queue	Accepting Direct-to-Agent Calls
Inbound Voicemail Call via an Inbound Voicemail Queue	Dialing Agent-to-Agent Calls
IVR Callback call via an Outbound Queue	Dialing a manual outbound call even if it makes the agent busy using an Outbound Phone Code (OPC) Queue
Web callback call via an Outbound Queue	Making a click-to-dial outbound call
Campaign call via an Outbound Queue	Agent-to-Agent Chat
Inbound Chat via an Inbound Chat Queue	Changing between logged in states such as Available, Working Offline, and On Break
Inbound Email via an Inbound Email Queue	Log in or Log out

4. Click **Save**.

After you define the queue properties, you are ready to assign members to the queue.

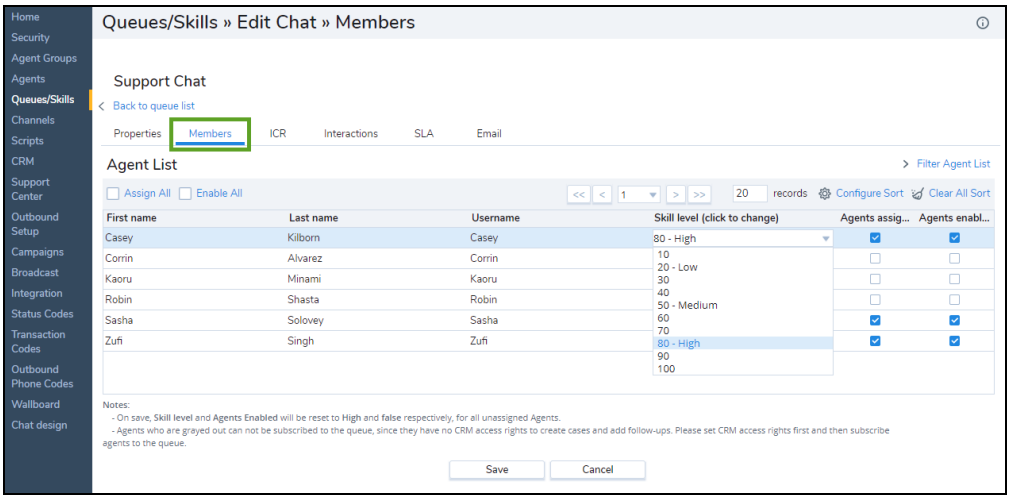
Assign Chat Queue Members

When you assign members to a chat queue, you allow them to process chat interactions that are initiated by customers and enter the queue. The queue uses skill-based routing to route the chat interactions based on the agents' skill sets. An agent with a higher skill level receives an interaction before an agent with a lower skill level does.

Go to Queues/Skills > Chat > Members to add, modify, or remove agents.

To assign members to a chat queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the chat queue you wish to assign members to, and click .
3. Go to the **Members** tab.



4. Select **Assign All** to assign all agents to the queue.
   OR
   Select **Agents assigned** to choose the desired agents only.
5. Click the **Skill level** for the agent serving the queue.
   The skill level can be selected from 10 to 100 (lowest to highest).

   The following table summarizes the options under **Queues/Skills > Chat > Members**:

Members Tab Option	Description
Assign All	Assigns all existing agents to this queue.
Enable All	To activate routing of interactions from this queue to all agents assigned to the queue.
Agents	For the selected queue, in the list of agents: ■ Select **Assign All** to assign all agents to the queue. ■ Select an individual agent to add that agent to the queue.
Skill Level	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated by ten numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Assigned	Assigns the selected agents to this queue.
Agents Enabled	Activates routing of interactions from this queue to selected agents assigned to the queue. You can assign but temporarily disable an agent.

6. Click **Save**.

Configure Chat Queue Greetings via ICR

Interactive Chat Response (ICR) refers to an automatic response from Virtual Contact Center to a customer's new chat request. Alternatively, you can use a chat script to design and control the chat flow. For details, refer to Enhanced Chat Script.

You can configure your chat response to collect some key data that identifies the customer before channeling the chat request to the chat queue. For example, you can gather a customer's unique account number and pass this information to agents while offering the chat interaction. Based on the account number, an agent can quickly view the customer information, and then accept the request. If an agent rejects a chat request, the request enters the queue again to be offered to the next available agent.

If a customer submits a chat request during closed hours, you can configure an alternative greeting to inform the customer of business hours.

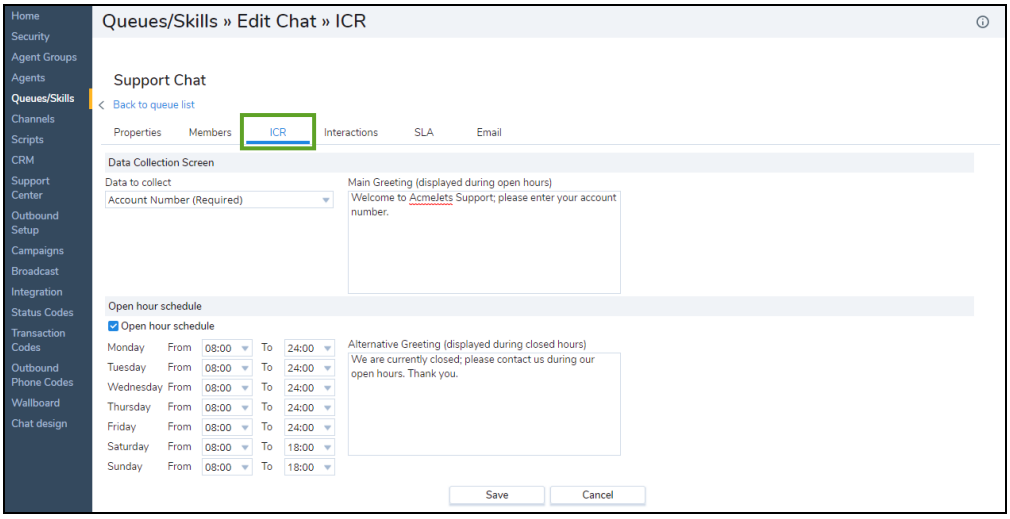
The ICR capability allows you to specify:

- CRM data to collect from a choice of options.
- A greeting to welcome customers, and a question to collect the desired CRM data.
- An open hour schedule for the chat media.
- An optional alternative greeting based on the specified schedule.

Go to Queues/Skills > Chat > ICR to specify a unique message for the chat interactions received during the open and closed hours.

To configure chat queue greetings:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the chat queue you wish to modify, and click .
3. Go to the **ICR** tab.



4. (Optional) Click **Data to collect** to select a field from the CRM customer data.
   You can allow a chat request to enter the queue without collecting any customer data.
5. (Optional) Type your **Main Greeting** to welcome customers.
   You can also add a question to collect the desired CRM data.
6. Enable **Open hour schedule** to specify a custom schedule and process chat interactions.
7. Enter an **Alternative Greeting** for the closed business hours. Alternative greetings do not apply to businesses that operate 24/7.

The following table summarizes the options under **Queues/Skills > Chat > ICR**:

ICR Tab Option	Description
Data to Collect	Choose the CRM data Virtual Contact Center prompts the user to submit before originating a new chat interaction. Choosing an entry enables the Main Greeting text entry area.
Main Greeting	To enable the Main Greeting text entry area, select a value for Data to Collect. In the Main Greeting, type a greeting message sent by Virtual Contact Center at the start of a new chat interaction. By default, Virtual Contact Center responds to a new chat interaction with the contents of the Main Greeting text entry area during both open and closed hours. To enable Virtual Contact Center to respond with an alternative greeting during closed hours of operation, select Open Hour Schedule, described later in this table.
Open Hour Schedule	If enabled, both scheduling and Alternative Greeting are activated. Choose the hours of operation for the chat queue. Virtual Contact Center responds to new chat interactions with the greeting from the Main Greeting text entry area during open hours, and from the Alternative Greeting area during closed hours.
Alternative Greeting	To enable Alternative Greeting, you must enable Open Hour Schedule. In Alternative Greeting, type a greeting message sent by Virtual Contact Center in response to a new chat interaction received during closed hours.

8. Click **Save**.

Set up Chat Queue Message Priority

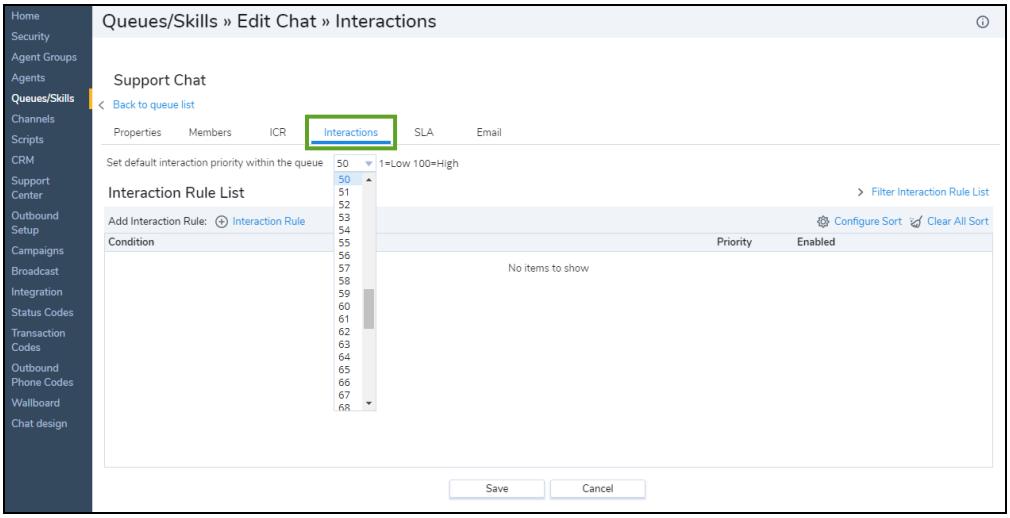
You can set custom priority for interactions in the queue based on the conditions you define. If an interaction meets the condition, it takes a higher or a lower priority than the default priority of the queue. To take advantage of this feature, you must use the Local CRM. Go to the Interactions tab to customize how the selected queue prioritizes specific types of interactions.

For example, AcmeJets has a support chat queue with a default priority set to 6.

This queue handles support inquiries from all customers. To better serve its premium customers before others, AcmeJets can define a higher interaction priority for interactions from premium customers by setting a condition to determine the customer type. When an interaction meets the condition, the interaction priority overrides the default priority of the queue, allowing agents to serve the premium customers faster.

To define custom priority for interactions:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the chat queue you wish to modify, and click .
3. Go to the **Interactions** tab.



4. Select a value for **Set Default Interaction Priority within the Queue**.
   The following table summarizes the options under **Queues/Skills > Chat > Interaction**:

Interactions Tab Option	Description
Set default interaction priority within the queue	To customize the priority for specific types of interactions within this queue, choose a non-default priority level, then in the condition area, specify the conditions that receive the non-default priority. In the list, 1 equals the lowest default interaction priority, and 100 equals the highest interaction priority.
Add Interaction Rule	Click to create an interaction priority rule.
If the value of the field	Choose a Local CRM field to enable the options available in the equals list such as Case: Priority. For details, refer to Configure CRM Fields.

Interactions Tab Option	Description
equals	The values in this field varies based on what field you choose for Local CRM. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
Set interaction priority to	Choose a priority level for the interaction from 1 (lowest) to 100 (highest).
Enable priority routing rule	Select to enable the routing rule in your Virtual Contact Center.

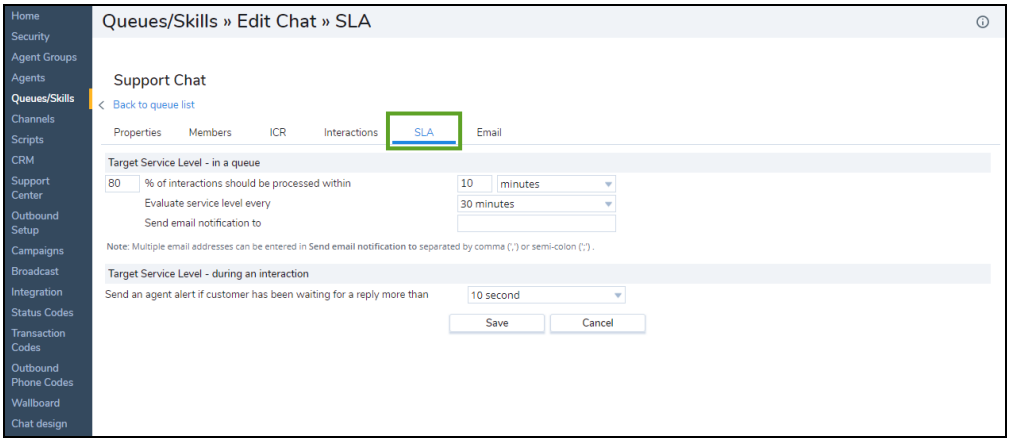
5. Define an interaction rule to specify a matching condition.
   a. Click ⊕ or **Interaction Rule**.
   b. Select a CRM field for **If value of the field**, such as Case: Priority.
   c. Select a value for **equals**. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
   d. Choose a value for **Set interaction priority to** from 1 to 100.
      This number sets the priority of the interactions that match the rule. For example, a platinum support customer gets a high priority, such as 90.
   e. Select the **Enable priority routing rule** check box to activate the rule.
   f. Click **Add this Rule**.
      The interaction rule appears in the list.
6. Repeat the above procedure to add more rules.
7. Click **Save**.

Define Chat Queue SLA

The Service Level Agreement (SLA) of a queue defines the target performance metrics of the queue. It includes the percentage of interactions processed within a specified time interval. You can set a target service level for each queue, and periodically evaluate the service level. You can also set up an alert notification to show if the service level falls below the specified threshold.

To define Service Level Agreement for a chat queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the chat queue you wish to modify, and click .
3. Go to the **SLA** tab.



The following table summarizes the options under **Queues/Skills > Chat > SLA**:

SLA Tab Option	Description
% of interactions should be processed within	To specify the Service Level Agreement (SLA) threshold for the selected queue: 1. Type a percentage value as an integer from 0 to 100 percent, such as 40. 2. Type an integer number to indicate the time interval. 3. Choose the units of time specified by this value. The valid time intervals are: ■ For Phone and Chat queues: Seconds, Minutes, or Hours ■ For Email and Voicemail queues: Minutes or Hours
Evaluate service level every	Choose how frequently Virtual Contact Center compares the queue's performance to the SLA threshold defined for the queue.
Send email notification to	Type one or more comma-separated email addresses that should receive email notifications from Virtual Contact Center. The email is sent when the queue's performance level falls below the performance threshold specified for the queue.

You can also choose to alert an agent if a customer has been waiting for a reply in chat for a certain amount of time.

4. Click **Save**.

Configure Chat Queue Email Fallback

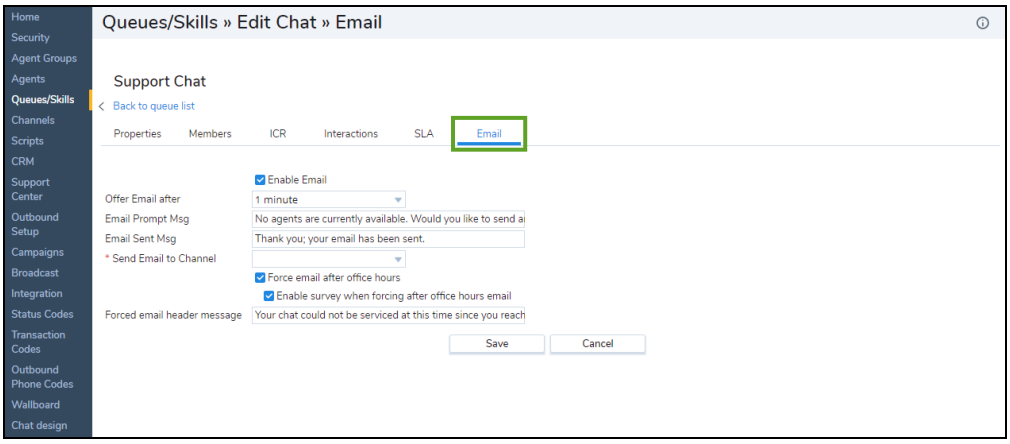
Stagnating chat requests in a queue for too long is not desirable to customers. If a chat request has been waiting in the queue for too long, as a fallback option, you can offer to send it as an email as a fallback option, rather than continue waiting for a chat agent.

You can:

- Enable email fallback for a chat queue.
- Specify a duration after which to offer the waiting chat requests the option to send an email.
- Select a message prompting for email, and a message confirming the sent mail.
- Specify after-hours email settings.

To configure email fallback for a chat queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the chat queue you wish to modify, and click .
3. Go to the **Email** tab.



The following table summarizes the options under **Queues/Skills > Chat > Email**:

Email Tab Option	Description
Enable Email	If selected, Virtual Contact Center offers the option of sending an email message for the overflow chat interactions instead of waiting.

Email Tab Option	Description
Offer Email after	Select a time period from the menu to indicate how long a chat interaction must wait in the chat queue before being offered the option of sending an email.
Email Prompt Msg	Type the question Virtual Contact Center asks the users when offering the overflow chat interactions the option of sending email. For example: "All our agents are busy. Would you like to send an email?"
Email Sent Msg	Type the confirmation message sent by Virtual Contact Center after receiving an email message from an overflow chat interaction. For example: "Thank you; your email has been sent."
Send Email to Channel	Select the destination email channel to send messages sent from an overflow chat interaction.
Force email after office hours	Select to automatically direct the user to send an email message whenever the chat queue is closed for business. For details on configuring chat queue hours of operation, refer to Configure Chat Queue Greetings via ICR.
Enable survey when forcing after office hours email	This option is enabled only if you select **Force email after office hour** first. If enabled, the overflow chat interaction is offered the opportunity to complete a customer chat survey. This requires the chat survey to be set up in the Support Center. For details on setting up chat survey in the Support Center, refer to Summary of Support Center Properties Tab Options.
Force email header message	This option is enabled only if you select **Force email after office hour** first. Type the header of the email messages you want to send. For example: "A chat interaction could not be serviced because it was received during the closed hours."

4. Click **Save**.
   With this step, the chat queue configuration is complete.

Create Email Queues

Virtual Contact Center supports email media allowing agents to process email interactions in a timed manner similar to processing phone calls. Emails directed to a specified email address of your contact center enter an email queue. In

turn, the queue offers these interactions to its members based on their skill set and availability. You can set up any email address to serve as your email channel.

Configuring an email queue involves:

- Defining email queue properties
- Assign Email Queue Members
- Setting up email queue message priority
- Defining email queue SLA

Define Email Queue Properties

To define an email queue, you need to specify the primary properties, such as queue name, default priority, email processing timeout, and more. The Properties tab under Queues/Skills > Email allows you to define these properties.

To define email queue properties:

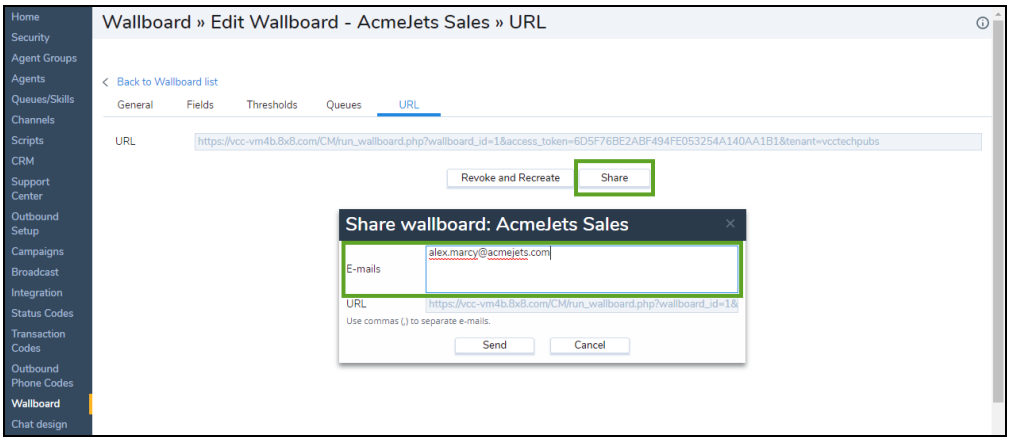
1. From the Configuration Menu, open **Queues/Skills**.
2. Click ⊕ or **Email**.
3. Enter the desired properties in the **Properties** tab.
   The following table summarizes the options under **Queues/Skills > Email > Properties**:

Properties Tab Option	Description
Queue Type	Read-only reminder of the type of queue.
Queue Name	Enter a name for the queue.
Default Priority	Choose the priority for this queue, where 1 specifies the lowest priority and 10 specifies the highest priority. This defines the priority for interactions of all media. By default, Virtual Contact Center prioritizes the queues as follows: ■ Phone queue = 8 (highest default priority) ■ Chat queue = 6 ■ Voicemail queue = 4

Properties Tab Option	Description
	■ Email queue = 2 (lowest default priority) Based on your business needs, you can assign the desired priority for each queue.
Email Processing Timeout	Choose how much time Virtual Contact Center must wait before assigning a new interaction from the queue to an agent who has just completed an interaction. The post-processing timeout enables agents servicing the selected queue to perform any necessary post-interaction tasks before receiving a new interaction. Choose **Manual** to enable agents assigned to this queue to use their Agent Console to explicitly make themselves available for new interactions. **Note:** The agent's idle timer is reset every time an interaction comes to an agent via a queue, and as soon as the agent ends the post processing. Log in and log out or changing the status does not reset the agent's timer. Also, if the agent transfers a call that comes via a queue to another agent, it resets the timer for Agent A but not for Agent B. See the following table for the complete list of activities that may or may not reset the agent's idle timer.

An agent's idle timer is reset by:	An agent's idle timer is not reset by:
Inbound Call via an Inbound Voice Queue	Accepting Direct-to-Agent Calls
Inbound Voicemail Call via an Inbound Voicemail Queue	Dialing Agent-to-Agent Calls
IVR Callback call via an Outbound Queue	Dialing a manual outbound call even if it makes the agent busy using an Outbound Phone Code (OPC) Queue
Web callback call via an Outbound Queue	Making a click-to-dial outbound call
Campaign call via an Outbound Queue	Agent-to-Agent Chat
Inbound Chat via an Inbound Chat Queue	Changing between logged in states such as Available, Working Offline, and On Break
Inbound Email via an Inbound Email Queue	Log in or Log out

Properties Tab Option	Description
Queue Signature	Type the default signature appended to all email responses sent by an agent in response to an email interaction.



4. Click **Save**.

After you define the queue properties, you are ready to assign members to the queue.

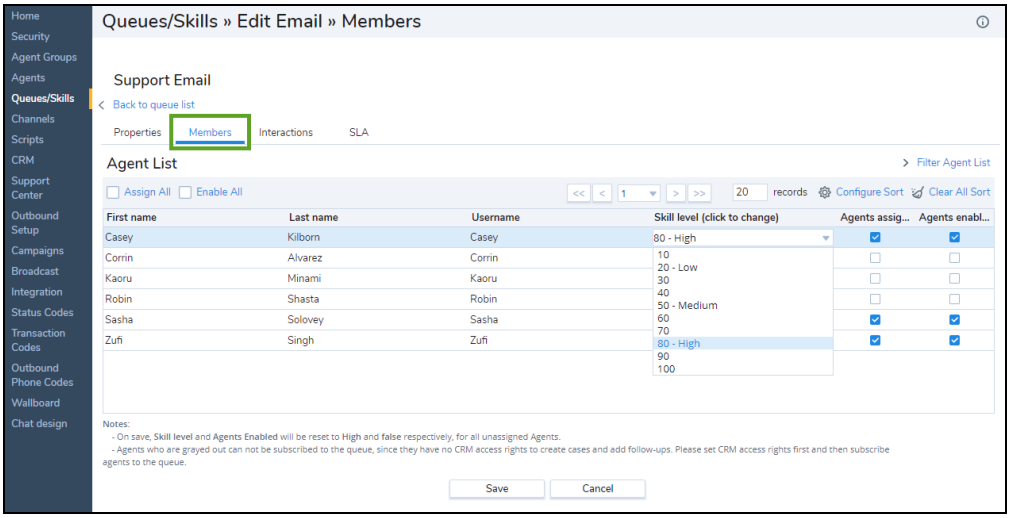
Assign Email Queue Members

When you assign members to an email queue, you allow the members to receive emails that enter the queue. The queue uses skill-based routing to route the emails based on the agents' skill sets. An agent with a higher skill level receives an interaction before an agent with a lower skill level does. Go to Queues/Skills > Email > Members to add, modify, or remove agents.

To assign members to an email queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the email queue you wish to assign members to, and click .

3. Go to the **Members** tab.



4. Select **Assign All** to assign all agents to the queue.

   OR

   Select **Agents assigned** to choose the desired agents only.

5. Click the **Skill level** for the agent serving the queue.

   The skill level can be selected from 10 to 100 (lowest to highest).

   The following table summarizes the options under **Queues/Skills > Email > Members**:

Members Tab Option	Description
Assign All	Assigns all existing agents to this queue.
Enable All	To activate routing of interactions from this queue to all agents assigned to the queue.
Agents	For the selected queue, in the list of agents: ■ Select **Assign All** to assign all agents to the queue. ■ Select an individual agent to add that agent to the queue.
Skill Level	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated

Members Tab Option	Description
	by ten numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Assigned	Assigns the selected agents to this queue.
Agents Enabled	Activates routing of interactions from this queue to selected agents assigned to the queue. You can assign but temporarily disable an agent.

6. Select **Agents enabled** or **Enable All** to activate routing of interactions from this queue to the selected agents.
7. Click **Save**.

Set up Email Queue Message Priority

You can set custom priority for interactions in the queue based on the conditions you define. If an interaction meets the condition, it takes a higher or a lower priority than the default priority of the queue. To take advantage of this feature, you must use the Local CRM. Go to the Interactions tab to customize how the selected queue prioritizes specific types of interactions.

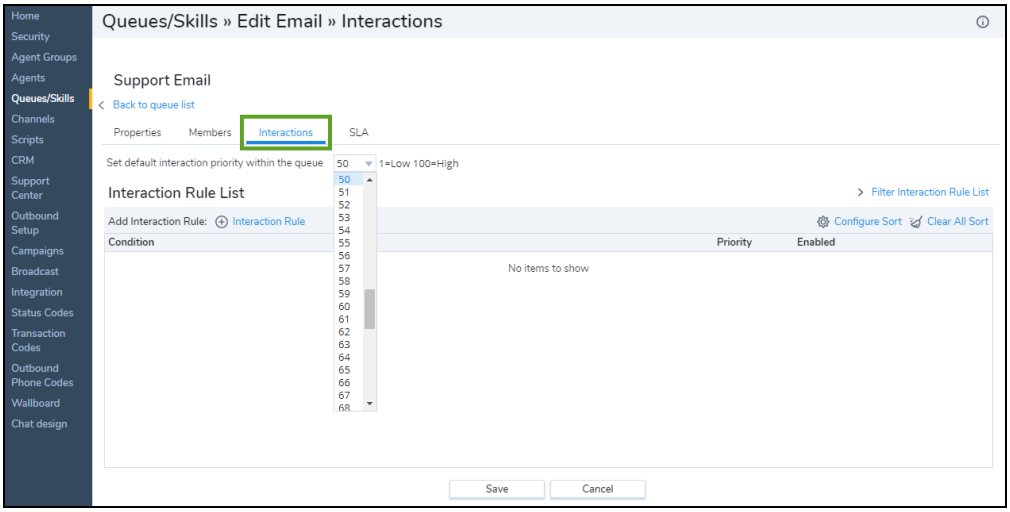
For example, AcmeJets has an email support queue with a default priority set to 2.

This queue handles support inquiries from all customers. To better serve its premium customers before others, AcmeJets can define a higher interaction priority for interactions from premium customers by setting a condition to determine the customer type. When an interaction meets the condition, the interaction priority overrides the default priority of the queue, allowing agents to serve the premium customers faster.

To define custom priority for interactions:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the email queue you wish to modify, and click .

3. Go to the **Interactions** tab.



4. Select a value for **Set Default Interaction Priority within the Queue**.

The following table summarizes the options under **Queues/Skills > Outbound Phone > Interactions**:

Interactions Tab Option	Description
Set default interaction priority within the queue	To customize the priority for specific types of interactions within this queue, choose a non-default priority level, then in the condition area, specify the conditions that receive the non-default priority. In the list, 1 equals the lowest default interaction priority, and 100 equals the highest interaction priority.
Add Interaction Rule	Click ⊕ to create an interaction priority rule.
If the value of the field	Choose a Local CRM field to enable the options available in the equals list such as Case: Priority. For details, refer to Configure CRM Fields.
equals	The values in this field varies based on what field you choose for Local CRM. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
Set interaction priority to	Choose a priority level for the interaction from 1 (lowest) to 100 (highest).

Interactions Tab Option	Description
Enable priority routing rule	Select to enable the routing rule in your Virtual Contact Center.

5. Define an interaction rule to specify a matching condition.
   a. Click or **Interaction Rule**.
   b. Select a CRM field for **If value of the field**, such as Case: Priority.
   c. Select a value for **equals**. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
   d. Choose a value for **Set interaction priority to** from 1 to 100.
      This number sets the priority of the interactions that match the rule. For example, a platinum support customer gets a high priority, such as 90.
   e. Select the **Enable priority routing rule** check box to activate the rule.
   f. Click **Add this Rule**.
      The interaction rule appears in the list.
6. Repeat the above procedure to add more rules.
7. Click **Save**.

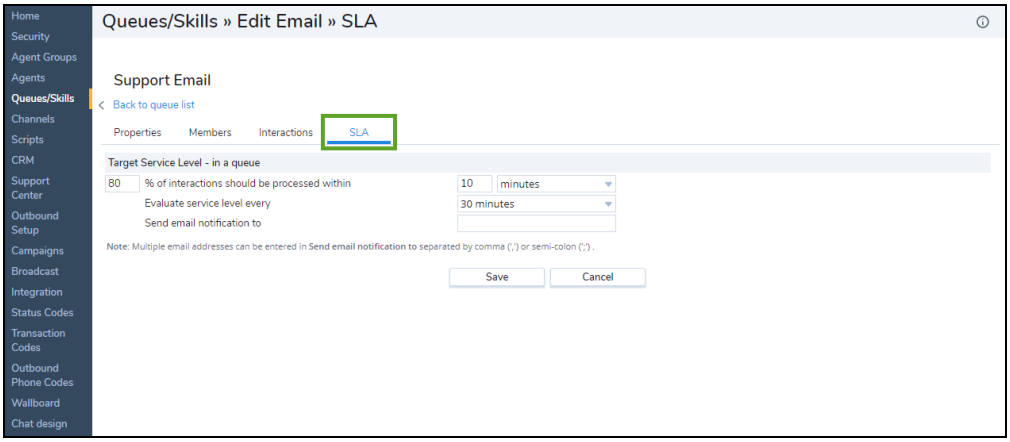
Define Email Queue SLA

Service Level Agreement (SLA) for a queue defines the target performance metrics of a queue. This includes the percentage of emails processed within a specified time interval. You can set a target service level for each queue, and periodically evaluate the service level. You can also set up an alert notification to show if the service level falls below the specified threshold.

To define SLA for an email queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the email queue you wish to modify, and click .

3. Go to the **SLA** tab.



The following table summarizes the options under **Queues/Skills > Email > SLA**:

SLA Tab Option	Description
% of interactions should be processed within	To specify the Service Level Agreement (SLA) threshold for the selected queue: 1. Type a percentage value as an integer from 0 to 100 percent, such as 40. 2. Type an integer number to indicate the time interval. 3. Choose the units of time specified by this value. The valid time intervals are: ■ For Phone and Chat queues: Seconds, Minutes, or Hours ■ For Email and Voicemail queues: Minutes or Hours
Evaluate service level every	Choose how frequently Virtual Contact Center compares the queue's performance to the SLA threshold defined for the queue.
Send email notification to	Type one or more comma-separated email addresses that should receive email notifications from Virtual Contact Center. The email is sent when the queue's performance level falls below the performance threshold specified for the queue.

4. Click **Save**.
With this step, the queue configuration is complete.

Create Voicemail Queues

Virtual Contact Center supports processing voicemails similar to phone calls. Voicemails left for Virtual Contact Center are directed to a voicemail queue. In turn, the queue offers voicemails to agents based on their skill set and availability.

Configuring a Voicemail queue involves:

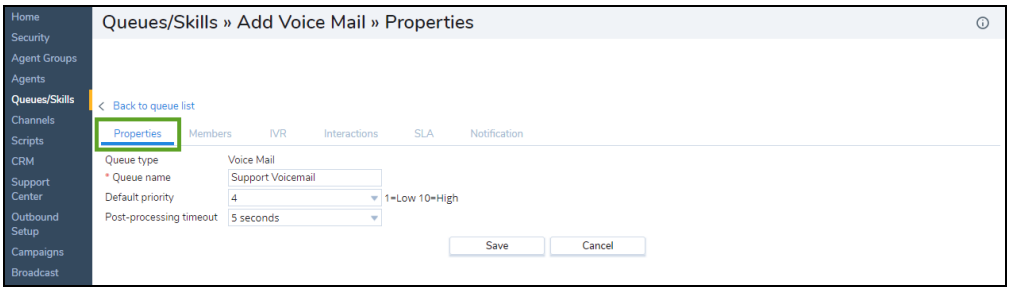
- Defining voicemail queue properties
- Assigning voicemail queue members
- Configuring voicemail delivery message
- Setting up voicemail queue message priority
- Defining voicemail queue SLA
- Configuring voicemail notification

Define Voicemail Queue Properties

To define a voicemail queue, you need to specify the primary properties such as queue name, default priority, post-processing timeout, and more. The Properties tab under Queues/Skills > Voice Mail lets you specify the primary properties of the voicemail queue.

To define voicemail queue properties:

1. From the Configuration Menu, open **Queues/Skills**.
2. Click ⊕ or **Voice Mail**.
3. Enter the desired properties in the **Properties** tab.



The following table summarizes the options under **Queues/Skills > Voicemail > Properties**:

Properties Tab option	Description
Queue type	Read-only reminder of the type of queue.
Queue name	Enter a name for the queue.
Default Priority	Choose the priority for this queue, where 1 specifies the lowest priority and 10 specifies the highest priority. This defines the priority for interactions of all media. By default, Virtual Contact Center prioritizes the queues as follows: ■ Phone queue = 8 (highest default priority) ■ Chat queue = 6 ■ Voicemail queue = 4 ■ Email queue = 2 (lowest default priority) Based on your business needs, you can assign the desired priority for each queue.

Properties Tab option	Description
Post-Processing Timeout	Choose how much time Virtual Contact Center must wait before assigning a new interaction from the queue to an agent who has just completed an interaction. The post-processing timeout enables agents servicing the selected queue to perform any necessary post-interaction tasks before receiving a new interaction. Choose **Manual** to enable agents assigned to this queue to use their Agent Console to explicitly make themselves available for new interactions. **Note:** The agent's idle timer is reset every time an interaction comes to an agent via a queue, and as soon as the agent ends the post processing. Log in and log out or changing the status does not reset the agent's timer. Also, if the agent transfers a call that comes via a queue to another agent, it resets the timer for Agent A but not for Agent B. See the following table for the complete list of activities that may or may not reset the agent's idle timer.

An agent's idle timer is reset by:	An agent's idle timer is not reset by:
Inbound Call via an Inbound Voice Queue	Accepting Direct-to-Agent Calls
Inbound Voicemail Call via an Inbound Voicemail Queue	Dialing Agent-to-Agent Calls
IVR Callback call via an Outbound Queue	Dialing a manual outbound call even if it makes the agent busy using an Outbound Phone Code (OPC) Queue
Web callback call via an Outbound Queue	Making a click-to-dial outbound call
Campaign call via an Outbound Queue	Agent-to-Agent Chat
Inbound Chat via an Inbound Chat Queue	Changing between logged in states such as Available, Working Offline, and On Break
Inbound Email via an Inbound Email Queue	Log in or Log out

4. Click **Save**.

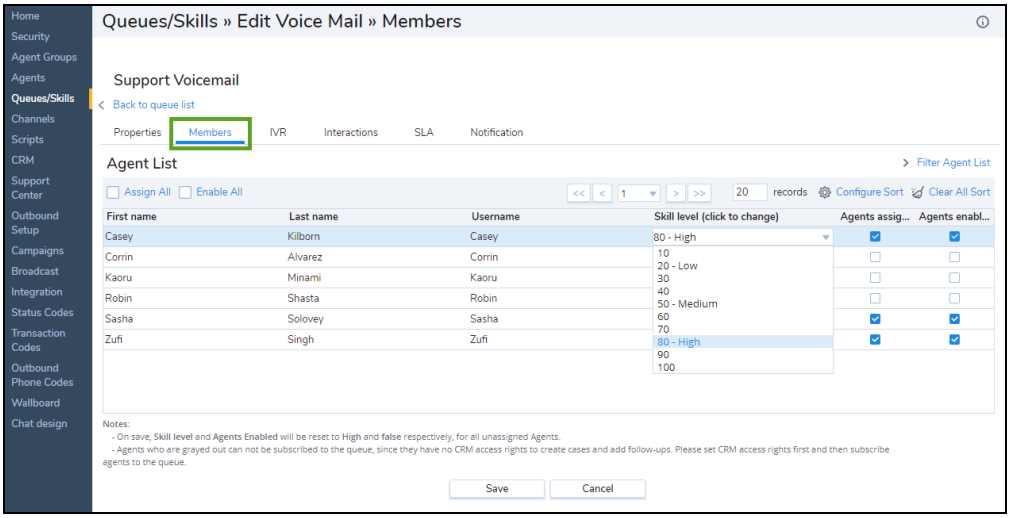
After you define the queue properties, you are ready to assign members to the queue.

Assign Voicemail Queue Members

When you assign members to a voicemail queue, you allow them to process voicemail interactions that enter the queue. The queue uses skill-based routing to route the voicemail based on the agents' skill set. An agent with a higher skill level receives an interaction before an agent with a lower skill level does. Go to Queues/Skills > Voice Mail > Members to add, modify, or remove agents.

To assign members to a voicemail queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the voicemail queue you wish to assign members to, and click .
3. Go to the **Members** tab.



4. Select **Assign All** to assign all agents to the queue.
   OR
   Select **Agents assigned** to choose the desired agents only.
5. Click the **Skill level** for the agent serving the queue.
   The skill level can be selected from 10 to 100 (lowest to highest).

   The following table summarizes the options under **Queues/Skills > Voicemail > Members**:

Members Tab Option	Description
Assign All	Assigns all existing agents to this queue.
Enable All	To activate routing of interactions from this queue to all agents assigned to the queue.
Agents	For the selected queue, in the list of agents: ■ Select **Assign All** to assign all agents to the queue. ■ Select an individual agent to add that agent to the queue.
Skill Level	Indicates the skill level of the agent for that queue. The skill level determines the routing of interactions within a queue. Virtual Contact Center attempts to direct interactions to an agent with a higher skill level before directing them to an agent with a lower skill level. Skill levels are now indicated by ten numerical values ranging from 10 to 100 with an increment of 10, with 10 being the lowest value and 100 being the highest. Assign the agent's skill level from the drop-down menu of options.
Agents Assigned	Assigns the selected agents to this queue.
Agents Enabled	Activates routing of interactions from this queue to selected agents assigned to the queue. You can assign but temporarily disable an agent.

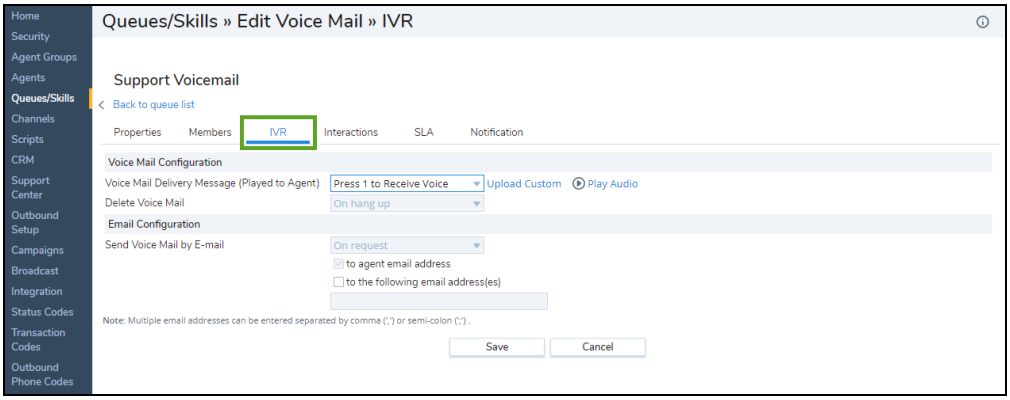
6. Select **Agents enabled** or **Enable All** to activate routing of interactions from this queue to the selected agents.
7. Click **Save**.

Configure Voicemail Delivery Message

When an agent accepts a voicemail interaction, a voicemail delivery message is played to inform the agent that a voicemail message is being offered. With the default setting, a prompt is offered to the agent to press 1 to receive the voicemail as an email attachment, or hang up to delete the voicemail. However, you can upload a custom voicemail delivery message and configure it to suit your contact center's needs. You can also configure to email the voicemail to one or multiple email addresses.

To define interactive voicemail configuration:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the voicemail queue you wish to modify, and click .
3. Go to the **IVR** tab.



The following table summarizes the options under **Queues/Skills > Voicemail > IVR**:

IVR Tab Option	Description
Voice Mail Delivery Message (Played to Agent)	Select a message to be played by Virtual Contact Center to inform the agent of a voicemail message waiting in the queue.
Upload Custom	Click **Upload Custom** to upload a custom voicemail delivery message.
Play Audio	Click **Play Audio** to play the currently selected voicemail delivery message.
Delete Voice Mail	To enable **Delete Voice Mail**, you must upload a custom voicemail delivery message first. ■ Select **On hang up** to delete a queued voicemail message after the agent hangs up. ■ Select **On agent confirmation** to delete a queued voicemail message after the agent presses the telephone's * key.
Send Voice Mail by E-mail	To enable **Send Voice Mail by Email**, you must upload a custom voicemail delivery message first. You can enter the agent's email address, or send it to more than one email by entering multiple addresses separated by comma (,) or semicolon (;). ■ Select **Never** to never send a queued voicemail message to an agent as an email attachment.

IVR Tab Option	Description
	■ Select **On request** to enable an agent to request that Virtual Contact Center send a queued voicemail message as an email attachment. ■ Select **Always** to always send a queued voicemail message to an agent as an email attachment.

4. Click **Save**.

Set up Voicemail Queue Message Priority

You can set custom priority for interactions in the queue based on the conditions you define. If an interaction meets the condition, it takes a higher or a lower priority than the default priority of the queue. To take advantage of this feature, you must use the Local CRM. Go to the Interactions tab to customize how the selected queue prioritizes specific types of interactions.

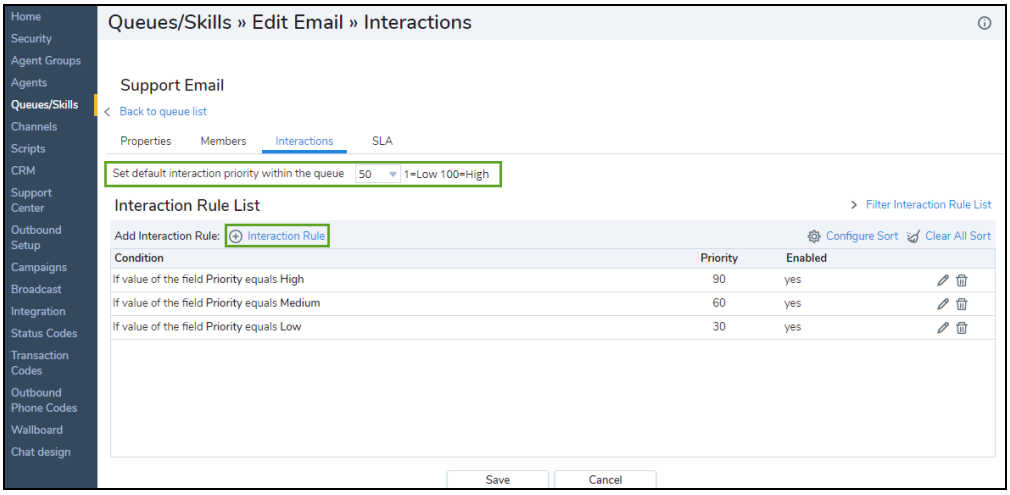
For example, AcmeJets has a support voicemail queue with a default priority set to 50.

This queue handles support inquiries from all customers. To better serve its premium customers before others, AcmeJets can define a higher interaction priority for interactions from premium customers by setting a condition to determine the customer type. When an interaction meets the condition, the interaction priority overrides the default priority of the queue, allowing agents to serve the premium customers faster.

To define custom priority for interactions:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the voicemail queue you wish to modify, and click .

3. Go to the **Interactions** tab.



4. Select a value for **Set Default Interaction Priority within the Queue**.

The following table summarizes the options under **Queues/Skills > Voicemail > Interactions**:

Interactions Tab Option	Description
Set default interaction priority within the queue	To customize the priority for specific types of interactions within this queue, choose a non-default priority level, then in the condition area, specify the conditions that receive the non-default priority. In the list, 1 equals the lowest default interaction priority, and 100 equals the highest interaction priority.
Add Interaction Rule	Click ⊕ to create an interaction priority rule.
If the value of the field	Choose a Local CRM field to enable the options available in the equals list such as Case: Priority. For details, refer to Configure CRM Fields.
equals	The values in this field varies based on what field you choose for Local CRM. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
Set interaction priority to	Choose a priority level for the interaction from 1 (lowest) to 100 (highest).

Interactions Tab Option	Description
Enable priority routing rule	Select to enable the routing rule in your Virtual Contact Center.

5. Define an interaction rule to specify a matching condition.
   a. Click ⊕ or **Interaction Rule**.
   b. Select a CRM field for **If value of the field**, such as Case: Priority.
   c. Select a value for **equals**. For example, for Case: Priority in the CRM field, you can choose Low, Medium, or High.
   d. Choose a value for **Set interaction priority to** from 1 to 100.
      This number sets the priority of the interactions that match the rule. For example, a platinum support customer gets a high priority, such as 90.
   e. Select the **Enable priority routing rule** check box to activate the rule.
   f. Click **Add this Rule**.
      The interaction rule appears in the list.
6. Repeat the above procedure to add more rules.
7. Click **Save**.

Define Voicemail Queue SLA

The Service Level Agreement (SLA) of a queue defines the target performance metrics of the queue. It includes the percentage of interactions processed within a specified time interval. You can set a target service level for each queue, and periodically evaluate the service level. You can also set up an alert notification to show if the service level falls below the specified threshold.

To define Service Level Agreement for a voicemail queue:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the voicemail queue you wish to modify, and click ✎.
3. Go to the **SLA** tab.
4. Enter values for SLA.

The following table summarizes the options under **Queues/Skills > Voicemail > SLA**:

SLA Tab Option	Description
% of interactions should be processed within	To specify the Service Level Agreement (SLA) threshold for the selected queue: 1. Type a percentage value as an integer from 0 to 100 percent, such as 40. 2. Type an integer number to indicate the time interval. 3. Choose the units of time specified by this value. The valid time intervals are: ■ For Phone and Chat queues: Seconds, Minutes, or Hours ■ For Email and Voicemail queues: Minutes or Hours
Evaluate service level every	Choose how frequently Virtual Contact Center compares the queue's performance to the SLA threshold defined for the queue.
Send email notification to	Type one or more comma-separated email addresses that should receive email notifications from Virtual Contact Center. The email is sent when the queue's performance level falls below the performance threshold specified for the queue.

5. Click **Save**.

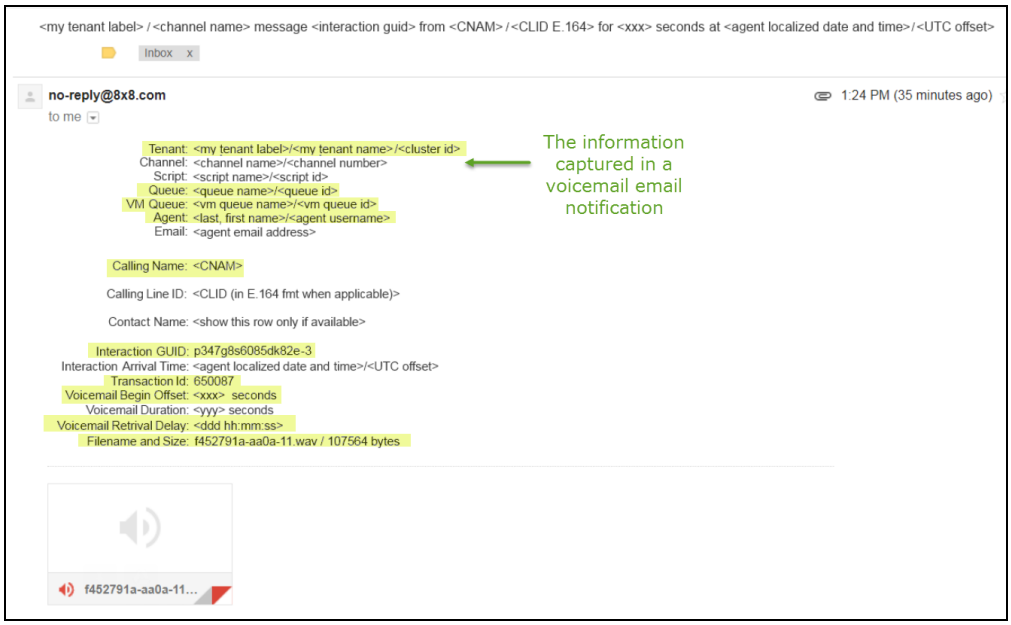
Configure Voicemail Notification

By default, voicemails are sent to the queues and offered to the next available agent. You can configure Configuration Manager to send voicemails as WAV file attachments directly to an email address. With this setup, agents do not have to retrieve voicemails from a queue. You can also configure Configuration Manager to automatically remove voicemails from a queue. An email notification for a voicemail is generated as a result of:

- **Voicemail Queue Notification:** When a caller leaves a voicemail via a voicemail queue, an email notification is sent to the email address configured for the voicemail queue.
- **IVR Settings for Voicemail:** A voicemail being sent to an agent from the voicemail queue. The agent requests an email to be sent to the agent.
- **Transferring to Agent Voicemail:** A voicemail being sent to an agent after the caller calls and leaves a voicemail in the agent’s voice box.

The voicemail email notification provides the transaction ID, allowing you to track the queued voicemails better. Additionally, you can retrieve the following information from a voicemail notification sent by email:

- Tenant name
- Cluster ID
- Phone queue ID
- Voicemail queue ID
- Calling name
- Interaction GUID of the inbound phone queue
- Transaction ID of the inbound phone interaction
- Voicemail begin offset
- Filename
- Agent name
- Voicemail retrieval delay



To configure voicemail notification:

1. From the Configuration Menu, open **Queues/Skills**.
2. Find the voicemail queue you wish to modify, and click .
3. Go to the **Notification** tab.

4. Select **Enabled** to enable the notification.
5. Specify the **Email Address(es)** to which voicemail attachments must be sent.
   The following table summarizes the options under **Queues/Skills > Voicemail > Notification**:

Notification Tab Option	Description
Enabled	To enable voicemail notification sent by email regardless of the agent status.
Email Addresses	To send voicemail in an email attachment to the specified email addresses.
Delete from Queue	If enabled, it automatically removes the voicemail from the queue after sending an email attachment. If disabled, it sends a voicemail to the specified email address and forwards it to the voicemail queue. When the agent logs in to Agent Console, the voicemail is presented in the queue.

6. Check **Delete from queue** to delete the voicemail from the voicemail queue after sending the email attachments.
7. Click **Save**.
   With this step, the configuration of a voicemail queue is complete.

Create and Configure Channels

A channel facilitates communication of interactions in and out of a Virtual Contact Center tenant. When an interaction comes to the channel via phone, email, chat, or social media, it is directed to the appropriate queues via skill-based routing rules. For example, a phone channel directs inbound phone calls from customers to contact center agents, or an email channel is an email address that your customers use to send email requests to the contact center.

Virtual Contact Center supports interactions of all media:

- **Phone**: Process inbound and outbound phone interactions using the phone channels. A phone channel is automatically crated when a number is ordered for the tenant through provisioning
- **Email**: Process inbound and outbound email interactions using the email channels. Email channels are created by the Virtual Contact Center administrator in Virtual Contact Center.
- **Chat**: Process incoming chat requests using the chat channels and direct chat requests from customers to contact center agents. Chat channels are created by the Virtual Contact Center administrator in Virtual Contact Center.
- **Social**: Process incoming chat requests from Facebook and Twitter and allow agents to accept and handle chat requests from social media. Social channels are created by the Virtual Contact Center administrator in Virtual Contact Center.

Features

- Facilitate communication of interactions in and out of a Virtual Contact Center tenant.
- Interact directly with the appropriate queues via skill-based routing rules.
- Create automatic phone channels through provisioning with every new order of telephone numbers.
- Configure existing phone numbers and email addresses to function as Virtual Contact Center channels.

- Direct messages received in Facebook and Twitter to the chat channels in Virtual Contact Center.
- Create, edit, and delete email, chat, and social channels, while the phone channels can only be edited.

Creating channels involves:

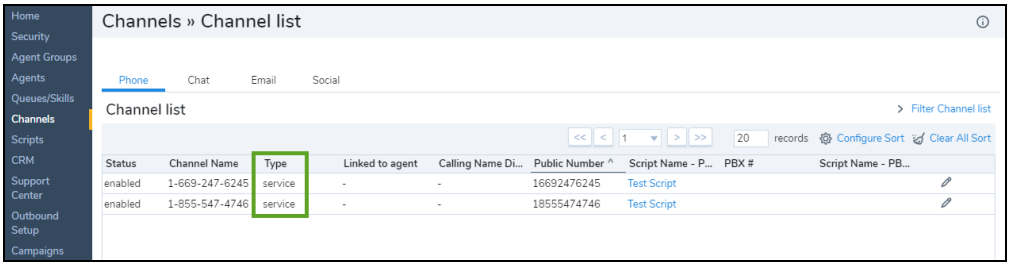
- Setting up phone channels
- Setting up email channels
- Setting up chat channels
- Setting up social channels
- Assigning scripts to channels

Note: You can add email and chat channels from Configuration Manager, but not any phone channels.

Set up Phone Channels

A phone channel processes inbound phone interactions in a Virtual Contact Center tenant via Service Channels. A **Service channel** is a regular phone channel associated with a telephone number. It is automatically created when a number is ordered for the tenant through provisioning. You can edit a service channel, and enable or disable it in Configuration Manager. An IVR script is linked to the service channel by default.

Phone channels in the Virtual Contact Center define phone numbers that your customers use to call your contact center.



Service phone channels can only be added or removed from your Virtual Contact Center tenant by a Virtual Contact Center representative. The representative coordinates the acquisition and routing of the phone number to the 8x8 platform that hosts your tenant.

Features

- Facilitate inbound phone interactions in a Virtual Contact Center tenant via Service channels.
- Interact directly with the appropriate phone queues via skill-based routing rules.
- Automatic creation of Service channels with numbers ordered for the tenant through provisioning.
- Ability to edit enable, and disable Service channels via Configuration Manager.
- Access to a default IVR script linked to the Service channel.

Setting up a phone channel involves:

- Configuring phone channel properties
- Creating a phone IVR script
- Assigning a script to the phone channel

Configure Phone Channel Properties

Configuring a phone channel in Virtual Contact Center involves:

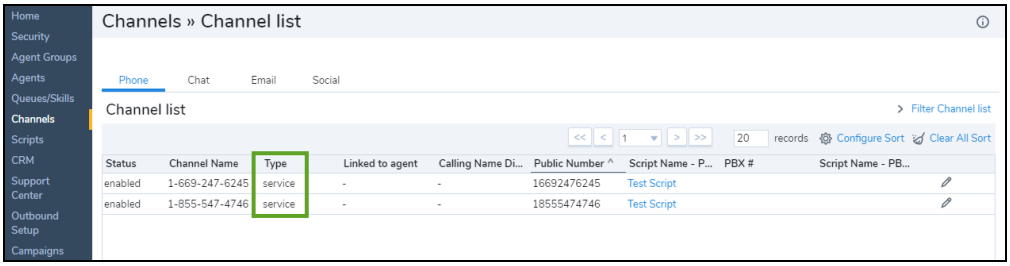
- Configuring channel properties.
- Creating a phone IVR script.

To configure the properties for a phone channel, you must specify the channel name, choose a phone format, and select the phone script for the channel. You can define a new script or copy an existing one in the tenant. A script refers to instructions that specify call treatment choices.

Go to **Channels > Phone > Properties** to specify the primary properties of the phone channel. Configuration Manager displays a list of Service Channels under Channels > Phone.

To configure phone channel properties:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Phone** tab.



3. From the list of channels, select a Service phone channel, and click .

   The **Properties** tab opens.

4. Enter or select values for the channel.

   The following table summarizes the options under **Channels > Phone > Properties**:

Service Phone Channel Property	Description
Channel Type	Read-only reminder of the type of channel.
Number	Read-only reminder of the channel's phone number. 8x8 defines your phone numbers when it provisions your Virtual Contact Center tenant.
Calling Name Display	Read-only reminder. Refers to the Calling Name Display (CNAM) that is used when the outbound calls use the associated public number as outgoing Calling Line ID (CLI).
Channel name	Type the name of this phone channel. Read-only agent name; also represents the channel name that is linked to the agent's public or PBX number. Agent Console displays the channel name when the agent receives an incoming phone interaction.
Display phone format	Select the phone display format. Agent Console uses this format to display the inbound phone numbers: ■ US standard [x-xxx-xxx-xxxx] (the default display mode) ■ US short [xxx-xxxx] ■ Australian (6 digits) [xx-xx-xx] ■ Australian (8 digits) [xxxx-xxxx] ■ Australian (10 digits) [xx-xxxx-xxxx] ■ French standard [xx-xx-xx-xx-xx] ■ No format [*]
IVR Script	You can select the default IVR script from the drop-down menu or select any existing IVR script in the tenant.

Service Phone Channel Property	Description
	Note: for best practice, create an IVR script first, and then configure the channel.
Link Channel to an agent	Allows you to link this phone channel to an agent. By clicking the link, a list of agents shows up. You can select an agent and click **Assign** to create a personal channel to the agent.
This channel is enabled	Select to enable this channel for service. Enable a channel only after your contact center is ready to receive interactions on the channel.

5. Click **Save**.

Set up Email Channels

An email channel in Virtual Contact Center defines an email address that your customers use to send email requests to the contact center, such as support@acmejets.com.

When you configure an email channel, you specify the POP3 or IMAP email server from which Virtual Contact Center retrieves email messages.

Features

- Facilitate communication of email interactions in and out of a Virtual Contact Center tenant.
- Interact directly with the appropriate queues via skill-based routing rules.
- Configure existing email addresses to function as Virtual Contact Center channels.
- Create, edit, and delete email channels.
- Email channel's script specifies which Virtual Contact Center queues receive the retrieved messages

Use Dedicated Contact Center Email Channels

The email accounts used in conjunction with your Virtual Contact Center must be used only for that purpose. Do not log in or access your contact center's email channel from outside of Virtual Contact Center.

The email channel's email script specifies which Virtual Contact Center queues receive those retrieved messages.

Setting up an email channel involves:

1. Configuring email channel properties
2. Creating an email script
3. Assigning a script to the email channel

Configure Email Channel Properties

Configuring an email channel in Virtual Contact Center involves:

- Configuring channel properties
- Creating an email script

To configure properties for an email channel, you must specify the channel name, enter an incoming email address, login credentials to access the email, incoming mail server properties, protocol, and the email script used for the channel. An email script directs emails entering Virtual Contact Center to agents via email queues.
Go to **Channels > Email > Properties** to specify the primary properties of the email channel.

To configure email channel properties:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Email** tab.
3. In the list of email channels, click to edit, or to add a new chat channel.
4. Enter or select values for the channel.
   The following table summarizes the options under **Channels > Email > Properties**:

Email Channel Property	Description
Channel type	Read-only reminder of the type of channel.
Channel name	Type the name of this email channel. Agent Console displays the channel name when the agent receives an email.
Incoming Email Address	Enter the full email address used by customers to submit interactions to this email channel.
User ID	Enter the username required to retrieve the email address entered for Incoming Email Address.

Email Channel Property	Description
Password, Retype Password	Enter and verify the password required to retrieve the email address entered for Incoming Email Address.
Incoming Mail Server	Enter the network address of the mail server. This mail server receives the email messages sent to the address entered for Incoming Email Address.
Protocol	Choose the email protocol supported by the server. The mail protocol valid choices are: ■ POP3, POP3 over SSL ■ IMAP, IMAP over SSL When you choose an email protocol, Configuration Manager automatically enters the protocol's default port number under Port.
Port	By default, Configuration Manager uses the following default port numbers based on the email protocol you select from the list: ■ 110 if you select POP3 ■ 995 if you select POP3 over SSL ■ 143 if you select IMAP ■ 993 if you select IMAP over SSL You can enter a non-default port number if your email server uses one.
Email script	If you have more than one email channel, choose another channel's previously defined IVR script. Choose an email script from the drop-down menu. If you do not select any scripts, the default email script is automatically assigned to your email channel.
This Channel is enabled	Select to enable this email channel for service. Enable a channel only after your contact center is ready to receive interactions for this channel.

5. Click **Test** to check the connection with the mail server.
   If the connection to the server is successful, the test indicates the messages in the server.
6. Click **Save**.

Set up Chat Channels

Chat Channels in Virtual Contact Center serve to direct chat requests from customers to contact center agents via chat queues. Virtual Contact Center provides options to embed links to chat channels on your website or on the Support Center. Customers can initiate a live chat session with the agents by clicking the link.

Features

- Facilitate communication of chat interactions in and out of a Virtual Contact Center tenant.
- Process incoming chat requests using the chat channels and direct chat requests from customers to contact center agents.
- Interact directly with the appropriate queues via skill-based routing rules.
- Ability to embed links to chat channels on your website or on the Support Center.
- Create, edit, and delete chat channels.

Setting up a chat channel involves:

1. Configuring chat channel properties
2. Configuring embedded chat design
3. Creating a chat script
4. Assigning a script to the chat channel

Configure Chat Channel Properties

Configuring a chat channel in Virtual Contact Center involves:

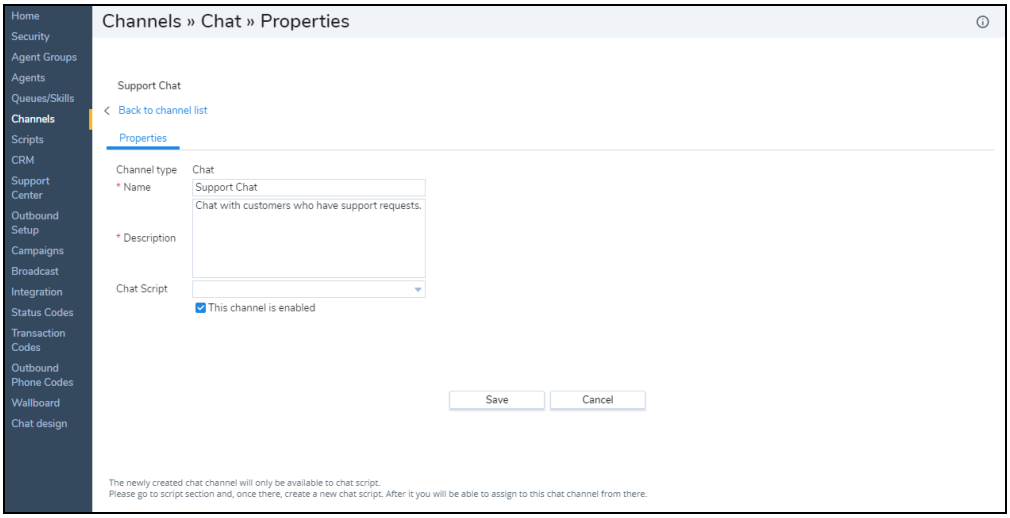
- Configuring chat channel properties.
- Creating a chat script to define chat flow.

To configure properties for a chat channel, you must specify the channel name, description, and chat script. A chat script defines the chat behavior from the time a website visitor enters the website, and initiates and completes a chat. Use **Channels > Chat > Properties** to specify the primary properties of the chat channel.

To configure chat channel properties:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Chat** tab.
3. In the list of chat channels, click to edit, or to add a new chat channel.

   The **Properties** tab opens.



4. Enter or select values for the channel.

   The following table summarizes the options under **Channels > Chat > Properties**:

Chat Channel Property	Description
Channel type	Read-only reminder of the type of channel.
Name	Type the name of this chat channel. Agent Console displays the channel name when the agent receives an email.
Description	Enter a summary or purpose of the chat channel.
Chat Script	If you have already defined a chat script, select the script from the list. If not, proceed to save the properties without a chat script. Next, create a chat script and add the channel you just created. For details on chat scripts, refer to Create a Chat Script. The script defines the chat behavior from the time a website visitor enters the website, and initiates

Chat Channel Property	Description
	and completes a chat.
This Channel is enabled	Select to enable this chat channel for service. Enable a channel only after your contact center is ready to receive interactions on the channel.

5. Click **Save**.

Virtual Contact Center: Social Media Integration

Take advantage of Facebook and Twitter to service customers directly and increase customer satisfaction with Virtual Contact Center Social Integration. By unifying the agent experience, 8x8 Social allows users to channel their messages from social media into Virtual Contact Center. Customers can contact the businesses and receive support from within their social platform.

VCC Social supports messaging via Facebook and Twitter in this release.

Features

With VCC Social Integration, you can:

- Set up social channels in your contact center application
- Direct messages received in Facebook and Twitter to the chat channels in VCC
- Allow agents to accept and handle chat requests from social media
- Set up social scripts to identify existing customers using the Social ID and greet them accordingly
- Learn more about the customer and direct them to the agents with the right skills
- Create new customer records in the Local CRM
- Access chat transcripts in the Local CRM
- Access chat history during a live chat

Limitations

- Support for an external CRM is not offered in this release.
- Agent cannot initiate outbound chats to the social media.
- Multimedia messaging is not within the scope, only text messaging is supported.
- Chat auto translate is not supported for Twitter interactions.

Use Case

Let’s say your business has set up Facebook and Twitter accounts to communicate with your customers effectively. Customers visiting your Facebook page can simply initiate a chat with a live agent in your contact center via the

Facebook Messenger. Agents in your contact center receive the chat request via the contact center chat queue. Upon accepting the chat request, agents can interact with the customer and assist them immediately.

To provide the business context, we will use the example of Robin's Fashions, a fictitious company. This company specializes in selling shoes, handbags, and cosmetics. They offer membership based services to help serve their customers better. They have set up business pages on Facebook and Twitter. The company connects with their customers through their social media pages and wishes to serve them more efficiently via their chat channels. We refer to this business use case throughout this guide.

Configure Social Media Integration

As a Virtual Contact Center administrator of your business, you are responsible to set up the social channels, configure a social scripts and assign the channel.

Preparation

- Gather the social media account details of your business (login ID and password).
- Plan how you want to route interactions from social media. The following questions may provide you tips.
  - Does your business support live chat 24/7 or based on schedule?
  - Do you have a lot of traffic to your social media pages?
  - Do you want to direct all your social interactions to the same queue or to skill based queues?
  - Do you want to identify existing customers and provide context to agents?
  - Do you want to automatically create customer records for new customers in the local CRM?
- Create chat queues to direct the social chat requests.

Configuring the VCC Social Media Integration

STEP 1: Set up VCC Social channels in Configuration Manager.

1. Log into Configuration Manager for Virtual Contact Center.
   a. Go to https://login.8x8.com.
   b. Enter your login credentials to launch the application panel.
   c. Select VCC-Configuration Manager icon to launch the application.
2. Go to **Channels** in the navigation menu.
3. Select the **Social** tab.
4. Click **+ Add new Facebook channel** or **+Add new Twitter channel** to add a new social channel.

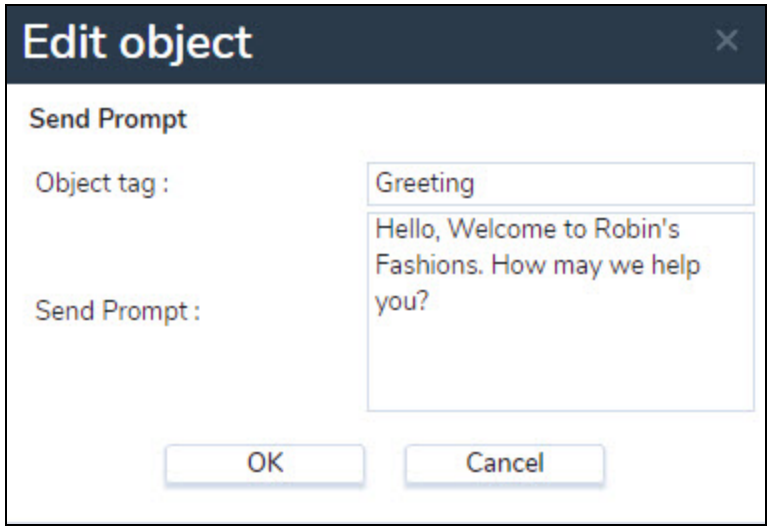
5. At the prompt, enter the email address and the respective password associated with the social account. Click **Login** (In Facebook) or **Authorize App** (In Twitter).

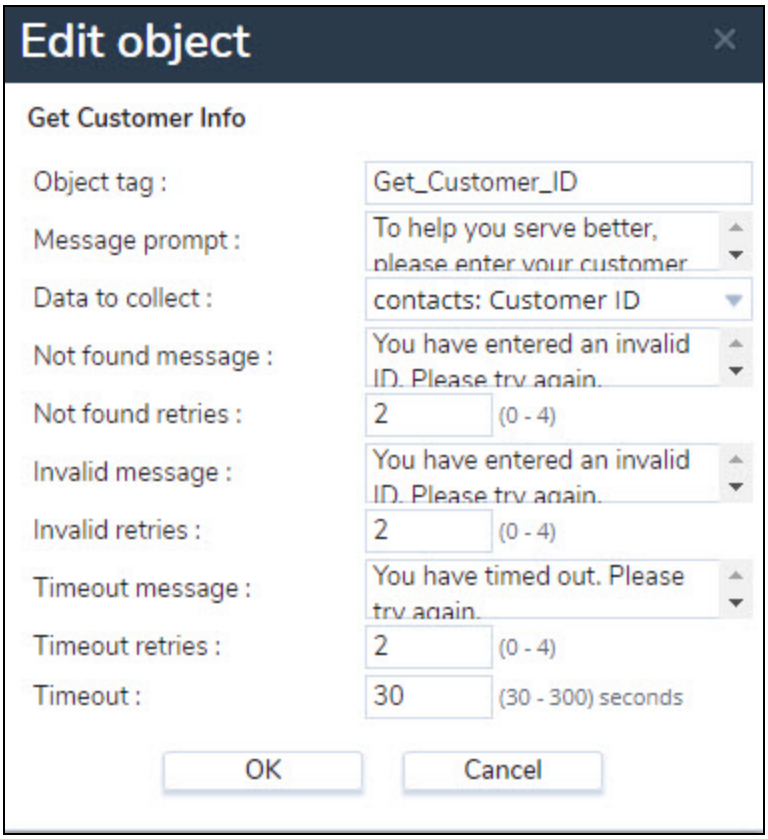
   You have now successfully created the social channel. The social channel appears in the list of Social channels on your tenant.

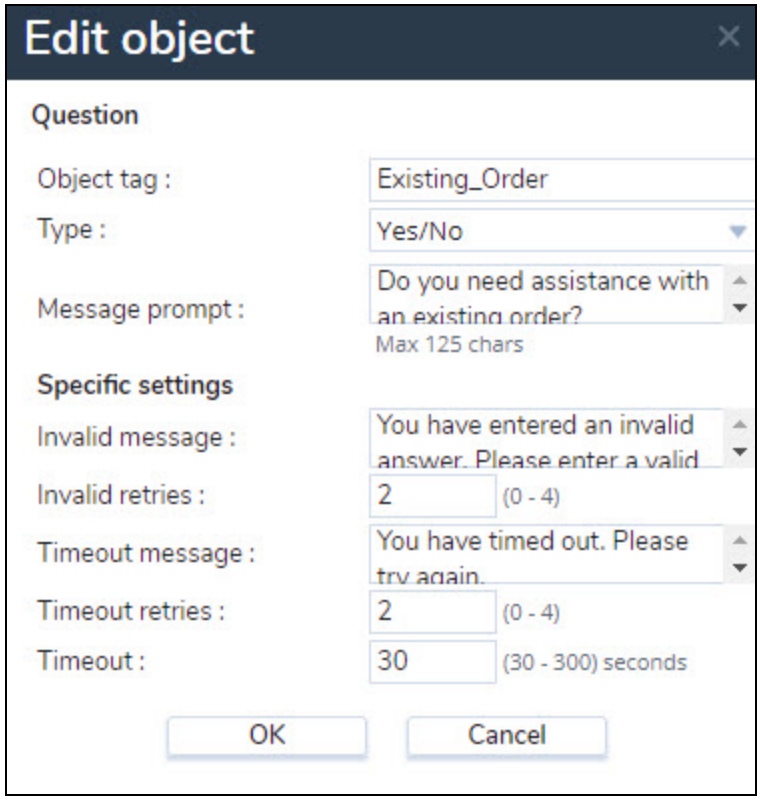
   Note: You can connect a VCC tenant with a single Facebook or Twitter channel only.

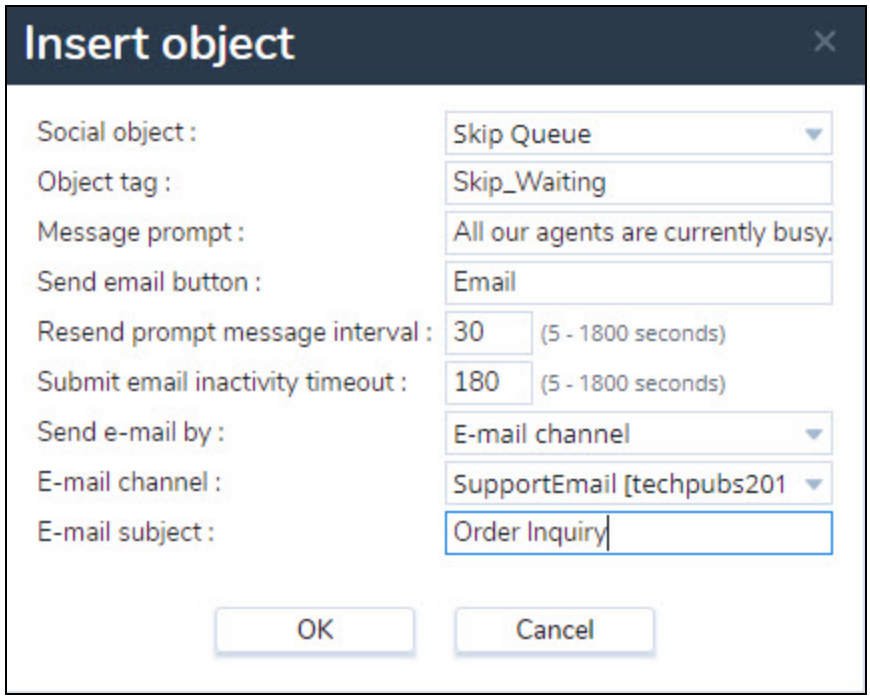
STEP 2: Define the social chat routing by configuring a social script.

A social script allows you to define the routing of chats received on social media. You can define when and how to interact with customers using the specific IVR objects. VCC Social introduces the following core social objects to facilitate interaction routing.

Social Object	Description
Check Social ID	Allows you to check the social ID of the customer and identify if it is an existing customer in the Local CRM and trigger screen pop. If it is a new customer, it automatically creates a new customer record in the Local CRM. The following exit points are available for this IVR object. **Contact Found**: If this is an existing customer record in the CRM, the system , presents the Agent the customer record for preview. Allows agent to edit and update case associated with customer. **Contact Not Found**: If it is a new customer's first visit, the CRM, automatically creates a new customer record in the Local CRM. Add first name and last name based on their social media ID.
Send Prompt	Allows you to display predefined greetings or messages in the chat window.  Example: Welcome to Robin's Fashions. How may I help you?
Get Customer Info	Requests additional information such as Customer ID, Case ID, email, phone number to learn more details about the customer. Example: Robin's Fashions serves membership based services offering early access to their product lines and better discounts to their members. To offer premium quality service to their members, the company collects the membership ID information, identify premium customers, and direct them to a fast serving queue.

Social Object	Description
	 **Note:** Custom fields in the Local CRM are not supported for data dip.
Question	Allows you to pop a question to the customer on the social media. You can design these questions to get more information about the customer's needs. The following question types are supported: ■ Open ended ■ Single Answer only ■ Yes/No Let's say, Robin's fashions has set up dedicated queues to specific line of products - handbags, shoes, and cosmetics. When a customer initiates a chat, you want to know the product for which the customer is seeking assistance. Add a question to collect this information from the

Social Object	Description
	customer. Based on the response received, direct the chat to the respective queue. 
Skip Queue	Use this object to allow customers to opt out of waiting in the chat queue and send an email off-line. Upon initiating a chat, if the customer chooses not to wait for an agent, then they can simply send an email. Emails can be sent via an email channel or as plain emails to the specified email address. You can even predefine the email subject to conveniently filter the messages received.

Social Object	Description
	

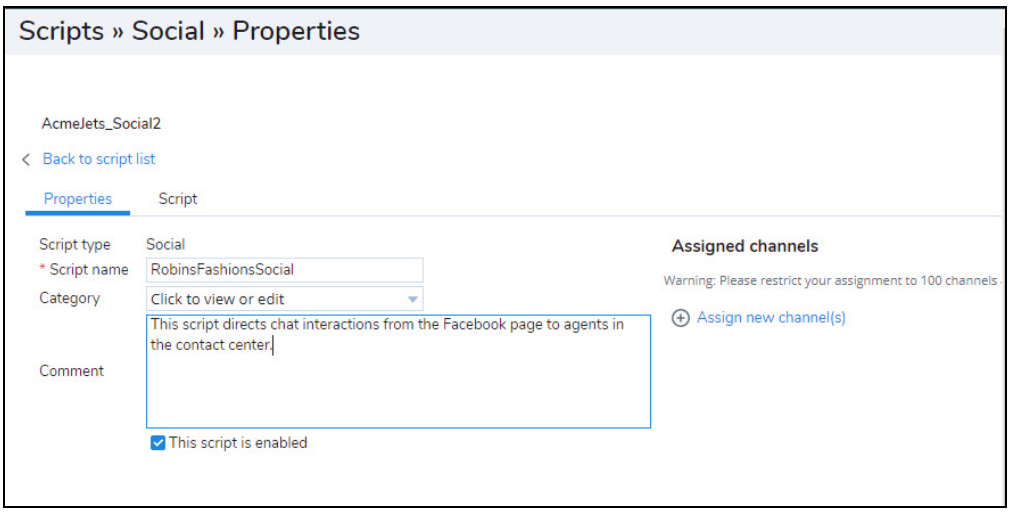
At Robin's Fashions, customers visit the social media pages to learn about the new deals, new products, sale offers, and inquire about their current orders. The following steps model a typical workflow:

1. Customer initiates a chat in the Messenger during their business hours.
2. Customer is greeted with a welcome message.
3. Customer is prompted to enter the membership ID to validate if it's an existing member.
4. If it is a member, they are then prompted: you need assistance with an existing order?
   - If **Yes**, direct them to the Sales Orders queue.
   - If **No**, direct them to the General Inquiries queue.
5. If it is a non-member, customers are directed to the new customers queue.

Crafting the Social Script

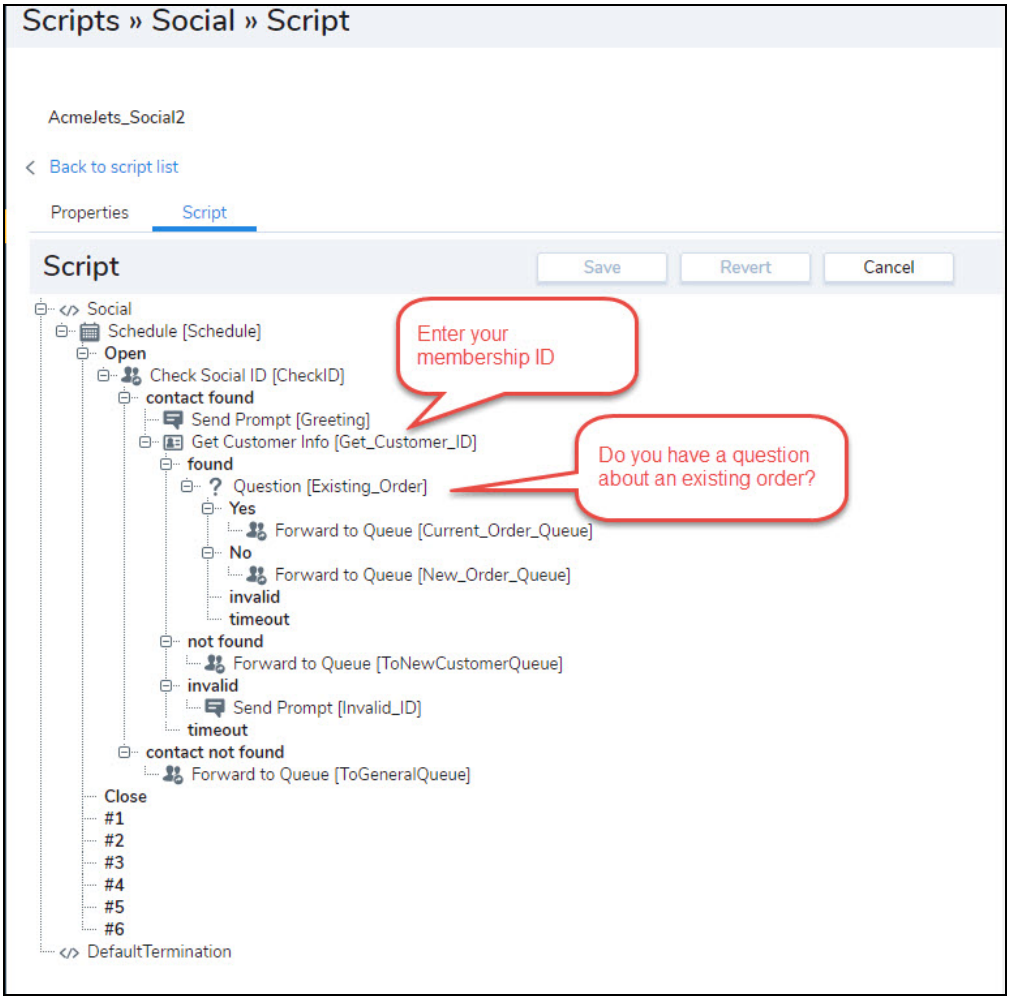
1. In the VCC-Configuration Manager, go to **Scripts**.
2. Select the **Social** tab.
3. Click **Add new social media script**.

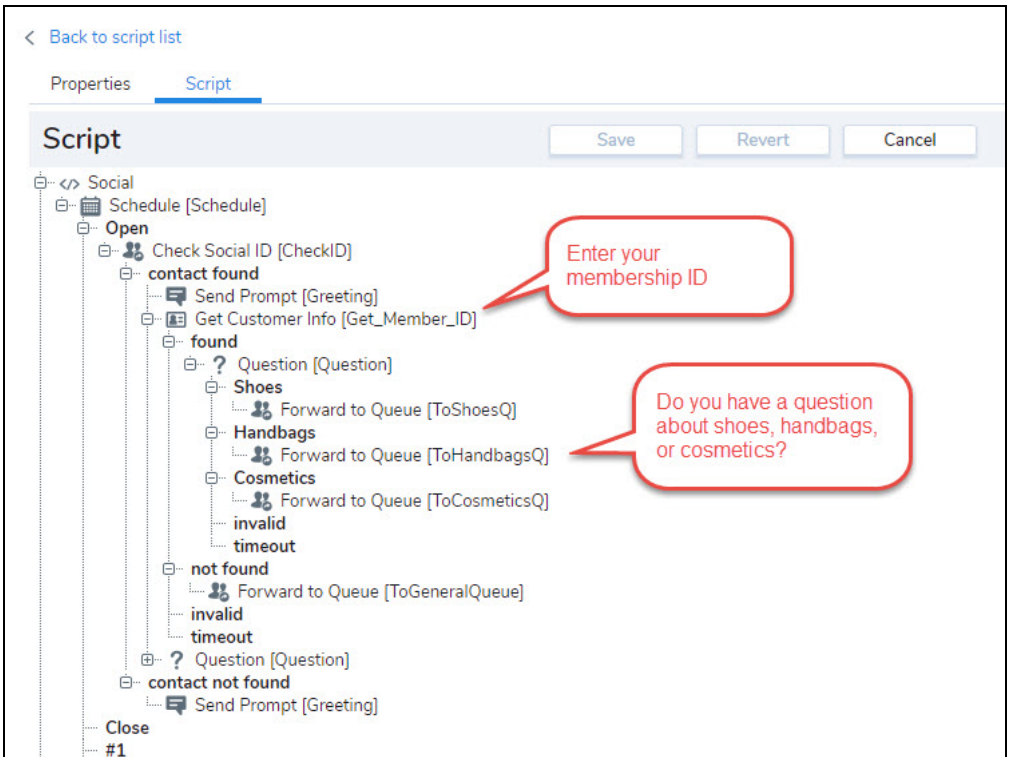
4. Enter the general properties and save.



5. In the Script tab, you are now ready to craft the script.
   a. Customer initiates a chat in the Messenger during their business hours. Add and select an existing [**Schedule**].
   b. Using the Social ID, validate the customer and check if it's an existing customer. [**Check Social ID**]
   c. Customer is greeted with a welcome message. Under the **Contact Found** exit point, add a message using [**Send Prompt** - Welcome back to Robin's Fashions. How may I help you?].
   d. Customer is prompted to enter the member ID to validate business membership. [**Get Customer Info - Collect Customer ID**]
   e. If it is a member, customer is prompted: Do you need assistance with an existing order? [**Question - Yes/No**]
      - If **Yes**, direct them to the Sales Orders queue. [**Forward to Queue**]
      - If **No**, direct them to the New Order queue. [**Forward to Queue**]
   f. Upon checking the Social ID in step b, if it is found to be a new customer, - customer is directed to the new customers queue.
6. Save the script.

The following images show two sample IVR Social scripts.


Scripts » Social » Script
AcmeJets_Social2
Back to script list
Properties
Script
Script
Save
Revert
Cancel
Social
Schedule [Schedule]
Open
Check Social ID [CheckID]
contact found
Send Prompt [Greeting]
Get Customer Info [Get_Customer_ID]
found
Question [Existing_Order]
Yes
Forward to Queue [Current_Order_Queue]
No
Forward to Queue [New_Order_Queue]
invalid
timeout
not found
Forward to Queue [ToNewCustomerQueue]
invalid
Send Prompt [Invalid_ID]
timeout
contact not found
Forward to Queue [ToGeneralQueue]
Close
#1
#2
#3
#4
#5
#6
DefaultTermination
Enter your membership ID
Do you have a question about an existing order?


Back to script list
Properties
Script
Script
Save
Revert
Cancel
Social
Schedule [Schedule]
Open
Check Social ID [CheckID]
contact found
Send Prompt [Greeting]
Get Customer Info [Get_Member_ID]
found
Question [Question]
Shoes
Forward to Queue [ToShoesQ]
Handbags
Forward to Queue [ToHandbagsQ]
Cosmetics
Forward to Queue [ToCosmeticsQ]
invalid
timeout
not found
Forward to Queue [ToGeneralQueue]
invalid
timeout
Question [Question]
contact not found
Send Prompt [Greeting]
Close
#1
Enter your membership ID
Do you have a question about shoes, handbags, or cosmetics?

Create and Configure Scripts

Phone, chat, and email scripts in Configuration Manager allow you to design and control the interaction flow in a contact center. Quickly connect callers with agents and streamline customer flow with the 8x8 Interactive Voice Response (IVR) scripts.

IVR is a critical component of any contact center, allowing customers to get quick answers to simple questions and helping companies identify the right resource to help a customer with a given issue.

Features

8x8 has powerful IVR capabilities that help in a number of ways:

- **Improve the customer service experience**
  - Help customers find the information they need through self-service functions.
  - Identify who is calling and route them to the best available agent.
  - Give callers access to information even after business hours.
- **Provide value to your organization**
  - Lower costs by automatically answering common questions.
  - Easily manage your IVRs online for complete control.
  - Create custom schedules for holidays and special events.
  - Make changes to your IVR on the fly.
- 8x8 Virtual Contact Center can use CRM information to personalize customer interactions and significantly increase the efficiency of every call center interaction.
- 8x8 provides our customers with three options for IVR:

- **Basic IVR**: Easy-to-create menus, and simple self service capabilities that allow the contact center manager the agility to keep up with changing requirements through simple edits to the IVR flow.
- **eIVR**: A powerful, full-function IVR that can access data from multiple sources and support speech driven applications.
- **Intelligent IVR**: 8x8 provides speech recognition and natural language processing on all incoming calls. To learn more, refer to our content on how to create intelligent IVR.

Designing a script can be simple or complex, depending on your business operation. Before sitting down to design your script, you need to prepare your plan for the interaction routing.

Go to the **Scripts** tab in Configuration Manager to create or edit scripts. Phone scripts are grouped under the **Phone** tab, and chat and email scripts are each grouped under their respective tabs. Scripts can be associated with one or more channels. You can create a user-defined script, or use our system default script.

To learn how to create or edit phone, email, and chat scripts, refer to:

- Create a Phone IVR Script
- Create an Email Script
- Create a Chat Script

To learn how to create social scripts, refer to our Social chapter.

Create a Phone IVR Script

A phone Interactive Voice Response (IVR) script can be an inbound phone script, outbound phone script, or post call survey script:

- **Inbound phone script**: Guides the inbound callers through the options to self-direct themselves to the desired destination within the contact center. You can create a new script and assign it to any number of channels.
- **Outbound phone script**: Improves handling process of inbound phone queues when the inbound queue agents are also members of an outbound phone queue, such as campaign calls. Whenever the inbound phone queues have higher priority over your outbound phone queues, you can reserve agents for the inbound phone queue so that they handle inbound calls first before handling outbound calls.
- **Post call survey**: A questionnaire presented to the caller at the end of a call, typically to collect feedback about the quality of service offered by the company. You can plan and build a post call survey script using IVR-controlled survey, agent-assisted survey, and stand-alone survey. To build a post call survey script, go to **Scripts > Phone** and add a new phone script. Select **Post call survey** for the script type and enter parameters. Follow the instructions on Post call survey User Guide to learn about types, use cases, and how to configure a post call survey.

Overview of IVR Script Objects and Operation

IVR scripts define how Virtual Contact Center processes an inbound phone interaction. The contact center administrator, guided by the center's business requirements, constructs an IVR script by choosing scripting objects to define the automated processing of your inbound calls.

Types of IVR Script Objects

IVR scripts consist of an ordered series of script objects. Each script object includes parameters and exit points.

- **Parameters**: Parameters are an object instruction set. Depending on the purpose of the object, parameters define what schedule to use, voice prompt to play, or Local CRM data to evaluate. The first parameter of all objects is the Object Tag, which uniquely identifies that object within the IVR script.
- **Exit points**: Exit points are an object response to the conditions detected by the object parameters. Exit points enable an object to perform different actions in response to different conditions. For example, an object can route or otherwise process an interaction in one way when the contact center is open, and process the interaction a different way when the contact center is closed. When designing an IVR script, note that if a script logic routes a phone interaction to a script object's exit point, and that exit point does not contain any script objects, then the Virtual Contact Center disconnects the interaction.

IVR Script Operation

When a new phone interaction arrives, the channel hands the call off to the top-level MainIVR script object. Beginning at MainIVR, the interaction begins flowing through the IVR script objects. Each script object parameters and exit points perform real-time processing of an interaction in response to conditions. For a basic IVR script that plays a greeting message and forwards the call to a queue when the call center is open, see IVR Phone Script Examples for building a simple greeting and routing a call to a queue. If the call center is closed, the script notifies the caller and routes the interaction to an off-hours voicemail queue.

Queued Callback

The 8x8 Queued Callback allows callers waiting in a call queue to opt out of the queue and be called back when an agent becomes available. This feature detects the caller phone number or allows the caller to input the callback number before exiting the queue. The system retains the queue position of the call and offers an outbound call to an available agent serving the queue. When the agent accepts the call, the call is dialed out to the caller using the callback number. The call is routed through an outbound queue.

With Queued Callback:

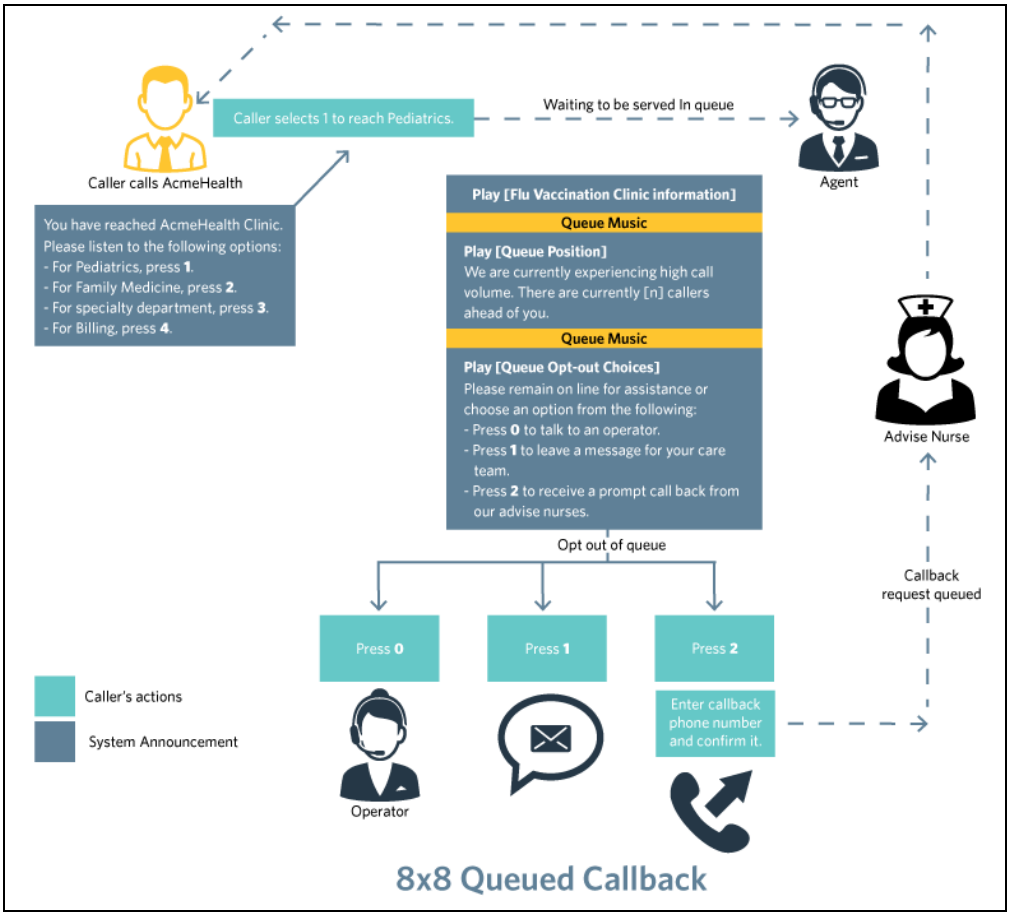
- Caller is allowed to input the desired callback number or caller's phone number (ANI) is used.
- Queue position is maintained when caller opts out of queue in favor of callback.
- Callback is initiated as soon as an agent is available.

Features

- Allows callers to opt out of the queue and be called back when an agent becomes available.
- Detects the caller phone number, or allows the caller to input the callback number before exiting the queue.
- The system retains the queue position of the call and offers an outbound call to an available agent serving the queue.
- Caller can input the desired callback number or caller's phone number (ANI) is used.
- Callback is initiated as soon as an agent is available.

Use Case

Extending the use case, AcmeHealth offers callers the option to receive a call back from the advise nurse team for a better experience. In addition to the exit choices of operator assistance and leaving a message for the care team, the caller is given a choice to be called back by the advise nurse team. If a caller opts to be called back, he is prompted to input the call back phone number. This number is then restated for confirmation. The following diagram shows the updated call flow for Queued Callback.



To enable call back, Virtual Contact Center IVR offers the following scripting capabilities.

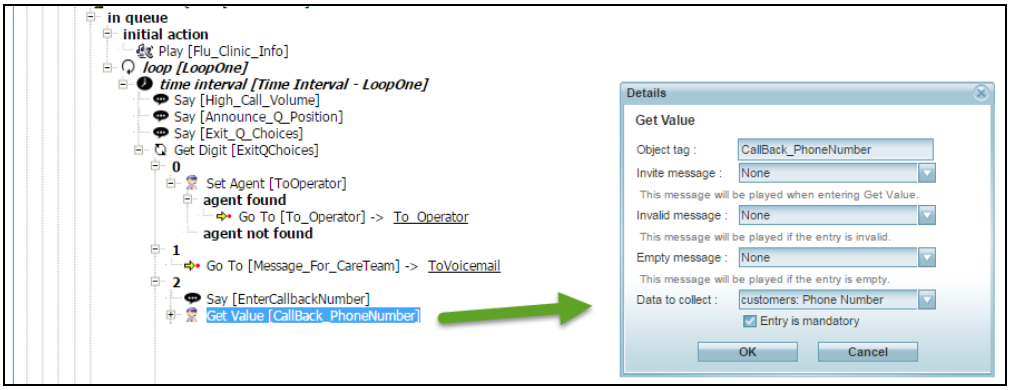
- Get Value supports an additional parameter to collect caller's phone number
- Callback object supports calling the customer back by maintaining the queue position even after the caller exited the queue, and initiating an outbound call when an agent serving the queue is available.

Add Call Back Option To IVR

To add a call back option to the existing IVR script:

1. Follow the steps 1 through 3 explained in In-Queue Treatments and Controls.
2. Modify the Say statement that announces the exit queue choices to include the option for callback.

3. Under Get Digit, add an option to Get Value. For Data to Collect, select **customers: Phone Number**.



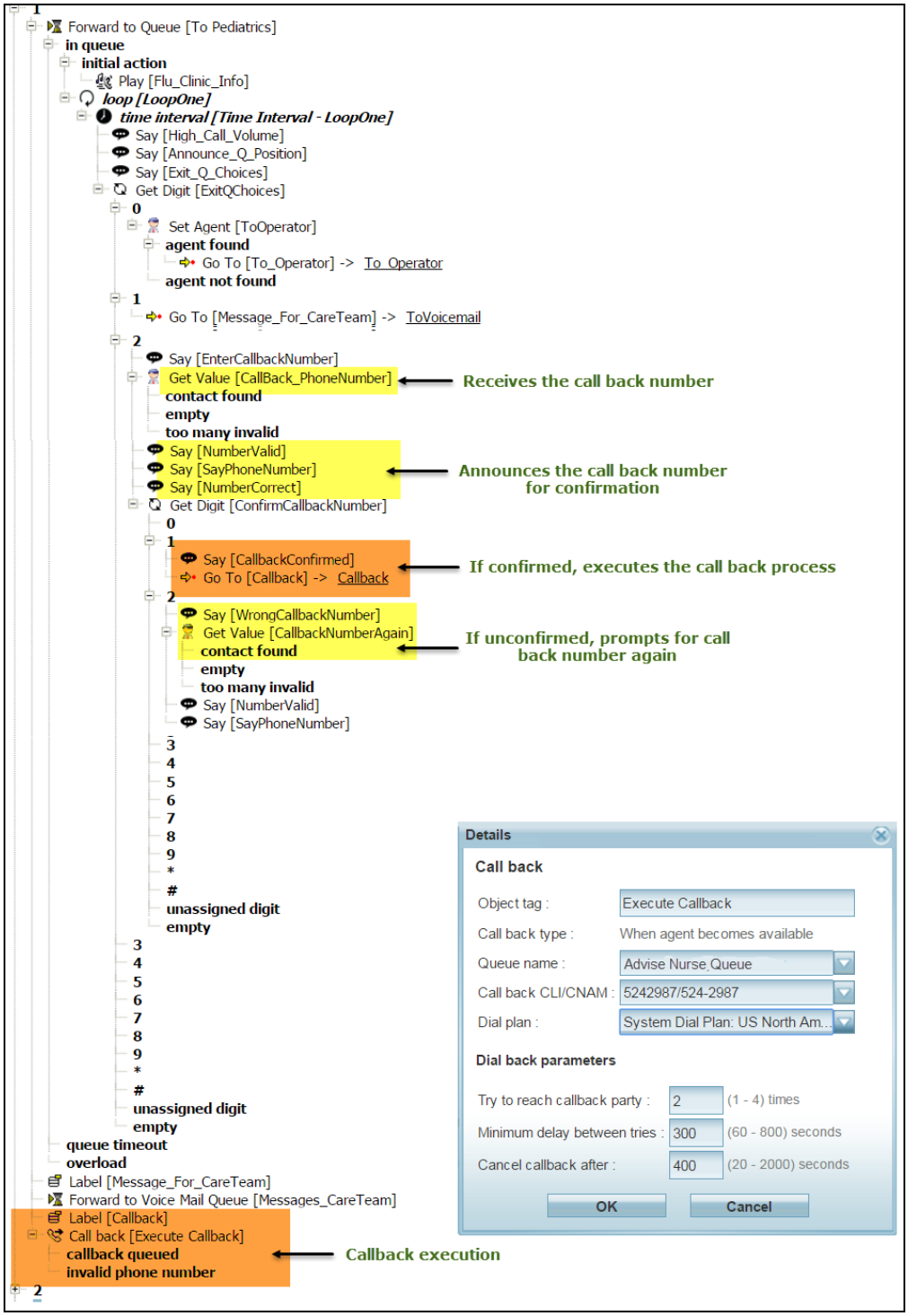
4. Add a few Say statements to announce the call back number input by the caller.
5. With Get Digit choices, allow the caller to confirm the phone number or prompt to enter the phone number again.
6. Add a label for callback execution.
7. Under the label for Callback, add the Call back object and select the following parameters:
   - **Queue name**: Select an existing outbound queue to route the call.
   - **Call back ANI**: Select a channel number for outbound caller ID.
   - **Dial plan**: Select from an existing dial plan.
   - **Expiration time**: Set an expiration time for call back. After the specified period, the call back is abandoned.
   - Under Dial back parameters, you can specify the number of retries and the duration for time out.
     - **Try to reach callback party**: Select the number of attempts to call back. The call failure is determined by the following factors:

       - Agent did not answer the call.

       - Agent answered, but the outbound leg dials out and experiences a busy network.

       - RNA (Ring no answer)
     - **Minimum delay between tries**: Specify the time delay between tries.

- **Cancel callback after**: Enter the duration after which call back request needs to be canceled.



8. Save the script and assign it to a channel.

Direct Agent Routing

Direct Agent Routing (DAR) is a powerful and flexible set of script functions to allow agent's call handling. In addition to legacy DAA call handling, DAR provides a powerful and flexible set of script functions which allows refined selection and control of calls to be directed to an individual agent. The following new Direct Agent Routing (DAR) objects and enhancements are introduced:

- **Get Value** is extended to be able to capture an agent's assigned DAA number. The caller is prompted to input a valid DAA number which is then validated.
- **Set Agent** finds agents based on:
  - Channel linked to Direct-In-Dial (DID) number
  - Look up Local CRM for **case created by**, **case last worked by**, and **case assigned to**
  - Set a fix agent selection
- **Transfer to Agent** directs a call to an agent. It can be used in conjunction with **Set Agent** to find an agent or by itself. This supports separate logic as why a call may not reach the target agent depending on the agent's real-time state.
- **Transfer to Agent Voicemail** transfers call to an agent's voicemail typically if **Transfer to Agent** is not successful.

DAA Call Handling Constraints

The following list presents the DAA constraints which are now overcome by the new DAR.

- DAA requires callers to enter an agent's DAA number exclusively during IVR Menu treatments.
- DAA calls are always presented to an agent regardless of the agent's current state.
- Unanswered DAA calls may be directed to an agent's voicemail with primitive opt-out controls.
- Queue calls are presented to agents who are Available even if they are on a DAA call.
- Forward to Agent logic is difficult to comprehend due to its implied action within IVR Menus.

Features

- Identify the agent the customer should talk to based on:
  - Who created the case associated with the customer
  - Who is assigned to the case

  - Who last worked on the case
  - Agent DID number that was shared with the customer
- Transfer the customer call to the right agent based on agent status, and change agent status to busy after accepting the call
- Control agent's status during a DAR Call
- Allow the caller to leave a voicemail for the agent if the agent is not available
- Allow caller to take an option to divert if they prefer not to leave a voicemail

Limitations

DAR calls do not yet support the following features:

- Post Processing state
- Transaction Codes

Requirements

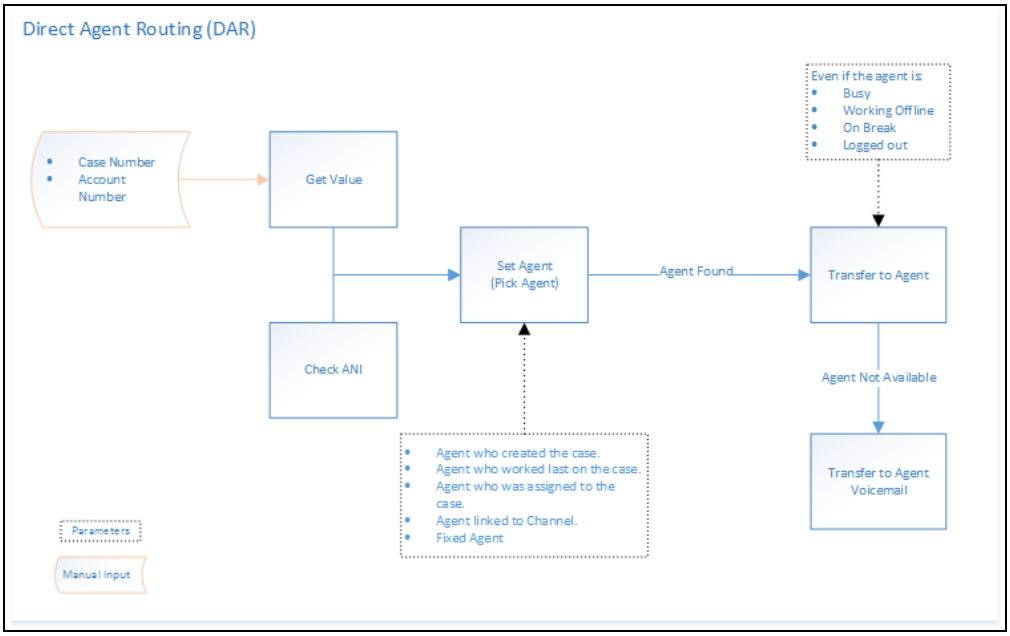
The agent must be assigned a Direct Access Number to be eligible for Direct Agent Routing. For details on setting up Direct Agent Routing, see our content on creating user-defined phone IVR scripts.

Process Flow for Direct Agent Routing

A typical process flow for Direct Agent Routing involves the following steps:

1. Get input such as case ID or Account number (GetValue) from the caller or caller ID (Check ANI). The system then searches CRM for matching records.
2. On finding a matching customer or case record, pick agent who worked on the case or created the case or is assigned to the case. For details on options, refer to Set Agent object.
3. If agent is found, transfer the call to the agent. You can transfer to agent irrespective of agent's current status OR

4. If agent is not available, transfer to agent's voicemail.



The following table summarizes the new DAR objects:

DAR Object	Description
Set Agent	Set Agent object facilitates direct agent routing. Before using Set Agent object in your script, you must get value (account number or case number) from the caller or check ANI. If these objects succeed in finding a match, you can then use Set Agent object to pick the agent you wish to reach based on the following parameters. ■ **Case created by**: Find the agent who created the case. ■ **Case last worked by**: Find the agent who last worked on the case. ■ **Case assigned to**: Find the agent who is assigned to the case. ■ **Channel linked to**: Find the agent who is linked to the channel the call was channeled through. Use this option to direct an incoming call to an agent directly. ■ **None**: Find an agent by name. By selecting this option, you can select a specific agent to direct the call to using **Fix Agent**. ■ **Fix Agent**: Click the **Choose Agent** link and select an agent from the list.
Transfer	The Transfer to Agent object connects the caller to the agent.

DAR Object	Description
to Agent	-Use this object with Set Agent. For this to work, you must have picked an agent using Set Agent. -Use this object without Set Agent to transfer calls directly to the agent with a personal channel. The agent must be assigned with a personal channel. Transfer to Agent object provides options which support transferring a call to agent even if status is: ■ busy ■ on break ■ working offline ■ logged off If you do not select any option, then the call is transferred only if the agent status is Available.
Transfer to Agent Voicemail	This object allows a caller to leave a voicemail for an agent. It assumes the agent is already chosen using Set Agent object or Get Value object.
Get Value	Use the Get Value object to request the caller to provide an agent's extension number. On selecting this option, the checkbox 'Entry is mandatory' is checked automatically and greyed out. You will be given the option to set the maximum length of extension. By default, it takes 8 digits.

Report on Direct Agent Calls

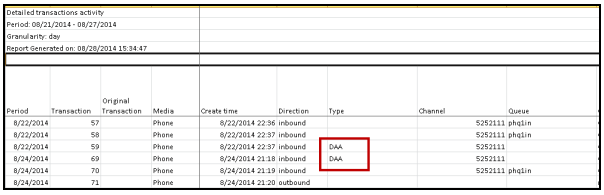
The agent is not offered any post processing activity for a DAA call. Contact Center supervisors can track DAA calls through the Detailed Transactions Activity report.

To access the Detailed Transactions Activity report:

1. In Agent Console, select **Report** from the menu.
2. Generate a report using the existing reporting template.
3. Select **New Report**.
4. Select **Detailed Transaction Activity** master report from the list and click **Next**.
5. Enter the desired time range and select the desired queues.

6. Select **Save** and **Run**.

   A new report generates and opens in Excel. Look under the Type to find DAA calls.



Detailed transactions activity
Period: 08/21/2014 - 08/27/2014
Granularity: day
Report Generated on: 08/28/2014 15:34:47

Period	Transaction	Original Transaction	Media	Create time	Direction	Type	Channel	Queue
8/22/2014	57		Phone	8/22/2014 22:36	inbound		5252111	phqlin
8/22/2014	58		Phone	8/22/2014 22:37	inbound		5252111	phqlin
8/22/2014	59		Phone	8/22/2014 22:37	inbound	DAA	5252111	
8/24/2014	69		Phone	8/24/2014 21:18	inbound	DAA	5252111	
8/24/2014	70		Phone	8/24/2014 21:19	inbound		5252111	phqlin
8/24/2014	71		Phone	8/24/2014 21:20	outbound			

Text To Speech

The IVR engine now converts text to speech using the Say object. The Say object relays static free text or dynamic value of a variable (phone number, queue position) to the caller. These text to speech announcements can play dynamic or static data in multiple languages.

Features

- Convert static text or dynamic value of a variable to speech using the Say object in IVR.
- Announce text to speech in multiple languages.
- Offer basic and prime text to speech services.

Virtual Contact Center offers two levels of Text to Speech service with the following options:

- Basic Text to Speech
- Prime Text to Speech

Text to Speech Options	Basic	Prime
Languages	English (US), French, Italian, German, Spanish	40+ For a list of language supported, click here.
Voices	1	60+
Datatype	Not supported	digit, number, phone, currency,date, time
Character limit	130	210
Number of Say instances allowed in IVR	unlimited	unlimited

Languages Supported in Prime

- Arabic
- Bahasa
- Basque
- Cantonese
- Catalan
- Czech
- Danish
- Dutch
- English (AU)
- English (GB)
- English (India)
- English (Ireland)
- English (Scotland)
- English (South Africa)
- English (US)
- Finnish
- French (Canada)
- Galician
- German
- Greek
- Hebrew
- Hindi
- Hungarian
- Italian
- Japanese
- Korean
- Mandarin (China)
- Mandarin (Taiwan)
- Norwegian
- Polish

- Portugese (Brazil)
- Portugese (Portugal)
- Romanian
- Russian
- Slovak
- Spanish (Castillan)
- Spanish (Columbia)
- Spanish (Mexico)
- Swedish
- Thai
- Turkish
- Valencian

Summary of Phone IVR Script Objects

The following table summarizes the objects available in the Phone scripts configuration:

Phone Script Object	Description
Schedule	Use the **Schedule** object to perform a particular sequence of script operations when the contact center is either open or closed. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. ■ Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Select schedule** list, choose a schedule definition. Exit points: The Schedule object uses the Select schedule value to transfer control to the script sequence specified within the following exit points: ■ **open** equals true if the phone interaction has been received within the selected schedule's open hours. ■ **close** equals true if the phone interaction has been received outside the selected schedule's open hours.

Phone Script Object	Description
	■ **#1** through **#6** equal true if the schedule specified in Select Schedule includes an exception condition, numbered 1 through 6, and today's date is within the exceptions from and to dates. For details on creating schedules, refer to Define Business Hours and Schedules.
Check ANI	Use the **Check ANI** object to use the phone number of the inbound caller to perform a lookup in the customers file. If a matching phone number is found in the Customer file, the record is loaded in memory and can be used to check the value of picklist fields to determine how to route the call. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **contact found** item, define the call processing steps to be performed if a Local CRM customer record was found. ■ In the **contact not found** item, define script call processing steps to be performed if a Local CRM customer record was not found. Exit points: The Check ANI object uses the value of the caller's ANI phone number to transfer control to the script sequence specified within the following exit points: ■ **contact found** equals true if the caller's phone number matches one in the Local CRM. ■ **contact not found** equals true if the caller's phone number does not match one in the customer file. When using the Check ANI object, both exit points should be configured. An exit point does not have any processing steps, and the object exits on that exit point the caller will be disconnected.
Get Value	Use the **Get Value** object to request or require the caller to use their telephone's keypad to provide the following Local CRM data: ■ A Local CRM customer AccountNumber ■ A Local CRM CaseID ■ An agent's extension number: On selecting this option, the **Entry is mandatory** check box is checked automatically and grayed out. You are given the option to set the maximum length of the extension. By default, the maximum is eight digits. ■ A numeric Customer or Case custom field.

Phone Script Object	Description
	■ An external Variable1 or Variable2 that can then be passed to an external program for screen pops or integration with third-party or custom systems. For details on screen pop, refer to Define Screen Pop Settings for External CRM. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR Script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Invite message** list, choose the audio file the IVR script plays to prompt the caller to enter specific numerical information. ■ In the **Invalid message** list, choose the audio file the IVR script plays if the caller responds to the invite message prompt with an invalid entry. ■ In the **Empty message** list, choose the audio file the IVR script plays if the caller does not respond to the invite message prompt within 10 seconds. ■ In the **Data to collect** list, select the CRM data to request or require from the user. ■ Select **Entry is mandatory** to require that the user supply a valid response to the prompt before enabling them to proceed beyond the Get Value object. Exit points: The Get Value object uses the value of the caller's response to transfer control to the script sequence specified within the following exit points: ■ **found** equals true if the caller's numerical entry matches the CRM data that was specified in the Data to Collect list. If Entry is Mandatory is disabled, or the value to be matched is stored in an external variable, the script exits. ■ **empty** equals true if Entry is Mandatory is enabled, and the caller does not supply a value. ■ **too many invalid** equals true if Entry is Mandatory is enabled and the caller made three incorrect attempts to supply a valid response.
Get Digit	This object is used after Play and Say messages that prompt for digit tone input. Get Digit is a menu optimized for the input of a single digit. Use **Get Digit** to receive the caller's DTMF input after prompting the caller for input. Parameters: None

Phone Script Object	Description
	Exit Points: ■ **0-9, *, #** label the script operations performed after the caller has pressed the corresponding key on their telephone's keypad. ■ **Unassigned digit**: Actions defined under Unassigned digit are followed when the caller enters a digit that has no assigned action. ■ **empty** contains the script operations performed if the caller does not respond to an IVR menu prompt within 10 seconds, and the empty exit point is not configured.
Check Pick-list	Use the **Check Picklist** object to evaluate the value of a particular item from the CRM database. Perform a Check Picklist comparison after you have used the **Check ANI** or **Get Value** object to load a customer or case record into memory. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR Script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Data to test** list, choose the picklist field to evaluate. ■ In the **Select operator** list, choose the equal to or not equal to comparison operator. ■ In the **Select values** list, choose the picklist values for the data element specified above by the Data to test list. Exit points: The Check Picklist object transfers control to the script sequence specified within the following exit points: ■ **matched** equals true if one of the selected values equals the value of a record in the Local CRM. ■ **not matched** equals true if one of the selected values does not equal the value of a record in the Local CRM.
Play	Use the **Play** object to play an audio file in a particular location in the IVR script. Parameters: ■ **Object Tag**: Enter the alphanumeric label used to uniquely identify the element in the IVR Script. ■ **Audio File**: Select from the default audio files or from the choice of custom uploaded files. ■ **Playback Options**: The playback option can be interrupted by a DTMF input or not. Select from

Phone Script Object	Description
	one of the following options: ◦ Uninterruptible (Input ignored): The playback continues, ignoring the DTMF input. ◦ Interruptible (Input captured): The playback is interrupted, and the DTMF input is captured. Exit points: None
Say	This object converts programmed text and variable objects such as phone number and queue position into speech. The Say object is also interruptible or not. For details, see our content on Text To Speech. Parameters: ■ **Object Tag**: Enter the alphanumeric label used to uniquely identify the element in the IVR script. ■ **Language**: Select the language from the available choices. Available Languages are: [1] ■ **Value to Play**: Select to play free text or variables, such as phone number and queue position. ◦ Callback phone number: Plays the call back number entered by the caller. It is retrieved via Get Value. ◦ Caller phone number: Plays the calling line ID of the caller fetched automatically. ◦ Queue position: Plays the queue position of the call. ■ **Text to Play**: Enter the text string to be played. ■ **Data type**: Select from the available data types: Text, Number, Phone number, Date, Time, and Currency. For example, if you select Date as the data type, the system announces the data in the date format. ■ **Playback rate:** Select a value: Slow, Normal, or Fast. The default rate is Normal. You can define the playback speed of IVR Text-To-Speech (TTS) prompts when using the Say object. The Say object converts programmed text and variable objects such as phone number and queue position into speech. You can play these prompts slowly, at a normal speed, or at a faster pace. Using the

[1]Arabic, Bahasa, Basque, Cantonese, Catalan, Czech, Danish, Dutch, English (AU), English (GB), English (India), English (Ireland), English (Scotland), English (South Africa), English (US), Finnish, French (Canada), Galician, German, Greek, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Mandarin (China), Mandarin (Taiwan), Norwegian, Polish, Portugese (Brazil), Portugese (Portugal), Romanian, Russian, Slovak, Spanish (Castillan), Spanish (Colombia), Spanish (Mexico), Swedish, Thai, Turkish, and Valencian.

Phone Script Object	Description
	playback rate option, you can control the speed of the speech that reads your text so your callers do not miss the important information such as names, numbers, or account balances. The default speed is Normal. The playback speed is set per IVR Say node. ■ **Playback Options**: The playback option can be interrupted by a DTMF input or not. Select from one of the following options: ○ Uninterruptible (Input ignored): The playback continues, ignoring the DTMF input. ○ Interruptible (Input captured): The playback is interrupted, and the DTMF input is captured.
Menu	Use the **Menu** object to present a list of options to the caller. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Invite message** list, choose the audio file the IVR script plays to offer menu options to a caller. ■ In the **Invalid message** list, choose the audio file the IVR script plays if the caller responds to the prompt with an invalid entry. ■ In the **Empty message** list, choose the audio file the IVR script plays if the caller does not respond to an IVR menu prompt within 10 seconds. In a Menu script object, the Empty message parameter and the empty exit point (described below) are mutually exclusive: If you configure the empty exit point, then the Menu object will not play the audio file specified in the Empty message list. Exit points: The Menu object contains the following labeled exit points: ■ **0-9, *, #** label the script operations performed after the caller has pressed the corresponding key on their telephone's keypad. ■ **extension** contains the script operations performed if the caller supplies a valid three-digit extension number. The Virtual Contact Center permits only agents with the Direct Agent Access Feature enabled to be directly accessed by extension number.

Phone Script Object	Description
	Note: Extension (Obsolete) is a legacy feature that will be deprecated. We recommend using the enhanced method for direct agent routing. ■ **empty** contains the script operations performed if the caller does not respond to an IVR menu prompt within 10 seconds, and the empty exit point of the Menu object is not configured. In a Menu script object, the empty exit point and the Empty message parameter (described above) are mutually exclusive; if you configure the empty exit point, then the Menu object will not play the audio file specified in the Empty message list. ■ **too many invalid** labels the script operations performed if the caller makes three invalid responses to the menu prompts. Invalid responses include three incorrect keypad entries or no response to the menu within 10 seconds.
Voice Recording Settings	If your Virtual Contact Center operates in jurisdictions which require seeking the caller's permission before recording a call, the caller's choice must be able to override the queue and agent level recording settings as well as the agent's record on demand capability. Use the **Voice Recording Settings** object to determine the circumstances under which a call may be recorded. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Permission to record**, select one of the four options: ○ **Keep prior setting**: Keep prior setting for automatic and agent-initiated recording ○ **Not asked**: No automatic recording, but allows an agent to initiate recording ○ **Granted**: Follows Agent & Queue recording settings for automatic recording, and allows an agent to initiate recording ○ **Denied**: No automatic recording, and does not allow an agent to initiate recording When Record % of calls is applicable, then IVR, Queue, and Agent voice recording percentages are applied. ■ In the **Automatic Call Recording**, based on the settings in **Permission to record**, one of the

Phone Script Object	Description
	following four options get automatically selected, or you can select an option to override the default: ◦ **Keep prior setting**: Keep prior setting for automatic recording ◦ **Record this call**: The current call is recorded ◦ **Do not record this call**: The current call is not automatically recorded ◦ **Record % of calls**: IVR %, Queue %, and Agent % probabilities are used to determine if the call is recorded automatically or not ■ In the **Allow agent to initiate recording**, based on the settings in **Permission to record**, one of the following three options get automatically selected, or you can select an option to override the default. ◦ **Keep prior setting**: Keep prior setting for agent-initiated recording ◦ **Yes**: Allow the agent to initiate recording of this call ◦ **No**: Do not allow the agent to initiate recording of this call
Set Agent	The Set Agent object facilitates direct agent access. Set Agent checks if the ANI or case number associated with an incoming call has corresponded with an agent on previous calls, and provides call routing choices based on the search result. For details, see our content on Direct Agent Routing. Set Agent allows you to look up agents based on the following parameters: ■ **Case created by**: Find the agent who created the case. ■ **Case last worked by**: Find the agent who last worked on the case. ■ **Case assigned to**: Find the agent who is assigned to the case. ■ **Channel linked to**: Find the agent who is linked to the channel the call was channeled through. ■ **None**: Find an agent by name. By selecting this option, the option to **Choose Agent** shows up. Click the link, and select an agent from the list. Set Agent may return empty if there is no agent associated with ANI or case number. Exit points: The Set Agent object uses the returning value from the search above to transfer control to the script sequence specified within the following exit points: ■ **agent found** equals true if the caller's phone number or the case lookup retrieves an agent who previously corresponded with the contact. ■ **agent not found** equals true if the caller's phone number or the case number does not retrieve any

Phone Script Object	Description
	agent who worked with the contact.
Transfer to Agent	The Transfer to Agent object connects the caller to the agent. ■ Use this object with Set Agent to find agents based on case lookup, and then transfer the call. ■ Use this object without Set Agent to transfer calls directly to the agent with a personal channel. The agent must be assigned with a personal channel. Transfer to Agent object provides options which support transferring a call to an agent even if their status is: ■ busy ■ on break ■ working offline ■ logged off If you do not select any option, then the call is transferred only if the agent status is Available. **If transfer is successful, change agent status to busy**: this option is enabled by default. The agent is offered the post processing state after terminating the call. The object supports separate logic as to why a call may not reach the target agent depending on the agent's real-time state. Exit points: The Transfer to Agent object uses the following exit points: ■ **Busy** equals true if the agent status is busy. ■ **on break** equals true if the agent is on break. ■ **working offline** equals true if the agent is working offline. ■ **logged off** equals true if the agent is logged off. ■ **rejected by agent** equals true if the agent rejected the call. ■ **invalid agent id** equals true if the agent found from ANI or case lookup is found invalid. ■ **ring no answer** equals true if the agent's phone rang but the agent failed to answer.
Transfer to Agent Voice Mail	The Transfer to Agent Voicemail object allows a caller to deposit a voicemail for an agent. It assumes the agent is already set through the Set Agent object or Get Value object. The following parameters dictate the call flow. Parameters:

Phone Script Object	Description
	■ **Name**: In the **Name** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script for the Forward to agent element. It can contain a maximum of 21 characters, and must be unique within an IVR script. ■ **Personal Invite**: You can set different greetings to inform the caller the available options. The options available under Personal Invite indicate the agent-specific greeting that will be played back to the caller when the call routes through this primitive. The following options act as templates for the actual prompts: ○ **AgentPersonalGreeting**: Plays the personal recording made by the agent through a verification call. ○ **AgentPersonalrecording_1** to **AgentPersonalrecording_6**: An agent can also record a maximum of 10 personal recordings using the Agent Console and any one of the first six of these personal recordings can be played back to the caller. This is done when the administrator sets the **Personal Invite** to one of these options. The agent's recording functionality in Agent Console is accessible via **Menu > My Recording**. Agents can record personal greetings using the My Recording functionality. ■ **Impersonal Invite**: If the personal recording of the agent is not available, the IVR system falls back on the **Impersonal Invite** message. These are the audio prompts that are available to Virtual Contact Center through the **Home > Audio Files** interface. ■ **Digit to opt out**: A caller is forced to deposit a voice mail when the “Digit to opt out” is set to false. When it is set to true then the caller has the option of leaving a voicemail or going back to the IVR system via the “opt out exit” point. This is similar to “resume” in the “ForwardToAgent” primitive in the legacy Virtual Contact Center. When opt out is set to true, the caller can press any DTMF key to navigate to the “opt out” exit point. Exit Points: ■ **opt out**: allows the caller to opt out of voicemail. ■ **agent not configured for VM**: If the Activate agent’s voice mail check box in the Phone tab of the Agent configuration in Configuration Manager is not checked, then the caller is directed to the agent not configured for VM exit point even when the agent ID is set. ■ **invalid agent id**: If the agent ID is not set before this primitive is encountered, the caller is directed to this exit point.

Phone Script Object	Description
Forward to agent	**Note:** Due to the constraints of the Forward to Agent object, we recommend using the Set Agent and Transfer to Agent objects to set up direct access to agents. Please note the Forward to Agent object will be obsolete on new Virtual Contact Center subscriptions past the 8.1 release. If your Virtual Contact Center uses the direct agent access feature, in the Menu script object described earlier in this table, you can use the Forward to Agent object to forward the caller to an agent's phone. The Forward to Agent object does not function unless contained in the extension exit point of a Menu object. Virtual Contact Center rings the agent's phone for the number of seconds specified in the Interaction offer timeout. For details, refer to Create Accounts and Configure Properties. Parameters: ■ In the **Label** text entry area type the alphanumeric label used to uniquely identify the element in the IVR script for the Forward to agent element. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Message** list, if agent voicemail is activated, then choose the audio file the IVR script plays immediately before forwarding the caller to the agent's voicemail. ■ In the **Invalid Extension Message** list, choose the audio file the IVR script plays if the caller supplies an invalid three-digit agent extension. Exit points: The Forward to agent object uses the value of the extension entered by the caller to transfer control to the script sequence specified within the following exit points: ■ **resume** equals true if the caller enters <*> instead of leaving a voice message. Use the **resume** label to transfer a caller who does not leave a message to another location in the IVR script. ■ **too many invalid** equals true if the caller dials an invalid agent extension three times.
Test Condition of Queue	Use this object to check the condition of a queue before entering a queue. Test queue provides a set of conditions which, when met, triggers specified actions. The test queue object gives the IVR designer much more routing flexibility by allowing testing queue status repeatedly. Parameters:

Phone Script Object	Description
	■ In the **Object tag** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Queue name** list, choose the phone queue to test the condition. ■ Use the **Queue Conditions** area to determine routing choices based on agent availability or queue performance. For Queue Conditions, select one or more options below. The following options are presented when you enable **There are NO agents**: ○ **Available**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. ○ **Available or Busy**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy and cannot immediately take the call. ○ **Available, busy, or working offline**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy or working offline and cannot immediately take the call. ○ **Available, busy, working offline, or on break**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy, working offline, or on break and cannot immediately take the call. ○ **Logged in (assigned but may not be enabled)**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent logged in (assigned but may not be enabled) to immediately accept the interaction. Qualified agents refer to agents set up to receive interactions from the queue specified in the **Queue name** list. ○ To evaluate the condition of a selected queue and then route the call based on the test results of that performance, perform one or all of the following tests: ■ Select **The number of calls waiting ahead of this call is greater than -----**, then enter the maximum number of calls that can be ahead of the current call. ■ Select **Current call has been waiting in this queue for more than --- (seconds)**, then enter a time the current call has spent in its queue exceeds a configurable threshold.

Phone Script Object	Description
	Each incoming call gets its own copy of an IVR script to receive treatments. The call being treated is referred to as the Current call. ■ Select **The longest wait time for any call in this queue is greater than --- (seconds)**, then enter the maximum time that a call in the queue has waited in the queue. ■ Select **The instantaneous expected-wait-time calculation exceeds --- (seconds)**, then enter a time duration in seconds. Exit points: Test Queue has two exit points: ■ Condition Matched ■ Condition not Matched The Test Queue object transfers control to the script sequence specified under the exit points based on the following test results: ■ There are no qualified agents available in the queue. ■ There are no qualified agents available or busy in the queue. ■ There are no qualified agents available, busy, or working offline in the queue. ■ There are no qualified agents available, busy, working offline, or on break in the queue. ■ There are no qualified agents logged in. ■ There are *n* number of calls in the queue ahead of this call, where *n* is the number specified in the test. ■ The current call has been waiting in this queue for more than specified time. ■ There is a call waiting longer than the specified time in the queue. ■ The instantaneous expected wait time calculation for a call exceeds the specified time. The expected wait-time calculation is useful only when there are more than 20 qualified agents assigned to the queue and active. Mathematical uncertainty with fewer than 20 active, similarly-skilled agents may produce unexpected results. One of the many ways the condition matched and condition not matched exit points can be used is to either trigger another test, provide the caller with a choice of waiting in the queue when no agent is available, leave a voicemail, or inform the caller of an approximate waiting time, and then forward to the queue.

Phone Script Object	Description
	For example, if there is a call in the queue that has waited longer than 120 seconds, you can insert the Play object under the Condition matched exit point to play a message informing the caller of an expected waiting time for the call to be answered. You can then use the Forward to Queue object to route the call to a queue.
Forward to queue	Use the Forward to queue object to forward a phone interaction to a specific phone queue. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the IVR script. The object tag can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Queue name** list, choose the target phone queue to receive the call. For more information about modifying the default queue forwarding behavior, see the information about the **Take the Overload path if** area below. ■ Use the **Queue Conditions** area to determine routing choices based on agent availability or queue performance. For Queue Conditions, select one or more options below. The following options are presented when you enable **There are NO agents**: ○ **Available**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. ○ **Available or Busy**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy and cannot immediately take the call. ○ **Available, busy, or working offline**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy or working offline and cannot immediately take the call. ○ **Available, busy, working offline, or on break**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent available to immediately accept the interaction. The agents may be temporarily busy, working offline, or on break and cannot immediately take the call. ○ **Logged in (assigned but may not be enabled)**: Select this option to route the call differently, or to provide the caller with choices when there is no qualified agent logged in

Phone Script Object	Description
	(assigned but may not be enabled) to immediately accept the interaction. Qualified agents refer to agents set up to receive interactions from the queue specified in the **Queue name** list. ◦ To evaluate the condition of a selected queue and then route the call based on the test results of that performance, perform one or all of the following tests: ■ Select **The number of calls waiting ahead of this call is greater than -----**, then enter the maximum number of calls that can be ahead of the current call. ■ Select **The longest wait time for any call in this queue is greater than --- (seconds)**, then enter the maximum time that a call in the queue has waited in the queue. ■ Select **The instantaneous expected-wait-time calculation exceeds --- (seconds)**, then enter a time duration in seconds. Exit points: ■ **In Queue** is true if a call has entered the queue. You can define the in-queue treatments for each queue. Callers are served with the treatments and options defined under each queue while waiting to be served. You can add Loop and initial action under In Queue: ◦ **Initial Action**: Under In Queue, select to add an initial action, such as announcing the Flu clinic details. Add a Play object and select an audio file to be played to callers once they enter the queue. ◦ **Loop**: Under In Queue, add a Loop object. Inside a loop, you can define multiple in-queue treatments using time intervals. These treatments are repeated for a specified number of times, or for a given duration. ■ **Queue Timeout** is true if the call waiting exceeds the timeout period set. ■ **Overload** is true if any of the overload paths are met. The Forward to Queue object transfers control to the script sequence specified under the **overload** exit point as follows: ◦ There are no qualified agents available in the queue. ◦ There are no qualified agents available or busy in the queue. ◦ There are no qualified agents available, busy, or working offline in the queue. ◦ There are no qualified agents available, busy, working offline, or on break in the queue. ◦ There are no qualified agents logged in.

Phone Script Object	Description
	◦ There are *n* number of calls in the queue ahead of this call, where *n* is the number specified in the test. ◦ There is a call waiting longer than the specified time in the queue. ◦ The instantaneous expected wait time calculation for a call exceeds the specified time. The expected wait-time calculation is useful only when there are more than 20 qualified agents assigned to the queue and active. Mathematical uncertainty with fewer than 20 active, similarly skilled agents may produce unexpected results. The overload exit point can be used to provide the caller with a choice of waiting in the queue when no agent is available, or to leave a voicemail. For example, in the Forward to Queue object's overload exit point, insert the Forward to voice mail object to route the call based on the caller's response to a prompt of the form "Press 1 to leave a message or remain on the line to speak to the next available agent"; if the caller does not press 1, the script transfers the call to the queue specified in the Queue Name list.
Loop and Time Interval	These new in-queue-only objects control the pattern of announcements, queue music, and conditional contact center tests while waiting in queue. ■ **Loop**: Under In Queue, add a Loop object. Inside a loop, you can define multiple in-queue treatments using time intervals. These treatments are repeated for a specified number of times, or for a given duration. Parameters: ■ **Object tag**: Enter the alphanumeric label used to uniquely identify the element in the IVR Script. ■ **Loop repeat count**: Select the number of times to repeat the treatments defined in the loop. Exit Points: **Time Interval**: The Intervals inside a Loop can be used to define multiple prompts. Use a Time Interval to define the length of an in-queue action. For example, define an interval to be 60 seconds long and select to play an in-queue prompt for 20 seconds. The queue music plays for the rest of the interval duration.
Callback	The Callback object allows callers waiting in a call queue to opt out of the queue and be called back when an agent becomes available. This feature fetches the caller's phone number from the calling line ID, the absence of which requires the caller to input the callback number before exiting the queue. The system retains the queue position of the call and offers an outbound call to an available agent serving the queue.

Phone Script Object	Description
	When the agent accepts the call, the call is dialed out to the caller using the callback number. The call is routed through an outbound queue. For details, see our content on queued callback. Parameters: ■ **Queue name**: Select an existing outbound queue to route the call. ■ **Call back CLI/CN**: Select a channel number for outbound caller ID. Using the option **[Current Channel]**, you can display the original channel number, which the caller used as the caller ID for the callback. This option is selected by default. If you wish to display any other channel number during the callback, you can select from the list of available channels. ■ **Dial plan**: Select from an existing dial plan. ■ In Callback parameters, select the number of callback tries, specify the delay time between tries in seconds or minutes, and enter the duration (in seconds, minutes, or hours) after which the callback request needs to be canceled. ○ **Callback tries:** Select the number of attempts to call back. The call failure is determined by the following factors: ■ Agent did not answer the call. ■ Agent answered, but the outbound leg dials out and experiences a busy network. ■ RNA (Ring no answer) ○ **Callback retry delay:** Specify the callback retry attempts in seconds or minutes. ○ **Cancel callback after:** Enter the duration in seconds, minutes, or hours. The requested callback remains in an outbound queue for the duration of that time (up to maximum six hours). Any callback attempt is prevented after the time expires. The callback request is removed from the outbound queue after Cancel Callback duration has expired. Exit Points: ■ **Callback Queued**: Informs the caller that the callback request is queued for further processing. ■ **Invalid Phone Number**: Informs the caller that the number entered is invalid, and can offer options for further corrective actions.
Forward to voice mail Queue	Use the **Forward to voice mail** object to transfer phone interactions to a selected voicemail queue. If the **Forward to voice mail** object is inserted under the **overload** exit point of a **Forward to Queue** object, the caller can choose between waiting in the queue or transferring to voicemail. Parameters:

Phone Script Object	Description
	■ In the **Object Tag** text entry area, type the label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Invite Message** list, choose the audio file that directs the caller to press 1 to leave a voicemail message. The audio file must direct the caller to press 1 to leave a voicemail; no other number will work. If the Access to voice mail is mandatory option, described below, is selected, then the IVR script forcibly transfers the call to voicemail. ■ In the **Queue name** list, choose the voicemail queue that receives calls transferred to voicemail. ■ Select **Access to voice mail is mandatory** to have the IVR script forcibly transfer calls to the voicemail queue. Exit points: None
Forward to External IVR	Use the Forward to External IVR object to forward a phone interaction to an external IVR server. This redirects an incoming call to an external SIP URI address, or a phone number, which lands on an external IVR system. You can complete a self-service authentication on an external IVR server, and resume the call as desired by the customer. The entry point for an incoming call remains the Virtual Contact Center IVR, with external IVR as an additional tree node within it. The object allows data exchange between the external IVR server and the Virtual Contact Center server through a RESTful API interface. The data flow requires a SIP connection. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Phone number** text entry area, type the complete phone number the IVR script dials when transferring a phone interaction. The Phone number text entry area accepts only the numeric characters 0-9. ○ In the United States, phone numbers, must be of the form (1 + three-digit area code + seven-digit phone number). In the United States, when typing numbers into text entry areas, always preface the area code with 1.

Phone Script Object	Description
	◦ Outside the United States, must be of the form (Country Code + phone number). Exit points: **Resume**: Provides the capability to resume within the Virtual Contact Center IVR tree on detecting a hang-up event on the External IVR server, and redirects a call to a predefined or assigned destination.
Forward to External Number	Use the **Forward to external number** object to forward a phone interaction to a phone number that is not managed by Virtual Contact Center. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. ■ In the **Phone number** text entry area, type the complete phone number the IVR script dials when transferring a phone interaction. The Phone number text entry area accepts only the numeric characters 0-9. ◦ In the United States, phone numbers, must be of the form (1 + three-digit area code + seven-digit phone number). In the United States, when typing numbers into text entry areas, always preface the area code with 1. ◦ Outside the United States, must be of the form (Country Code + phone number). Exit points: None
Label	Use the **Label** object in combination with the Goto object, described later in this table, to redirect call processing to any location in the IVR script. The Goto object redirects the interaction to the parameter of a Label object. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. Exit points: None.
Goto	Use the **Goto** object to redirect the script to continue running at some labeled location in the script. Parameters: In the **Destination** list, choose a labeled script location.

Phone Script Object	Description
	Exit point: None
Set Variable	The ability to set variables allows programming abilities within IVR scripts, enabling better caller experience. You can use variables to remember the user input and use them to drive the call flow. You can create variables to store values of string and number types, and reference them anywhere and any number of times in the script. Virtual Contact Center allows two types of variables in IVR: ■ System Variables: These are predefined variables which cannot be edited: **$QueuePosition**: Returns the current position of a call within the queue. **$callerPhoneNumber**: Returns the caller's phone number based on caller ID. **$callbackPhoneNumber**: Returns the call back number input by the caller. ■ User-Defined Variables: These are variables defined by users. You can initialize these variables with a certain value, and modify them later. Parameters: ■ **Object Tag**: Enter a label to uniquely identify the element in the IVR script. ■ **Variable**: Select a predefined variable from the drop-down list, or create a new variable. ■ **Value**: Select a desired value for the variable. For example, to offer callers suitable choices based on the queue position, set a variable and check: ■ If the queue position is greater than 10, offer to call back when an agent is available. ■ If the queue position is less than 10, play promotional messages and retain callers in the queue. Exit Points: None
Test Variable	The Test Variable object allows you to test an already defined variable and test it against a set value. To test a variable, select either a system variable or a user-defined variable, and test it against a specific value. For example, test how many calls are ahead of a call using the system variable $QueuePosition. If there are more than ten calls ahead of this call, announce the position to the caller, and offer the caller to receive a call back. If there are fewer than 10 calls ahead of this call, keep the caller in the queue. To access the Test Variable object within the script, click Add next to a node, and select the Test Variable object from the Insert Object list. Exit Points: ■ **True**: equals true if it meets the condition set for the variable ■ **False**: equals true If it does not meet the set condition

Phone Script Object	Description
Randomize	The Randomize object allows us to randomly pick callers and offer a different treatment from the norm. For example, in a customer survey program, you may want to randomly select 50% of callers, and direct them to a survey. You will need to use the randomize object that randomly picks callers and offers a specific treatment based on the path chosen. Parameters: ■ **Object tag**: Enter the alphanumeric label used to uniquely identify the element in the IVR Script. ■ **Path A Percentage**: Slide the pointer on the scale to indicate the percentage of callers to be directed to the Path A treatment. Exit Points: ■ **Path A**: Allows you define the treatment for callers randomly directed to path A. ■ **Path B**: Allows you to define the treatment for callers not chosen for path A.
Hang up	Use the **Hang up** object to disconnect a phone interaction. The IVR disconnects a phone interaction if the call has not been forwarded to a queue, voicemail, or an external number, and the script flow contains no further script objects. In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. Labels can contain a maximum of 21 characters, and must be unique within an IVR script. Exit points: None
Default Termination	The IVR tree has two objects: ■ Main IVR ■ Default Terminating Node The default terminating node is the last node in the IVR tree, and cannot be deleted from the tree. You can only add and remove IVR objects between the first and last nodes. The Default Terminating node catches all calls that would drop on reaching a non-terminating exit criterion, such as Play or Label in the IVR script, and routes them with four exit options: ■ **Forward to Queue**: Directs the call to a queue ■ **Forward to Voice Mail:** Directs the call to a voicemail queue ■ **Forward to External Number:** Forwards the call to an external phone number ■ **Hang up**: Terminates the call

IVR Phone Script Examples

An IVR script plays audio files to prompt a caller for information, and uses the caller's responses to route the interaction to a specific phone queue.

The following procedure illustrates scripts that contain increasingly complex combinations of IVR script objects and control flow features:

- Build a Simple Greeting and Routing Script
- Create Menus of Options
- Use Caller Information to Process Interactions
- Enable a Phone Channel and Associated IVR Script

Before You Begin

The procedure in this section assumes that you have used Configuration Manager to create:

- At least one phone queue; for details on creating phone queues, refer to Create Inbound Phone Queues.
- At least one voicemail queue; for details on creating voicemail queues, refer to Create Voicemail Queues.
- At least one contact center schedule; for details on creating schedules, refer to Define Business Hours and Schedules.

Best Practice: Before editing a Virtual Contact Center IVR script, disable the IVR channel.

To disable the phone channel:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Phone** tab.
3. Find the desired channel, and click .
4. In the Properties tab, clear **This channel is enabled**.
5. Click **Save**.

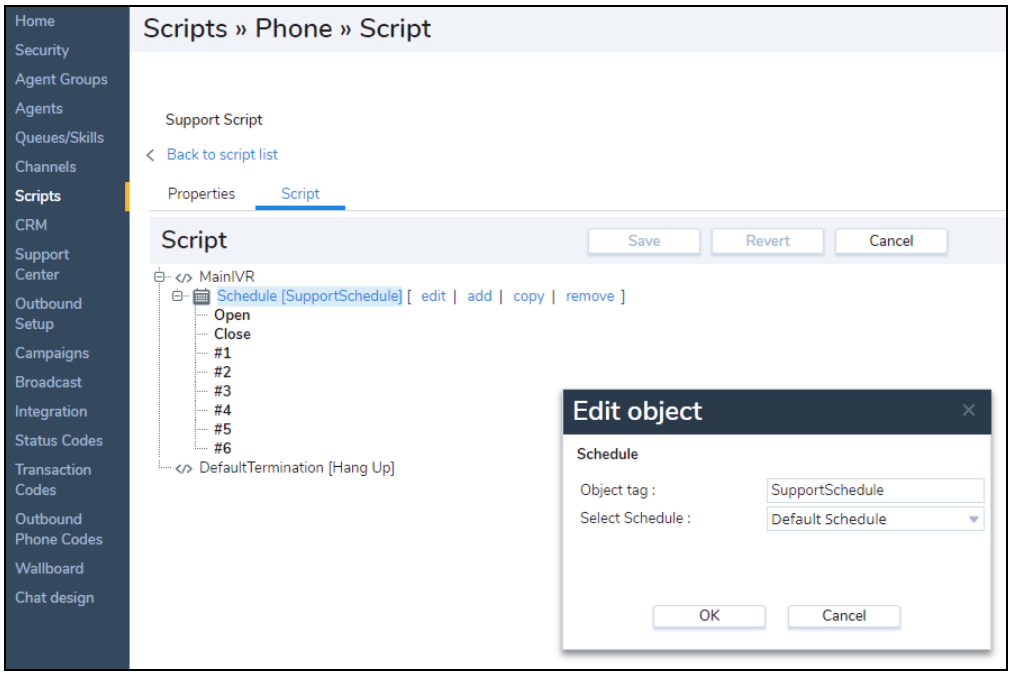
Build a Simple Greeting and Routing Script

Perform the procedure in this section to build a simple IVR script that:

- Checks a schedule for the contact center's current hours of operation.
- Plays a greeting message to the caller.
- Routes the call to a queue if the contact center is open.
- Offers the caller the chance to leave a voicemail message if the contact center is closed.

To select a schedule, play a greeting, and route a call to a queue:

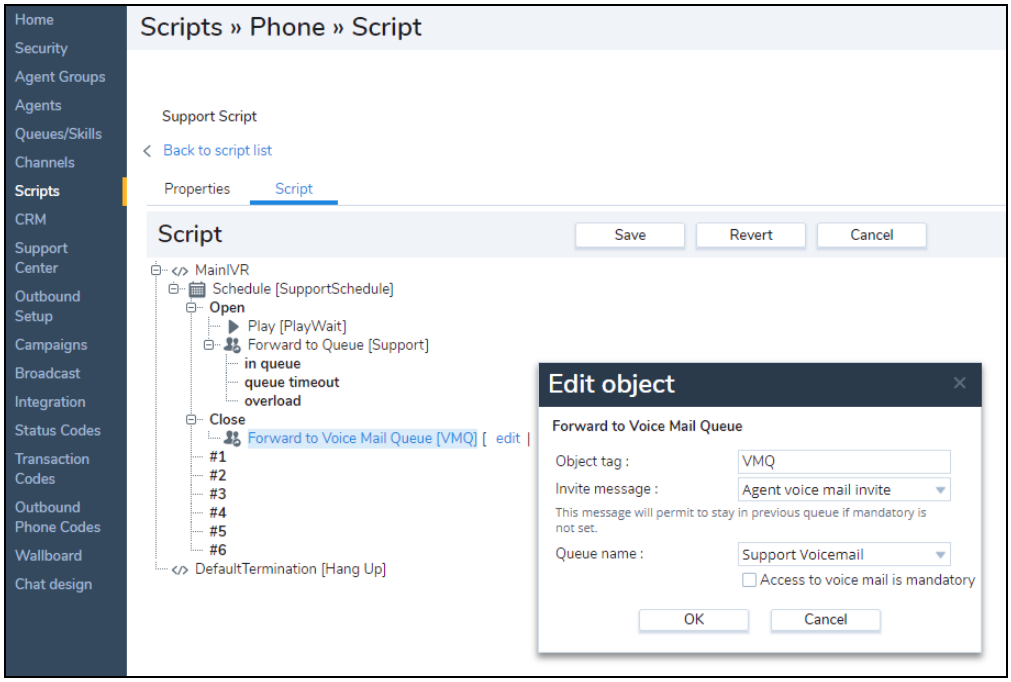
1. From the Configuration Menu, open **Scripts**.
2. Go to the **Phone** tab.
3. Find the desired script, and click .
4. Open the **Script** tab.
5. Click an object to see **[add]**.
6. In the object add list, select **Schedule**.
7. In the object configuration area:
   a. For the **Label** text entry area, type <BusHours>.
   b. For the **Select Schedule** list, choose a previously defined schedule.
   c. Click **Save**.
   Configuration Manager inserts the Schedule object below the MainIVR label.



8. If a call arrives when the contact center is open, play a greeting message:
   a. In the **Schedule** object, select the **open** exit point.
   b. In the object Add list, choose **Play**.
   c. In the **Name** text entry area, type <PlayWait01>.
   d. In the **Played Message** list, choose **Wait for next agent**.
      The procedure refers to audio files from the Virtual Contact Center default set of audio files. Your IVR scripts may reference one or more default audio files, or reference the customized audio files you uploaded to Configuration Manager.
   e. Click **OK**.
      Configuration Manager inserts the Play object below the open exit point.
9. Choose the queue that the caller is routed to.
   a. Select the **Play** object under **schedule**.
   b. Click **add**.
   c. Select **Forward to Queue**.
   d. In the **Label** text entry area, type <PhoneQ01>.
   e. In the **Queue name** list, choose a phone queue.
   f. Click **OK**.
      Configuration Manager inserts the Forward to Queue object below the Play object.
10. If the call arrives when the contact center is closed, route the call to a voicemail queue.
   a. In the **Schedule** object, select the **closed** exit point, then in the object selection list, choose **Forward to Voice Mail Queue**.
   b. In the **Label** text entry area, type <Vmail01>.
   c. In the **Invite Message** list, choose **Voice mail invite**.
   d. In the **Queue name** list, choose a voicemail queue.
   e. Select **Access to voice mail is mandatory**.

f. Click **OK**.

Configuration Manager inserts the Forward to Voice Mail Queue object below the Close label.



Create Menus of Options

The procedure in this section illustrates how to implement menus of options, and builds on the IVR script example in Build a Simple Greeting and Routing Script.

To script a set of menu options:

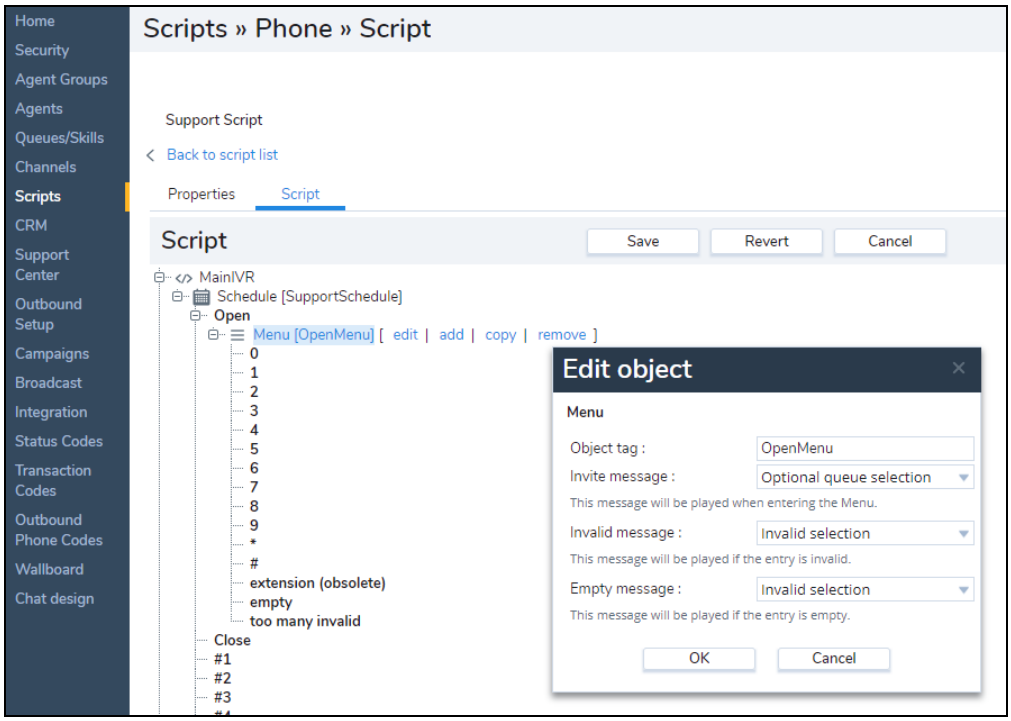
1. In the script you created in the procedure in Build a Simple Greeting and Routing Script, delete the current open hours script logic. In the script:
   a. Select the **Forward to queue** object <PhoneQ01>, then click **Remove**.
   b. Select the **Play** object <PlayWait01>, then click **Remove**.
2. When the contact center is open, play a menu of options.
   a. In the **schedules** object, select the **open** exit point.
   b. In the object add list, choose **Menu**.
   c. In the **Label** text entry area, type <OpenMenu01>.
   d. In the **Invite Message** list, choose **Optional queue Selection**.
   When a caller first connects to the contact center, the Menu object's Invite message audio file orients them to

the set of menu choices. In most cases, this implies the need for an invite message that has been customized for your contact center.

e. In the **Invalid message** list, choose **Invalid selection**.
   If a caller provides an invalid response to the invite message, the Invalid message audio file informs them that Virtual Contact Center cannot interpret their response.

f. In the **Empty message** list, choose **Wait for next agent**.
   If a caller does not respond to the prompt within ten seconds, the Empty message audio file informs them to respond.

g. Click **OK**.
   Configuration Manager inserts the Menu object below the Open label.



3. Configure the message played when the caller responds to the initial menu by pressing 1:

   a. In the **Menu** object, select the **1** exit point.

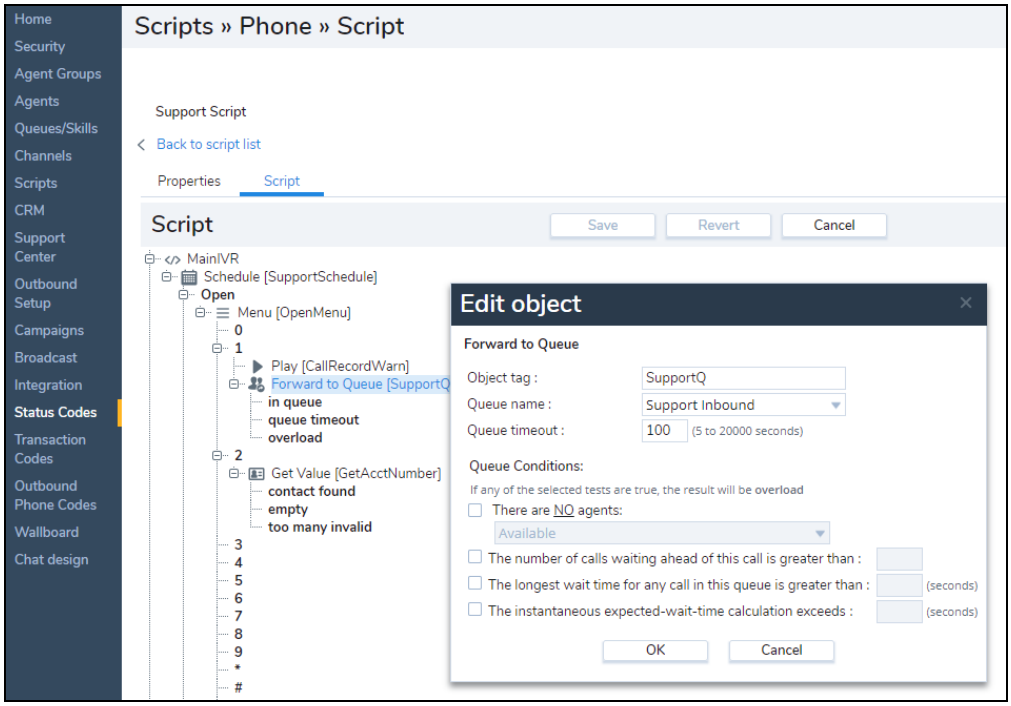
   b. In the object selection list, choose **Play**.

   c. In the **Label** text entry area, type <CallRecordWarn>.

   d. In the **Played message** list choose the **Call monitoring warning** audio file.

   e. Click **Save**.
      Configuration Manager inserts the Play object below exit point labeled 1.

4. Configure the queue the caller is routed to if they respond to the initial menu by pressing 1:
   a. In the **Menu** object and under the **1** exit point, select the **Play** object.
   b. In the object add list, choose **Forward to queue**.
   c. In the **Name** text entry area, type <PhoneQ02>.
   d. In the **Queue name** list, select a phone queue.
   e. Click **OK**.
   Configuration Manager inserts the Forward to Queue object below exit point labeled 1.



5. Continue to the next example, Use Caller Information to Process Interactions, to build on this script.

Use Caller Information to Process Interactions

Use the procedure in this section to prompt a caller for information that is used to find a caller's record in the Local CRM database, then use information contained in that record to determine how to route the call. The following procedure builds on the IVR script example in Create Menus of Options.

To create an IVR script that prompts a caller, tests for the caller's Local CRM record, and routes the call:

1. Prompt the caller for information, such as an account number. In the **Menu** script object, select the exit point labeled **2**, then in the object selection list, choose **Get Value**.
   Virtual Contact Center displays the parameters for the GetValue object in the object configuration area:

a. In the **Label** text entry area, type <GetAccountNumber>.

b. In the **Invite Message** list, choose **Enter mandatory account number**.

c. In the **Invalid message** list, choose **Invalid selection**.

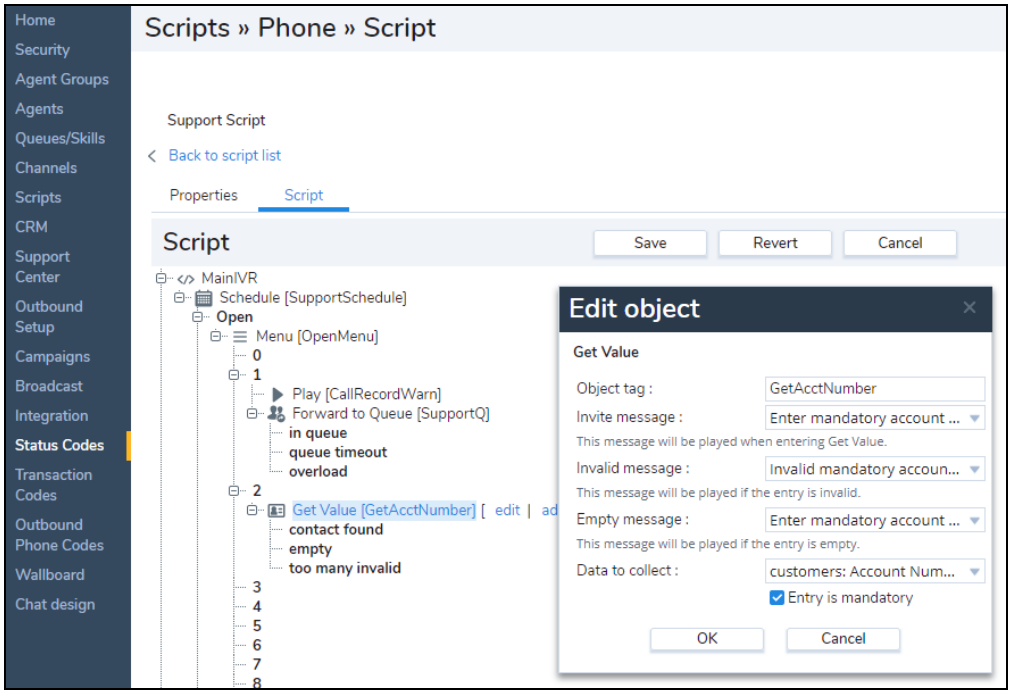
d. In the **Empty message** list, choose **Invalid selection**.

e. In the **Data to collect** list, choose **Customers: Account Number**.

f. Select **Entry is mandatory**.

g. Click **OK**.

Configuration Manager inserts the Get Value object below the exit point labeled 2.



You can also use the GetANI script object to look in the Local CRM for existing customers.

2. Add a **Label** object to the portion of the script that processes customer accounts.

a. In the **GetValue** object, select the **Contact found** exit point.

b. In the object **add** list, choose **Label**.

c. In the **Label** text entry area, type <AcctFound>.

d. Click **OK**.

Labeling the portion of the script that processes customer account interactions enables other script objects to use the Goto script object to transfer control jump to that portion of the IVR script.

3. Check the customer's status. Select the **Label** object, then in the object selection list choose **Picklist**.
   Virtual Contact Center displays the parameters for the Picklist object. In the object configuration area:
   a. In the **Label** text entry area, type <ChkCustID>.
   b. In the **Data to test** list, choose **Record Type**.
   c. In the **Select operator** list, choose **Is equal to**.
   d. In the **Select values** list, choose **Customer**.
   e. Click **OK**.

   The Configuration Manager inserts the Picklist object below the found label.
   - The configuration of your Local CRM determines the types of data the Picklist script object can test for.
   - Use the Picklist script object's matched and unmatched labels to use the result of the Picklist's comparison operation to route the call.
   - The Label script object enables other objects to use a Goto script object to transfer control to the Picklist script sequence.
   - You can also use the GetANI function to use the caller's Automatic Number Identification (ANI) to look for existing Local CRM data.

Enable a Phone Channel and Associated IVR Script

Perform the following procedure to enable a phone channel and the channel's IVR script.

To enable the Phone channel:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Phone** tab.
3. Find the desired channel, and click .
4. In the Properties tab, select **This channel is enabled**.
   For details, refer to Configure Phone Channel Properties.
5. Click **Save**.
   Virtual Contact Center puts the IVR channel and associated script into service.

You can now make test phone calls to the phone channel to validate the operation of the IVR script.

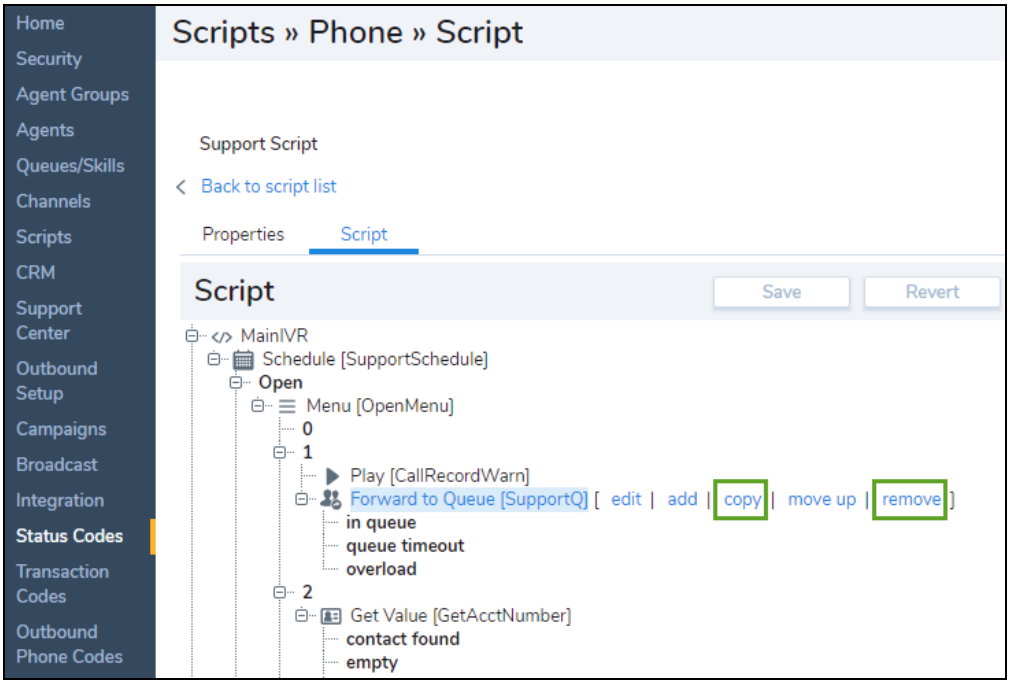
Copy and Paste IVR Script Objects

While defining or editing an IVR script, you have the flexibility to copy and paste IVR script objects, reducing the time spent writing the script. You can use the copy and paste icons to copy any part of the IVR tree and paste it to a desired

area. You must then apply the changes for them to take effect. The copy-and-paste feature is especially useful if you introduce similar call treatments with slight variations. You can write once, and copy as many times as you desire within the script.

To copy and paste a part of the IVR object:

1. From the Configuration Menu, open **Scripts**.
2. Go to the **Phone** tab.
3. Find a script and click .
4. Go to the **Script** tab.



5. Select an object, and click **Copy**.
6. Select an IVR tree node you wish to paste the copied object to.
7. Click **Paste**. The segment is pasted immediately.
8. Click **Save** to apply the changes.
   OR
   Click **Revert** to remove all changes since the last save.

Create Inbound Phone Scripts

Inbound phone scripts are grouped under **Scripts > Phone** in Configuration Manager. You can create a user-defined script or use the system default script:

System Default Script

IVR script default: The default phone script provided by the system. You can copy and then edit the default script when creating a new user-defined script.

User-Defined Script

A phone script created by the user. It can be Inbound phone, Outbound phone, or Post call survey script. You can create, edit, or delete a user-defined phone script by going to **Scripts > Phone**.

To create or edit a user-defined phone IVR script:

1. From the Configuration Menu, open **Scripts**.
   Scripts are grouped by media in separate tabs: Phone, Chat, Email, and Social.
2. Go to the **Phone** tab.
3. Click ⊕ or **Add new phone script**.
4. Enter the properties for the phone script.
   The following table summarizes the options under **Scripts > Phone > Properties**:

Phone/ Chat/Email Script Property	Description
Script Type	■ **Phone:** Select a script type: Inbound phone, Post call survey, or Outbound phone. ■ **Chat and Email:** A read-only reminder of the script type. It displays if it is a phone, chat, or email script.
Script Name	Enter a unique name for the script.
Category	A category helps you organize your scripts better. For example, if you have multiple scripts serving Support and Sales needs, you can group scripts under separate categories. You can select an existing category or create a new one.

Phone/ Chat/Email Script Property	Description
	To create a new category: 1. Select **Edit Categories** from the drop-down menu. 2. In the **Category** dialog box, add a new category by clicking ⊕.
Copy script from	Choose this option to place a copy of the default or an existing IVR script into this channel. This option appears when you are creating a new script.
Comment	Add comments or additional notes, if desired.
This script is enabled	Select to place this script definition into service.
Assigned Channels /Assigned Queues	■ When you select **Script Type > Outbound Phone**, you must assign one or more new outbound phone queues. ■ When you select **Script Type > Post Call Survey** or **Script Type > Inbound phone**, you must assign one or more channels to the script. **Note:** It is not mandatory to assign a channel while creating a script. **To assign new channels:** 1. Click on the link to bring up the list of channels. 2. Select the desired channels from the list. 3. Click **Assign**. **Note:** All channels in the list are associated with a script whether default or user-defined. If you assign and save a new script, the old script is permanently replaced by the new selected script.

Phone/ Chat/Email Script Property	Description
	Note: It is recommended to restrict your assignment to 100 channels at a time.

5. Click **Save**.
   Upon saving the properties, Configuration Manager takes you to the Script tab, where you can define the script.
6. In the **Script** tab, click **MainIVR**.
   The **[add]** option appears.
7. Add the desired IVR Objects such as Schedule, Check ANI, and Get Value.
   See Summary of Phone IVR Script Objects for the complete list of available objects and their description.
8. Click **Save**.
9. To edit the details, click any object and select **edit**. An edit window opens up. To view the details, double-click any object. The View details window appears. You can also click **edit** from inside the View details window.
10. To undo the changes click **Revert**.
    For a primer on writing IVR scripts, refer to the guide on Interactive Voice Response for samples, refer to IVR Phone Script Examples.
11. Click the on the script page to generate a PDF image and save it locally. The PDF printout is generated containing the script name, date, and time of print. Supervisors and administrators can review and modify the script as needed.

Note: When creating or modifying a script, disable the script by clearing **This script is enabled** in the channel's **Properties** tab. This ensures that Virtual Contact Center does not run an incomplete script. After completing the script, enable it again.

Create Outbound Phone Scripts

In many contact centers, queued inbound calls are more important than queued outbound calls. In situations where there is an ample supply of queued outbound calls waiting, all agents are kept busy all of the time. When a new inbound call comes in, chances are, the caller has to wait for an agent to finish their less important outbound call. Using an outbound phone script, you can now reserve a number of agents, in the available and idle state, to improve the probability of quickly attending to a new inbound call. While there are fewer than the assigned number of reserved available and idle agents, no queued outbound calls will be presented to agents. Whenever the available and idle agents reserve is exceeded then the most idle agent will receive a queued outbound call.

Reserve Idle Agents for Inbound Queues

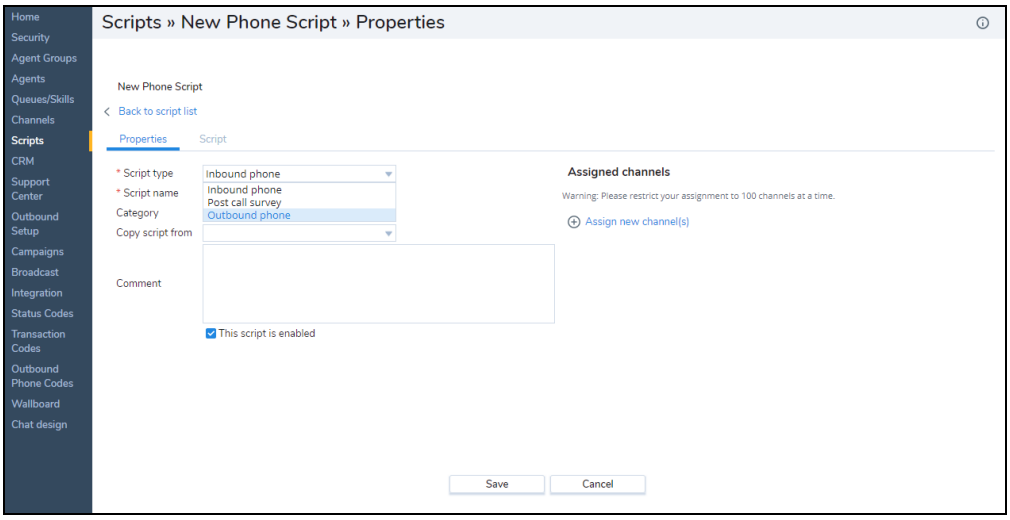
To improve handling of inbound queues when queued outbound calls are less important, you must define an outbound phone script and assign it to an outbound phone queue. In the outbound phone script, specify the inbound queue you wish to prioritize and the number of reserved agents at a time to be prevented from handling queued outbound calls.

Note: This feature only applies to outbound calls that are assigned to go through an outbound queue. a click-to-dial call is a direct outbound call that does not go through a real outbound queue.

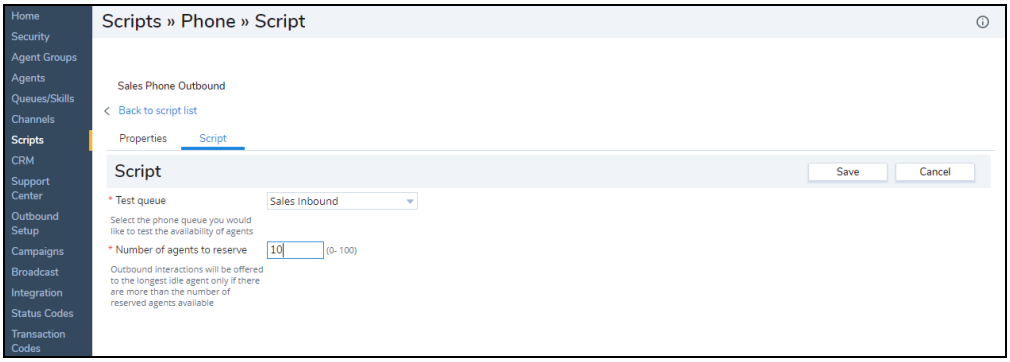
To reserve agents for an inbound queue:

1. From the Configuration Menu, open **Scripts**. Scripts are grouped by media in separate tabs: Phone, Chat, and Email.
2. Go to the **Phone** tab and click **Add new phone script**.

3. In **Script type** drop-down menu, select **Outbound phone**.



4. Enter a **Script name** for the script.
5. In **Assigned Queues**, link the outbound phone script to the outbound phone queue the agents are going to serve, and click **Save**.
6. Go to the **Script** tab.
7. In **Test Queue**, select the inbound phone queue you like to protect and test the availability of its agents.
8. Specify the **Number of agents to reserve** and save.



Whenever an outbound interaction such as a customer callback needs to be made, it will be offered to the longest idle agent only if there are enough reserved idle agents for that queue. For example, if you designate four agents as reserved in an inbound queue, the outbound interaction will be offered to the longest idle agent whenever the fifth agent becomes available in the queue.

Assign Scripts to Channels

A chat script defines the behavior from the time a website visitor enters the website, initiates and completes a chat. For details on chat scripts, refer to Create a Chat Script. For a chat channel to be operational, you must link it to a chat script that defines the chat flow process.

You can assign a script to the channel in two ways:

- From the Scripts page
- From the Channels page

From the Scripts Page

1. From the Configuration Menu, open **Scripts**.
2. Go to a media tab, such as Phone, Email, or Chat.
3. Select a script from the list, and double-click to open.
4. In the **Properties** tab, click **Assigned Channels**.
   The list of existing channels appears.
5. Select a desired channel, and click **Assign**.

From the Channels Page

1. From the Configuration Menu, open **Channels**.
2. Go to a media tab, such as Phone, Email, or Chat.
3. Select a channel from the list, and double-click to open.
4. In the **Properties** tab, select a script from the list of scripts.

   Note: In phone and email channels, a default script is automatically assigned if you do not select any user-defined scripts.

5. Click **Save**.

Create a Chat Script

A chat script defines the path of a chat interaction from its initiation until it is accepted by an agent. Using chat scripts, you can define how to present a chat, when to present it, what information you need to collect before initiating the chat,

and which queue to direct the chat interaction to. You can create a new script and assign it to any number of channels. Chat scripts are grouped under Scripts > Chat in Configuration Manager. The enhanced chat script allows you to design and control the chat flow in a contact center. To see the chat workflow diagram, refer to Chat Overview.

In the use case discussed, Bob, a contact center administrator at AcmeJets, wants to define a chat workflow that allows website visitors to initiate a chat with friendly representatives from his company. To enable a smooth chat flow, Bob must create a chat script that enables the following workflow:

1. Allow web page visitors during business hours to click the chat button and initiate a chat.
   OR
   Invite visitors to chat once they have spent some time on the page.
2. When they click the chat button, present a short pre-chat form that helps identify the customer's interests.
3. Once the customer submits the pre-chat form, direct the chat interaction to an appropriate chat queue.
4. If the wait is too long, allow the customer to skip waiting in the queue and send an offline message.
5. Present the customer with a chat window they can use to interact with a representative.
6. Allow the visitor to send an email message, if reached during closed hours.

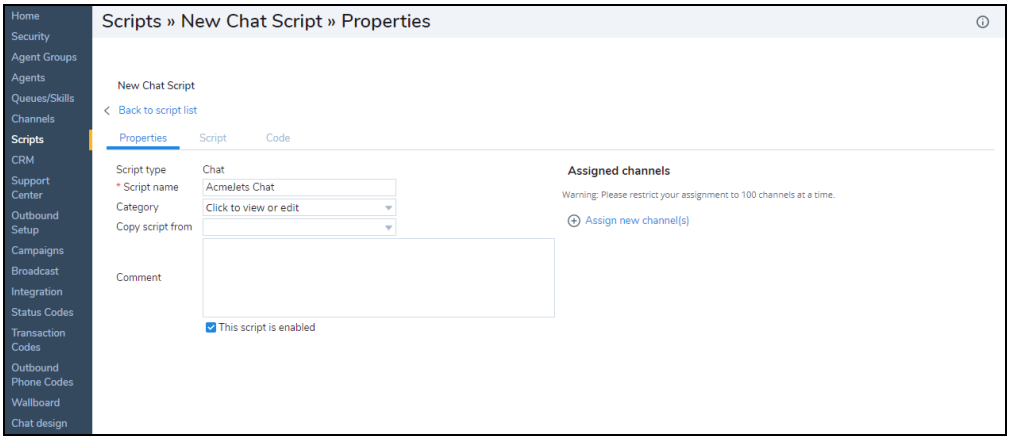
To achieve the above goals, Bob must create a chat script like the one below. The objects can be entered in any order, as Virtual Contact Center arranges them in the correct order.

To create a chat script:

1. From the Configuration Menu, open **Scripts**.
2. Go to the **Chat** tab.
3. Click ⊕ or **Add new chat script**.
4. Follow the steps below:

Configure Chat Script Properties

1. Go to the **Properties** tab.



2. Enter the properties for the script.

   The following table summarizes the options under **Scripts > Chat > Properties**:

Phone/ Chat/Email Script Property	Description
Script Type	■ **Phone:** Select a script type: Inbound phone, Post call survey, or Outbound phone. ■ **Chat and Email:** A read-only reminder of the script type. It displays if it is a phone, chat, or email script.
Script Name	Enter a unique name for the script.
Category	A category helps you organize your scripts better. For example, if you have multiple scripts serving Support and Sales needs, you can group scripts under separate categories. You can select an existing category or create a new one. **To create a new category:** 1. Select **Edit Categories** from the drop-down menu. 2. In the **Category** dialog box, add a new category by clicking ⊕.
Copy script from	Choose this option to place a copy of the default or an existing IVR script into this channel. This option appears when you are creating a new script.

Phone/ Chat/Email Script Property	Description
Comment	Add comments or additional notes, if desired.
This script is enabled	Select to place this script definition into service.
Assigned Channels /Assigned Queues	■ When you select **Script Type > Outbound Phone**, you must assign one or more new outbound phone queues. ■ When you select **Script Type > Post Call Survey** or **Script Type > Inbound phone**, you must assign one or more channels to the script. **Note:** It is not mandatory to assign a channel while creating a script. **To assign new channels:** 1. Click on the link to bring up the list of channels. 2. Select the desired channels from the list. 3. Click **Assign**. **Note:** All channels in the list are associated with a script whether default or user-defined. If you assign and save a new script, the old script is permanently replaced by the new selected script. **Note:** It is recommended to restrict your assignment to 100 channels at a time.

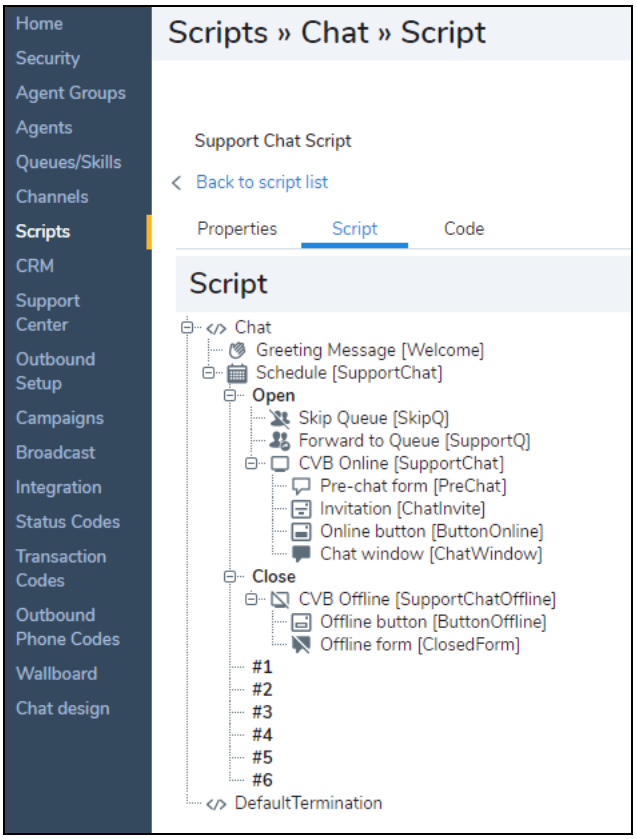
3. Click **Save**.

Create the Chat Script

1. Go to the **Script** tab.

2. Click **Chat**. The [add] option appears. For a complete list of objects and their descriptions, refer to Summary of Chat Script Objects.
3. Click **[add]**.
4. Select **Schedule** from the chat objects.
   This object performs a particular sequence of script operations when the contact center is open or closed.
   a. Enter a name for the **Object Tag**.
   b. Select an existing schedule from the list of **Select Schedule**.
   c. Click **OK**.
5. Click **[add]** next to **Open** and then:
   a. Select **Forward to Queue**, enter a name for the object tag, select a queue, and click **OK**.
      This object forwards a chat interaction to a specific chat queue, such as the sales or main queue.
   b. Select **CVB Online**, enter a name for the object tag, and click **OK**.
      CVB Online refers to a chat design element, such as a chat button, chat invitation, chat form, or chat window, which can be used on your website during the business hours.
   c. Select **Greeting Message** and click **OK**.
      This object displays the greeting message to invite customers to the chat session. Append <@skipQueue@> to your message to offer the option to skip queue in the chat window.
   d. Select **Skip queue**, enter the relevant parameters, and click **OK**.
      This object gives customers the option to opt out of waiting in the chat queue and send an email offline. It can only be triggered in the greeting message object.
6. For the **CVB Online**, click **[add]**:
   a. Select **Online button**, enter a name for the object tag, and click **OK**.
   b. Select **Invitation**, enter a name for the object tag, and click **OK**.
   c. Select **Pre-chat form**, enter a name for the object tag, and click **OK**.
   d. Select **Chat Window**, enter a name for the object tag, and click **OK**.
7. Click **Close**, then click **[add]**.
   a. Click **CVB Offline**, enter a name for the object tag, and click **OK**.
      This object refers to a chat design element, such as a chat button or chat form, that activates on your website during closed hours.
   b. Click **add offline button** next to **CVB Offline**, enter a name for the object tag, select a button, and click **OK**.
8. Click **Save** to save your chat script.

9. To edit the details, click any object and select **edit**. An edit window opens up. To view the details, double-click any object. The View details window appears. You can also click **edit** from inside the View details window.
10. To undo the changes click **Revert**.
11. Click the on the script page to generate a PDF image and save it locally. The PDF printout is generated containing the script name, date, and time of print. Supervisors and administrators can review and modify the script as needed.

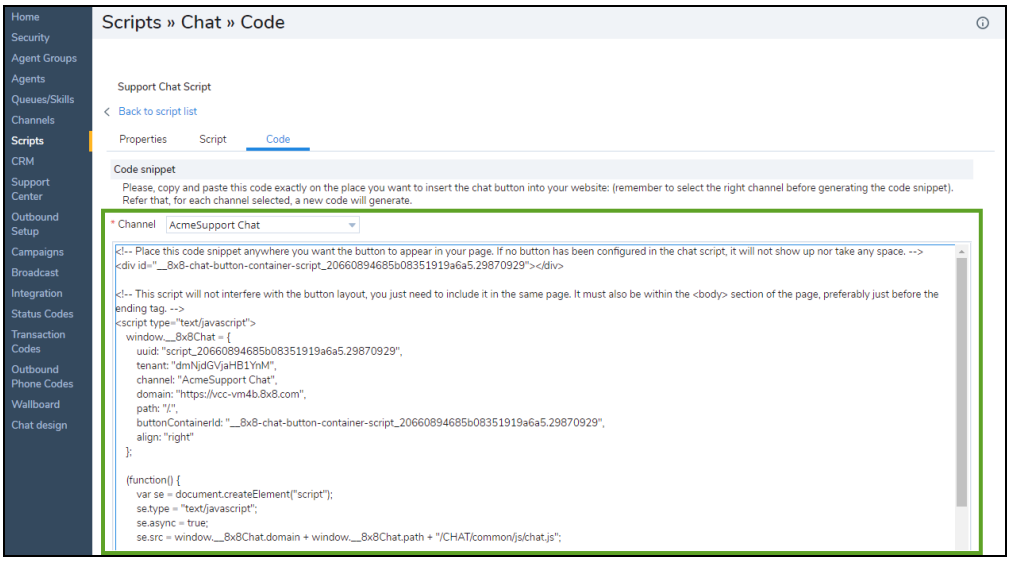


For details, refer to Summary of Chat Script Objects.

Note: As long as you have all the objects in the script, the sequence does not matter. Virtual Contact Center arranges the script in the correct order.

Run and Use the Script

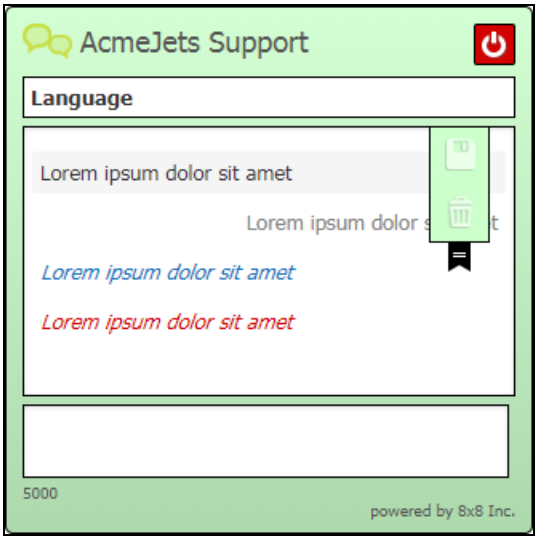
1. Go to the **Code** tab.
2. Select the **chat channel** from the list.



3. Click **Generate Code**. The code appears in the window.
4. Copy and paste the code to a page where you want to insert a chat button on your website.

Note: This script does not interfere with the button layout. It must be included in the same page and within the body section of the web page, preferably just before the ending tag.

5. Click the Chat button you just created. The **Chat** window opens.



See Chat Overview to learn about Embedded Chat Design.

Summary of Chat Script Objects

The following table summarizes the objects available in the Chat scripts configuration:

Chat Script Object	Description
Schedule	Use the **Schedule** object to perform a particular sequence of script operations when the contact center is either open or closed. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. ■ Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Select schedule** list, choose a schedule definition. Exit points: The Schedule object uses the Select schedule value to transfer control to the script sequence specified within the following exit points: ■ **open** equals true if the phone interaction has been received within the selected schedule's open hours.

Chat Script Object	Description
	■ **close** equals true if the phone interaction has been received outside the selected schedule's open hours. ■ **#1** through **#6** equal true if the schedule specified in Select Schedule includes an exception condition, numbered 1 through 6, and today's date is within the exceptions from and to dates. For details on creating schedules, refer to Define Business Hours and Schedules.
Skip Queue	Use this object to give the customers the option to opt out of waiting in the chat queue and send an email offline. This option can only be triggered in the greeting message object. ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ **Email Prompt Msg**: The prompt message offered to a customer waiting in the chat queue. It can appear as a link in the chat window (for example, "All our agents are busy helping other customers. Would you like to send us an email?"). ■ **Select form**: Select an offline form from the list. An offline form presents an option to send an email message during the chat's offline hours. ■ **Send info by**: Shows whether you want to send the information you collected in the form using an email channel or a dedicated email. ○ **Email channel**: Select this option to choose an email channel. The email channel directs the customer's email to the right agent. ○ **Plain email**: Select a dedicated email to send the customer's email to. ■ **Email Channel**: If you choose to use a Channel, you must select an email channel from the list. ■ **Forced email header message**: Specifies the Subject line in the email message sent by a customer skipping the chat queue. Exit Point: None
Forward to Queue	Use the **Forward to queue** object to forward a chat interaction to a specific chat queue, such as the sales or main queue. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Queue name** list, choose the target chat queue to receive the chat.

Chat Script Object	Description
	Exit points: None
CVB Online	Chat Visual Block Online refers to a chat design element, such as a chat button or chat form which can be used on your website during business hours. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
CVB Off-line	Chat Visual Block Offline refers to a chat design element, such as a chat button or chat form that activates on your website during closed hours. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
CVB Default	Chat Visual Block Default refers to a chat design element, such as a chat button or chat form available by default from Virtual Contact Center. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
Greeting Message	Use this object to type a greeting message to invite the customers to the chat session. Use @skipQueue@ to present the message that is previously set in the skip queue. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Greeting Message**, type the message you like to appear in the chat window. For example: <We will be with you shortly. click here to send an email.> ■ **Use auto-translation**: This option is selected by default and is used to automatically translate the greeting messages using Google Translate. If this option is disabled, you can bypass the automatic translation, and let the user provide a customized translation instead. Exit points: None

Chat Script Object	Description
Test Condition of Queue	Use the Test Queue object to check the condition of a queue before entering a queue. Test queue provides a set of conditions which, when met, trigger specified actions. The test queue object gives the IVR designer much more routing and announcement flexibility by allowing them to repeatedly test queue status. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Queue name** list, choose the phone queue to test the condition. ■ Use the **Condition Matched** check boxes to determine routing choices based on agent availability or queue performance. ◦ To route the chat differently, or to provide the customer with choices when there is no qualified agent available to immediately accept the interaction, select **there are no enabled agents waiting**. ◦ To route the chat differently, or to provide the customer with choices when there is no qualified agent logged in to immediately accept the interaction, select **there are no assigned agents logged in**. Qualified agents refer to the agent setup to receive interactions from the queue specified in the **Queue name** list. ◦ To evaluate the condition of a selected queue, and route the chat based on the test results of that performance, select **Enable queue overload tests below**. Perform one or all of the following tests: ■ **Number of chats in queue ahead of this chat**: Enter the maximum number of chats that can be ahead of the current chat. ■ **there is a chat in this queue that has been waiting longer than (seconds)**: Enter the maximum time that a chat is waiting in the queue. ■ **the instantaneous expected wait-time calculation exceeds**: Enter a time duration in seconds. Exit points: Test Queue has two exit points: ■ **Condition Matched** ■ **Condition not Matched**

Chat Script Object	Description
	The Test Queue object transfers control to the script sequence specified under the exit points based on the following test results: ■ There are no enabled agents waiting in the queue. ■ There are no assigned agents logged in. ■ There are <n> number of chats in the queue ahead of this chat, where <n> is the number specified in the test. ■ There is a chat waiting longer than the specified time in the queue. ■ The instantaneous expected wait time calculation for a chat exceeds the specified time. The expected wait-time calculation is useful only when there are more than 20 qualified agents assigned to the queue and active. Mathematical uncertainty with fewer than 20 active similarly-skilled agents may produce unexpected results. Some of the many ways the exit points can be used are to trigger another test, provide the customer with a choice of waiting in a queue when no agent is available, leave a voicemail, or inform the customer of an approximate waiting time, and then forward to queue. For example, if there is a chat in the queue that has waited longer than 120 seconds, you can insert the Play object under the Condition matched exit point to play a message informing the customer of an expected waiting time for the chat to be answered. You can then use the Forward to Queue object to route the call to a queue.
Chat as a Pop-up	Allows the pop-up chat window to appear. The pop-up chat applies to the Pre-Chat Survey and the Chat Window options. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None

Create an Email Script

An email script is used to route incoming email interactions to the correct email queue. You can create a new script and assign it to any number of channels. Email scripts are grouped under Scripts > Email in Configuration Manager.

You can create a user-defined script or use a system default script. Virtual Contact Center offers **Email script default**. The default email script is provided by the system. You can copy and then edit the default script when creating a new user-defined script.

To create or edit an email script:

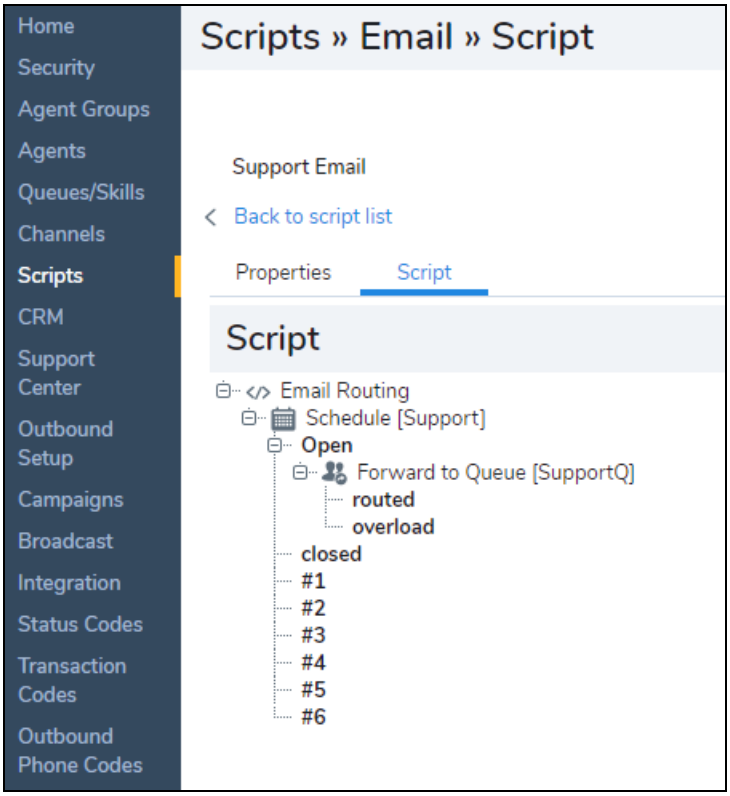
1. From the Configuration Menu, open **Scripts**.
   Scripts are grouped by media in separate tabs: Phone, Chat, and Email.
2. In the **Email** tab, click ⊕ or **Add new email script**.
3. Enter the required properties for the script.
   The following table summarizes the options under **Scripts > Email > Properties**:

Phone/ Chat/Email Script Property	Description
Script Type	■ **Phone:** Select a script type: Inbound phone, Post call survey, or Outbound phone. ■ **Chat and Email:** A read-only reminder of the script type. It displays if it is a phone, chat, or email script.
Script Name	Enter a unique name for the script.
Category	A category helps you organize your scripts better. For example, if you have multiple scripts serving Support and Sales needs, you can group scripts under separate categories. You can select an existing category or create a new one. **To create a new category:** 1. Select **Edit Categories** from the drop-down menu. 2. In the **Category** dialog box, add a new category by clicking ⊕.
Copy script from	Choose this option to place a copy of the default or an existing IVR script into this channel. This option appears when you are creating a new script.
Comment	Add comments or additional notes, if desired.
This script is	Select to place this script definition into service.

Phone/ Chat/Email Script Property	Description
enabled	
Assigned Channels /Assigned Queues	■ When you select **Script Type > Outbound Phone**, you must assign one or more new outbound phone queues. ■ When you select **Script Type > Post Call Survey** or **Script Type > Inbound phone**, you must assign one or more channels to the script. **Note:** It is not mandatory to assign a channel while creating a script. **To assign new channels:** 1. Click on the link to bring up the list of channels. 2. Select the desired channels from the list. 3. Click **Assign**. **Note:** All channels in the list are associated with a script whether default or user-defined. If you assign and save a new script, the old script is permanently replaced by the new selected script. **Note:** It is recommended to restrict your assignment to 100 channels at a time.

4. Click **Save**.
   Upon saving the properties, Configuration Manager takes you to the Script tab, where you can define the script.
5. In the **Script** tab, click **Email Routing**.
   The **[add]** option appears.

6. Add the desired objects.
   See Summary of Email Script Objects for the complete list of available objects and their description.



7. Click **Save**.
8. To edit the details, click any object and select **edit**. An edit window opens up. To view the details, double-click any object. The View details window appears. You can also click **edit** from inside the View details window.
9. To undo the changes, click **Revert**.
10. Click the on the script page to generate a PDF image and save it locally. The PDF printout is generated containing the script name, date, and time of print. Supervisors and administrators can review and modify the script as needed.

Note: When creating or modifying a script, disable the script by clearing **This script is enabled** in the channel's **Properties** tab. This ensures that Virtual Contact Center does not run an incomplete script. After completing the script, enable it again.

11. For a primer on writing IVR scripts, refer to the guide on Interactive Voice Response. For examples, refer to Email Script Examples.

Summary of Email Script Objects

The following table summarizes the objects available in the email script. You can access the email scripts by going to **Scripts > Email > Script** from the Configuration Menu. Click **Email Routing**, and then click **[add]** to see the drop-down menu.

Email Script Object	Description
Schedule	Use the **Schedule** object to perform a particular sequence of script operations when the contact center is either open or closed. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. ■ Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Select schedule** list, choose a schedule definition. Exit points: The Schedule object uses the Select schedule value to transfer control to the script sequence specified within the following exit points: ■ **open** equals true if the phone interaction has been received within the selected schedule's open hours. ■ **close** equals true if the phone interaction has been received outside the selected schedule's open hours. ■ **#1** through **#6** equal true if the schedule specified in Select Schedule includes an exception condition, numbered 1 through 6, and today's date is within the exceptions from and to dates. For details on creating schedules, refer to Define Business Hours and Schedules.

Email Script Object	Description
Check CRM	Use the **Check CRM** email script object to check the value of the Local CRM for existing customer information: new customer, new case, or followup fields. Parameters: In the **Label** text entry area type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters and must be unique within an email script. Exit points: The Check CRM script object transfers control to the script sequence specified within the following labeled conditions: ■ **new customer** equals true if the email interaction's From field contains an email address that is not in the Local CRM. ■ **new case** equals true if the email interaction's From field contains an email address that is in the Local CRM, and the email does not contain an existing case number in the Subject line. ■ **followup** equals true if the email interaction's From field contains an email address that is in the Local CRM, and the email contains an existing case number in the Subject line. For details on the Local CRM, refer to Configure Local CRM.
Check Priority	Use the **Check Priority** email script object to inspect the priority of the incoming mail message. The Check Priority object inspects the incoming email message's header for the value of X-Priority, Importance, and Priority. If Virtual Contact Center cannot locate these areas in the message, it assigns the message a priority equal to 3 – Normal. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Priority value** list, choose the priority setting of the incoming email message, where 1 is the highest priority and 5 is the lowest priority. ■ Select **Negate comparison** to make inspection true if the priority specified in the Priority value list does not match the priority of the incoming mail message. Exit points: The Check Priority script object transfers control to the script sequence specified within the following labeled conditions:

Email Script Object	Description
	■ **matched** equals true if the Negate comparison is not selected, and the email interaction's priority equals the value of Priority. ■ **not matched** equals true if the Negate comparison is not selected, and the email interaction's priority does not equal the value of Priority.
Check Recipient	Use the **Check Recipient** email script object to inspect the To or CC areas of the incoming mail for a name or other text string. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Select recipient field** list, choose whether the Email script inspects the **To** or **Cc** addressee field of the incoming email message. ■ In the **Select operator** list, choose a comparison operator. Choices available are **Contains**, **Begins with**, **Ends with**, or **Is equal to**. ■ In the **Use pattern as a POSIX extended regular expression** text entry area, type a pattern as a text string or a POSIX extended regular expression. ■ Select **Negate comparison** to make the recipient check true if the Email Script does not find the string specified in the Pattern text entry area. ■ Select **Case sensitive** to enable the pattern search to differentiate between upper and lowercase characters. Exit points: The Check Recipient script object transfers control to the script sequence specified within the following labeled conditions: ■ **matched** equals true if the Negate comparison is not selected, and the email message's recipient equals the value of Pattern. ■ **not matched** equals true if the Negate comparison is not selected, and the email message's recipient does not equal the value of Pattern.
Check Sender	Use the **Check Sender** email script object to inspect the From area of the incoming mail for a name or other text string. Parameters:

Email Script Object	Description
	■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Select operator** list, choose a comparison operator. Choices available are **Contains**, **Begins with**, **Ends with**, or **Is equal to**. ■ In the **Use pattern as a POSIX extended regular expression** text entry area, type a pattern as a text string or a POSIX extended regular expression. ■ Select **Negate comparison** to make the recipient check true if the email script does not find the string specified in the Pattern text entry area. ■ Select **Case sensitive** to enable the pattern search to differentiate between upper and lowercase characters. Exit points: The Check Sender script object transfers control to the script sequence specified within the following labeled conditions: ■ **matched** equals true if the Negate comparison is not selected, and the From area of the email message equals the value of Pattern. ■ **not matched** equals true if the Negate comparison is not selected, and the From area of the email message does not equal the value of Pattern.
Check Subject	Use the **Check Subject** email script object to inspect the Subject area of the incoming mail for a particular text string. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Select operator** list, choose a comparison operator. Choices available are **Contains**, **Begins with**, **Ends with**, or **Is equal to**. ■ In the **Pattern** text entry area, type a pattern as a POSIX extended regular expression. ■ Select **Negate comparison** to make the recipient check true if the string specified in the Pattern text entry area is not found. ■ Select **Case sensitive** to enable the pattern search to differentiate between upper and lowercase

Email Script Object	Description
	characters. Exit points: The Check Sender script object transfers control to the script sequence specified within the following labeled conditions: ■ **matched** equals true if the Negate comparison is not selected, and the Subject area of the email message equals the value of Pattern. ■ **not matched** equals true if the Negate comparison is not selected, and the Subject area of the email message does not equal the value of Pattern.
Check Flood	Use the **Check Flood** email script object to detect an unusually high volume of incoming email messages that appear to be identical. One possible reason a high volume of identical incoming messages may be received is a Denial of Service attack. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Time Interval** list, choose the time period during which the email script counts the number of email messages arriving at the email queue. Choices available are **Disabled**, **15 minutes**, **30 minutes**, **45 minutes**, **1 hour**, **2 hour**, **3 hour**, **4 hour**, **6 hour**, **12 hour**, and **1 day**. ■ In the **Maximum number of emails** list, choose the maximum number of incoming emails that occur within the time period specified in the Time Interval list. Choices available are **2**, **5**, **10**, **20**, or **50** emails. Exit points: The Check Flood script object uses the values of Time Interval and Maximum number of email to transfer control to the script sequence specified within the following labeled conditions: ■ **flood detected** equals true if the Maximum number of emails that appear to be identical have been received within the Time Interval. ■ **first email** equals true if the most recently received email message appears to be new. ■ **other emails** equals true if the most recently received email message is similar to at least one other email processed within the specified Time Interval, but the quantity of these messages has not yet exceeded the value of the Maximum number of emails.

Email Script Object	Description
Check Spam	Use the **Check Spam** email script object to enable the script to perform different operations depending on the incoming email message's status as spam or not spam. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. Exit points: The Check Spam script object transfers control to the script sequence specified within the following labeled conditions: ■ **is spam** equals true if Virtual Contact Center classifies the email message as spam. ■ **is not spam** equals true if Virtual Contact Center does not classify the email message as spam. For details on the Virtual Contact Center spam threshold level, refer to Summary of Profile Settings.
Check Virus	Use the **Check virus** email script object to enable the script to perform different operations depending on the incoming email message's status as infected or not infected. Virtual Contact Center uses McAfee VirusScan to inspect incoming email messages. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. Exit points: The Check Virus script object transfers control to the script sequence specified within the following labeled conditions: ■ **infected** equals true if Virtual Contact Center detects a virus in the email message. ■ **not infected** equals true if Virtual Contact Center does not detect a virus in the email message.
Forward to Queue	Use the **Forward to queue** email script object to check how many incoming messages are waiting in the queue, and if a maximum number is exceeded begin forwarding messages to a different email queue. Parameters: ■ In the **Object tag** area, type the alphanumeric label used to uniquely identify the element in the email script. The object tag can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Select queue** list, choose which email queue receives forwarded messages. ■ In the **Maximum number of emails waiting** text entry area, type the integer number of emails that

Email Script Object	Description
	can accumulate in the current email queue before the script begins forwarding messages to the queue specified by the Select queue list. A Virtual Contact Center email queue can contain a maximum of 900 messages. If an email queue contains more than 900 messages, and the email queue's email script includes the Forward to queue script object, then Virtual Contact Center initiates overflow processing. Exit points: The Forward to queue script object transfers control to the script sequence specified within the following labeled conditions: ■ **routed** equals true if the email queue does not contain more messages than specified by the **Maximum number of emails waiting** text entry area, or no more than 900 messages. Virtual Contact Center places the new message in the current email queue. ■ **overload** equals true if the email queue contains more messages than specified by the **Maximum number of emails waiting** text entry area, or more than 900 messages. Virtual Contact Center places the new message in the queue specified in the **Select queue** list.
Label	Use the **Label** email script object to insert a named point into the email script. The labeled script object can then be accessed by other script statements, such as the Goto script object, described later in this table. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. Exit points: None
Goto	Use the **Goto** Email script object to direct the script to continue running at some labeled location in the script. Parameters: ■ In the **Name** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters, and must be unique within an email script. ■ In the **Destination** list, choose a labeled script location. The Goto object can reference object labels located "lower" in the email script. Exit points: None

Email Script Object	Description
Reply to Email	Use the **Reply to Email** email script object to define the email's Subject, From, CC, BCC, etc. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the Email Script. Labels can contain a maximum of 21 characters. ■ In the **From** text entry area, type the return address for the outgoing email message. You must type a valid email address or select Use channel email address as From to save the Reply to Email email script object. ■ Select **Use channel email address as From** to place the email channel's address in the outgoing email message's From area. You must select Use channel email address or type a valid email address in the From text entry area to save the Reply to Email email script object. ■ In the **CC** text entry area, to send a carbon copy of the outgoing email message to one or more additional recipients, type the recipients' properly-formatted email address. The CC text entry area allows you to type up to 80 characters. ■ In the **BCC** text entry area, to send a blind carbon copy of the outgoing email message (a copy whose email address is concealed from other addressees) to one or more additional recipients, type the recipients' properly-formatted email address. The BCC text entry area allows you to type up to 80 characters. ■ In the **Subject** text entry area, type an optional subject line for the outgoing email message. The Subject text entry area allows you to type up to 40 characters. ■ In the **Content** text entry area, type the message contents. Exit points: The Reply to email script object transfers control to the script sequence specified within the following labeled conditions: ■ **sent** equals true if Virtual Contact Center did not receive an error when it sent the reply email message. ■ **not sent** equals true if Virtual Contact Center received an error when it sent the reply email message.
Delete Email	Use the **Delete Email** email script object to delete the email message being processed by the Email script.

Email Script Object	Description
	Because the Delete Email script object deletes the current email message, use the object as the final action in an email script. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the Email Script. Labels can contain a maximum of 21 characters. Exit points: None.
Stop Processing	Use the **Stop Processing** email script object to stop performing the email script. Parameters: In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the email script. Labels can contain a maximum of 21 characters. Exit points: None
Check Picklist	Use **Check Picklist** to filter emails based on the customer type and send them to their respective queues for better customer experience. For example, if a company wishes to prioritize their premium customers and offer to assist them quickly, agents can prioritize and route the emails from customers based on their account type, say Platinum, Gold, and Bronze. Emails received from Platinum customers can be routed to a dedicated queue for faster processing. To take advantage of the check picklist object, you must first define the desired Customer field of picklist data type in the Local CRM and then select this field in the email script.

Email Script Examples

A Virtual Contact Center email script uses the information contained in an email message to route the message to one or more email queues.

The following procedure illustrates how to combine Virtual Contact Center email script objects with script object control flow features:

- Delete email messages that contain viruses.
- Inspect an email message subject line.
- Route email messages to queues.
- Insert stop processing objects into email scripts.
- Enable an email channel.

Before You Begin

The procedure in this section assumes that you have used Configuration Manager to create at least one email queue. For details on creating email queues, refer to Create Email Queues.

Best Practice: Before editing a Virtual Contact Center script, disable the email channel.

To disable the email channel:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Email** tab.
3. Find the desired channel, and click .
4. In the **Properties** tab, clear **This channel is enabled**.
5. Click **Save**.
   For details on email channels properties, refer to Configure Email Channel Properties.

Delete Email Messages that Contain Viruses

If your email server does not provide protection against email viruses, include the Check Virus script object at the top of all your email scripts to help protect your contact center from malicious email messages.

Note: If your server already protects against email viruses, do not use the Check Virus object.

To inspect the email messages for viruses:

1. From the Configuration Menu, open **Scripts**.
2. Go to the **Email** tab.
3. Find the desired script, and click .
4. In the **Script** tab, click **Email Routing**, then click **[add]**.
5. In the Insert object selection list, select **Check Virus**.

6. Enter an **Object tag**, such as <CV01>, and click **OK**.
   Configuration Manager adds the Check Virus script object to the script. The Check Virus script object contains the exit points labeled **infected** and **not Infected**.
7. Delete any email messages infected by viruses:
   a. Under the **Check Virus** script object, click **[add]** next to **infected**.
   b. In the Insert object selection list, select **Delete Email**.
   c. Enter an Object tag, such as <Delete Infected>, then click **OK**.

Use the same script design principles to incorporate the Check Spam and Check Flood objects into an email script.

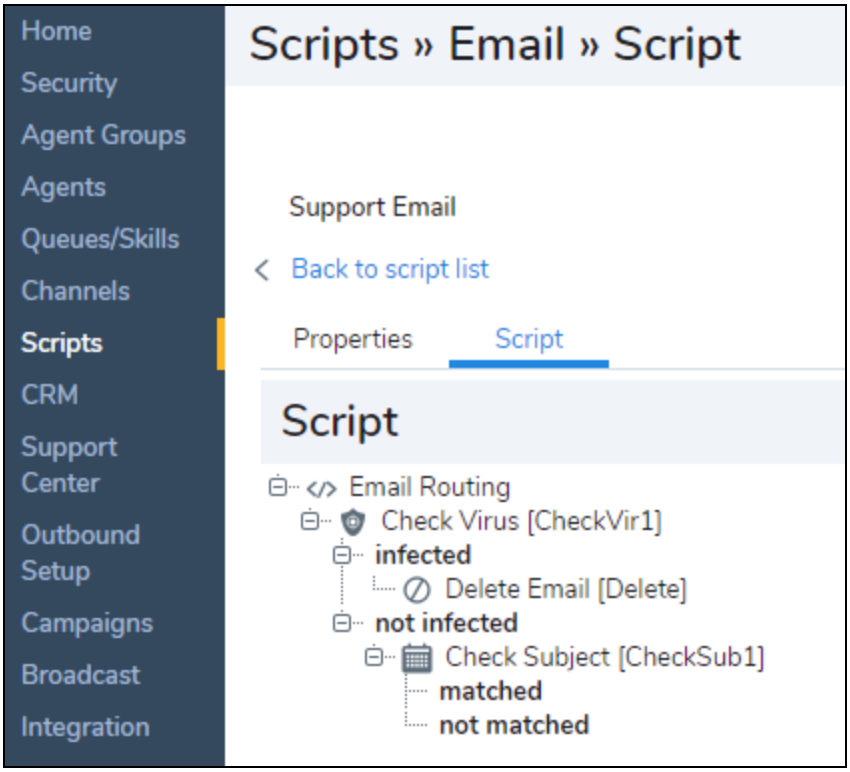
Inspect an Email Message Subject Line

Use the Check Subject in the email script to inspect the subject line of incoming email messages for a particular string.

To inspect an email message's subject line:

1. In the above example, click **[add]** next to **not infected**.
2. In the script object selection list, select **Check Subject**.
3. Enter an Object tag, such as <CS01>.
4. In the **Select Operator** list, choose **Contains**.
5. In the **Pattern** text entry area, type <ADV>.
6. Clear **Use pattern as a POSIX extended regular expression** and **Negate comparison**.
7. Select **Case Sensitive**.

8. Click **OK**.
   Configuration Manager inserts the Check Subject script object below **not infected**.



Route Email Messages to Queues

Use the comparison results returned by the Check Subject to route email messages.

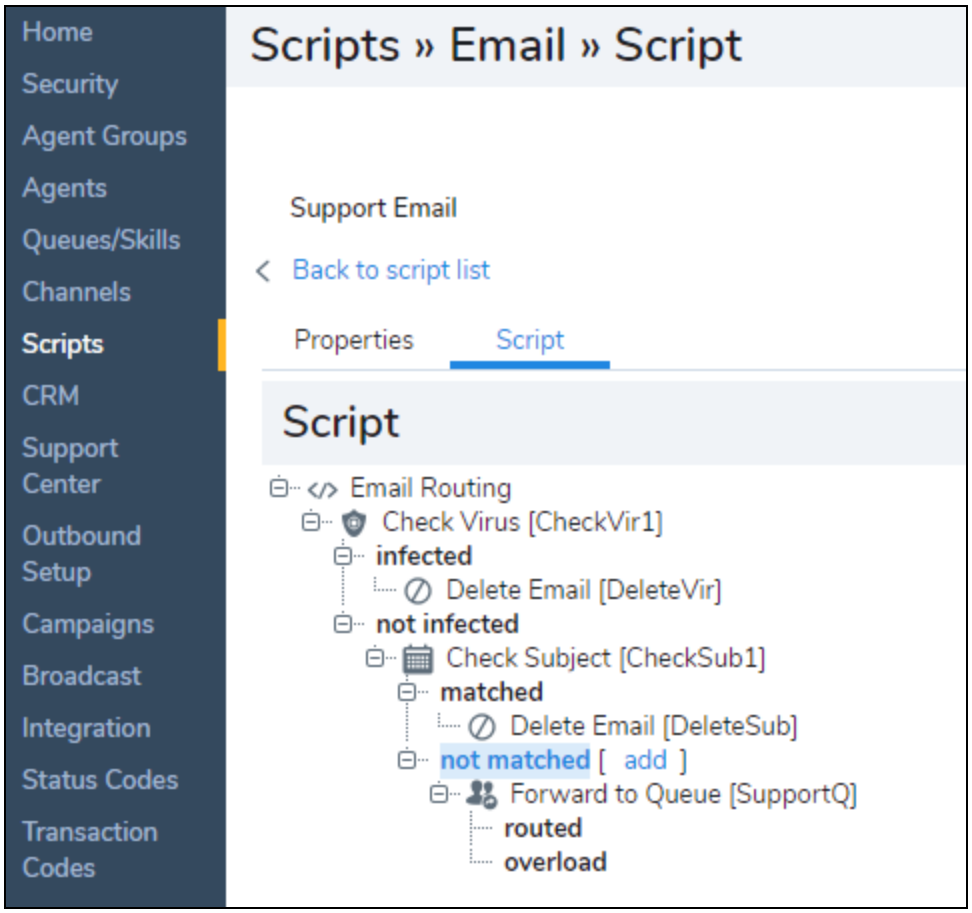
To use the results Check Subject to route the message:

1. Delete email messages that contain a certain string, such as <ADV>, in the subject area.
   a. Under Check Subject, click **[add]** next to **matched**.
   b. Select **Delete Email** from the Insert object list.
   c. Enter an object tag, such as <DelADV>, then click **OK**.
      The email script deletes all incoming email messages that contain <ADV> in the subject line.
2. For all messages that do not contain <ADV> in the subject area, route the message to an email queue.
   a. Under Check Subject, click **[add]** next to **not matched**.
   b. Select **Forward to queue** from the Insert object list.

c. Enter an object tag, such as <EmailQ01>.

d. In the **Select Queue** list, choose an email queue.

e. In **Maximum number of emails waiting**, type <100>, and click **OK**.



3. If the message does not exceed the value specified by Maximum number of emails waiting, then stop script processing:

   a. Under Forward to queue, click **[add]** next to **routed**.

   b. Select **Stop processing** from the Insert object list.

   c. Enter an Object tag, and click **OK**.
   After routing the message, the script stops.

4. If the message exceeds the value specified by Maximum number of emails waiting (in the email queue), then send the email to an overload queue:

a. Under Forward to queue, click **[add]** next to **overload**.

b. Select **Forward to Queue** from the Insert object list.

c. Enter an Object tag.

d. Enter the **Maximum number of emails waiting**.

e. Click **OK**.

Use the Forward to Queue script object to specify a secondary email queue that receives messages that exceed the primary queue's Maximum number of emails waiting setting.

f. Click to **Save** your script.

Insert Stop Processing in Email Scripts

The procedure discussed in Route Email Messages to Queues illustrates the use of the Stop processing email script object to end the operation of an email script.

Insert Stop processing objects at all points where you intend the script to stop. Doing so ensures that the script always behaves as designed.

Enable an Email Channel

Perform the procedure in this section to enable an email channel, and run the channel's email script.

To enable the email channel:

1. From the Configuration Menu, open **Channels**.
2. Go to the **Email** tab.
3. Find the desired script, and click .
4. In the **Properties** tab, select **This channel is enabled**.
5. Click **Save**.

   The Virtual Contact Center puts the email channel and associated script into service.

   You can now send test messages to the email channel to validate the operation of the script. For details on email channel properties, refer to Configure Email Channel Properties.

Create Intelligent IVR

8x8 provides speech recognition and natural language processing on all incoming calls. A set of pre-built templates can be modified to easily implement solutions, such as appointments, bill reminders, and inbound IVR call treatment with integrations.

The intelligent IVR supports:

- Automated speech recognition (ASR)
- Natural language processing (NLP)

Features

The Intelligent IVR provides the following advantages:

- Allows customer requests without using Dual-tone multi-frequency (DTMF) interface.
- Increases efficiency of agents.
- Reduces cost of business.
- Improves customer experience.

Check out the instructions in the following pages to learn how to set up intelligent IVR.

- Studio Reference Guide
- Studio API Documentation
- Nodes or building blocks in call flows

Configure Local CRM

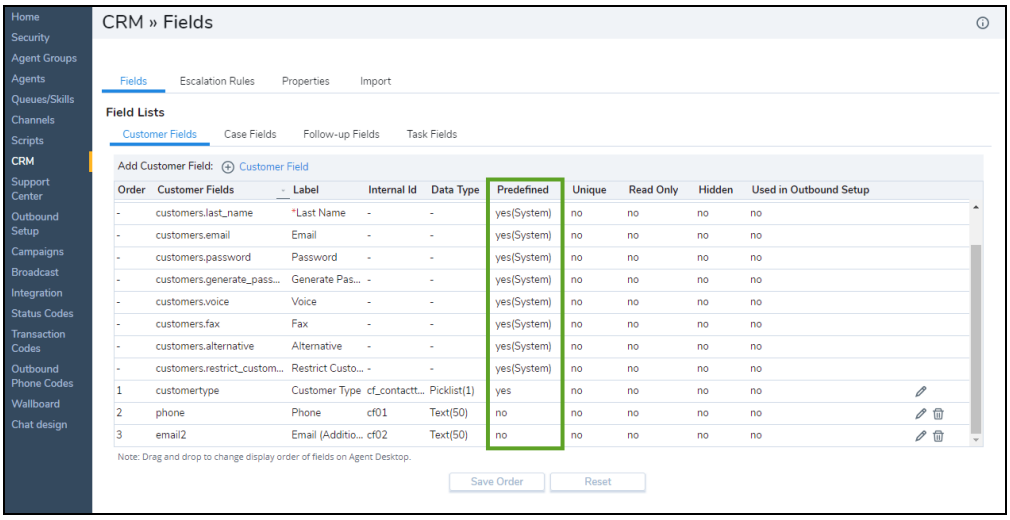
The Local CRM (or Customer Relationship Manager) in Virtual Contact Center gives you the ability to manage customer and case data. Use the CRM page in Configuration Manager to define the Customer and Case fields to identify and characterize interactions. For your contact center, you have the option to use Local CRM or a third-party CRM such as Salesforce or Zendesk with VCC supports out of the box.

You must select either the Local CRM or a third party integration for case and contact management. Both cannot be used together.

Features

- Manage customer and case data in your contact center using the Local CRM. It is perfect for organizations that do not already use a CRM.
- Deliver screen pops of critical customer information to make every agent interaction more efficient.
- Solve customer problems more quickly and increase customer satisfaction.
- Integrate and combine information from other software and sources in the same screen.
- Define custom fields in the CRM to suit the needs of your organization.

To configure Local CRM, click **CRM** in the Configuration Menu. In the **Fields** tab, the **Predefined** column identifies the default set of customer and case fields.



Configuring Local CRM involves:

- Understanding customers, cases, follow-ups, and tasks
- Types of CRM Fields
- Configuring CRM fields
- Configuring case notification
- Configuring CRM properties
- Importing data into CRM

Understand Customers, Cases, Follow-Ups, and Tasks

8x8 Virtual Contact Center provides customer and case management capabilities using its Local CRM. The Local CRM provides a model for managing the contact center's interactions with customers and stores the contact center's customer, case, and follow-up data.

The phone, chat, and email scripts in Virtual Contact Center can use information such as phone number, case number, or email ID, to locate and display a customer or case record stored in the Local CRM. To manage customer relationships, the Local CRM provides the following hierarchy of standard objects:

- Customer
- Case

- Follow-up
- Task

Customer

A customer object allows creating customer instances with unique account numbers. A customer record stores information such as name, address, and phone numbers, and offers the capability to customize the customer object with custom fields.

Case

A case object describes customer feedback, queries, or issues. Agents can create cases to systematically track and solve customer issues. Agents can quickly create, update, and view cases. They may indicate the status of a case as open or closed. The standard definition of a case allows adding additional attributes to a case by stating its status, visibility, severity, and priority.

For example, a support agent at AcmeJets creates a case when a customer calls in reporting scheduling issues with private jets. The support agent captures and records the customer-reported issue by creating a case.

Follow-up

A case may have multiple follow-ups before it is resolved. Each communication regarding the case from its creation until it is closed may be recorded as individual follow-up instances. This may include notes as well as email communications regarding the case. The Follow-up object allows tracking how a case is resolved by creating multiple follow-up records.

Task

A Task refers to a call, email, meeting, chat, or any other type of contact made with a customer. A task organizes and helps agents track all interactions associated with a customer. The task object serves to create and manage all tasks agents plan to perform or have performed, such as making calls or sending mails. For example, agents can create a task to schedule a phone call to a customer, and set a reminder. A reminder pops up a few minutes before the scheduled call.

Integrating with External CRM

The Virtual Contact Center also supports integration with External CRMs, such as NetSuite and Salesforce. If your Agent Console integrates with an External CRM, your contact center supervisor provides you with the information you need to use the CRM to manage your customers, cases, and follow-up activities.

Types of CRM Fields

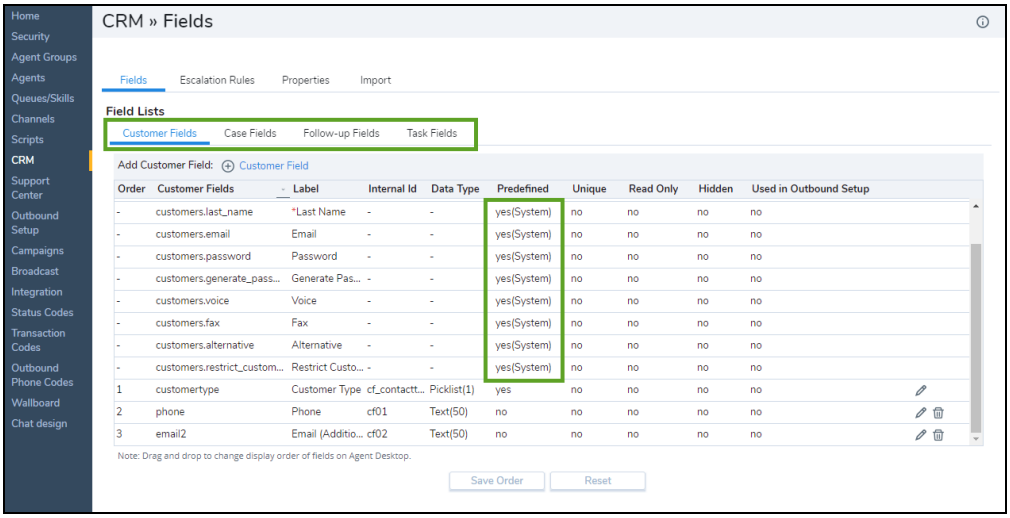
You can view, create, and configure Local CRM fields in Configuration Manager and access them in Virtual Contact Center.

Virtual Contact Center supports customization abilities in the Local CRM for your convenience and better usability. The CRM fields are categorized into three types:

- **System-Predefined Fields**: View-only system fields. You cannot create, edit, or delete System-Predefined Fields. They are marked by **yes (System)** under the Predefined column in Configuration Manager.
- **Predefined Fields**: You can view and edit predefined fields, but cannot create or delete them. They are marked by **yes** under the Predefined column in Configuration Manager.
- **Custom Fields**: You can create, view, edit, or delete custom fields. They are marked by **no** under the Predefined column in Configuration Manager.

To view the system-predefined fields:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Fields** tab.
   The system-predefined fields are visible under all tabs: Customer Fields, Case Fields, Follow-up Fields, and Task Fields.



The following table summarizes the options available when creating or editing a field under **CRM > Fields**:

CRM Field Option	Description
Data Type	Choose the type of data to add: ■ Text ■ URL ■ Number ■ Date ■ Pick List As you select a data type, Configuration Manager enables or disables Add Field options. **Note:** Once you save a data type, you cannot change it.
Field Name	Type the name of the custom field. It can be a maximum of 32 alphanumeric characters.
Display Label	Type the label that the Virtual Contact Center displays for this field in Agent Console. It can be a maximum of 32 alphanumeric characters.
Default Value	For Text, URL, Number, and Date data types. Type the default value of the CRM Field. It can be a maximum of 85 alphanumeric characters.
Maximum Length	For Text, URL, and Number data types. Type the maximum number of characters that an agent can type into this field. The value varies based on the data type of the field, as follows: ■ **Text**: 85 characters ■ **URL**: 200 characters ■ **Number**: 255 characters
Mandatory	For Text and Number data types. Select this option to make the field mandatory.
Value Must be Unique	For Text and Number data types. Select this option to require the Agent to supply a unique value for the field.
Read Only	Select to prevent non-supervisor Agents from modifying the value of this field.
Hidden	Select to hide this field on non-supervisor Agent Console.

CRM Field Option	Description
Show on Customer View	This feature is not accessible via the **Customer Fields** tab. Select to see this option to be visible in customer view.
Pick List Values	This option is available for the **Pick List** data type only. Click **Edit Pick List Values** from the drop-down menu, and enter the desired values for pick list field. For example, if your pick list field is Car Type, your values could be Sedan, SUV, Van, and Pickup Truck.
Existing Records Value (N/A)	This option is available only for the **Pick List** data type. While adding pick list values, you can select one of the values for the existing customer records. This automatically populates existing records, with the selected value visible on Agent Console.
Include this value in Pick List	This option is available only for the **Pick List** data type. This option includes the pick list value in the list.
Show as a tree	This option is available only for the **Pick List** data type. Selecting this option will present the choices in a tree (multi-level) format in Agent Console.

3. Enter the field properties, and **Save**.
   Follow the above instructions to create new Case, Follow-up, and Task fields.

Configure CRM Fields

The Local CRM allows you to create custom fields, such as customer instances with unique dates of birth or dates of employment. A customer record stores information such as name, address, and phone numbers, and offers the capability to customize the customer object with custom fields. Use the Fields tab to specify a custom field for the Local CRM.

Create New CRM Customer Fields

1. From the Configuration Menu, open **CRM**.
2. Go to the **Fields** tab.
3. Click ⊕ **Customer Field**.
   The Add New Custom Field (Customer) page appears.

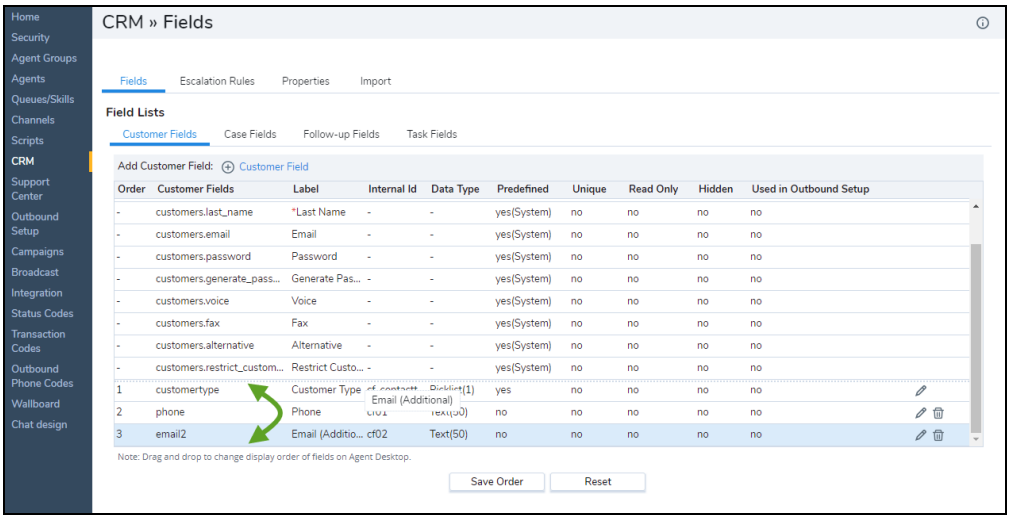
4. Enter the field properties, and **Save**.
   Follow the above instructions to create new Case, Follow-up, and Task Fields.
   For a summary of the options, refer to Types of CRM Fields.

Customize the Display Order of CRM Fields

You can change the display order of CRM fields. The CRM fields appear under the Customer, Case, Task, and Follow-up objects in Agent Console. This feature is available to both custom and predefined fields. The system-predefined fields cannot be moved. For example, in Customer Fields, you can only move the **customertype** predefined field, in addition to the custom fields you have created.

To customize the display order of the CRM fields:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Fields** tab.
3. Select a predefined or custom field and drag it to the desired row, then drop.
   The new order appears in Agent Console.



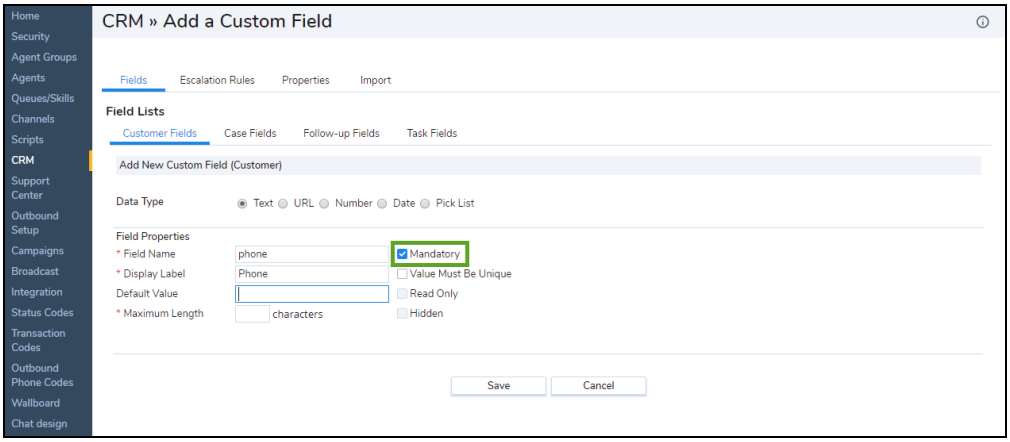
Make Mandatory CRM Fields

You can make any existing or new predefined and custom field as mandatory. Mandatory fields can be added to Customer, Case, Task, and Follow-up objects. When creating new customer records or cases in Agent Console for example, agents must enter data into fields that are mandatory (such as Name, Email, or Address). Mandatory fields cannot remain blank.

Note: System-predefined fields are view-only and cannot be edited.

To make a mandatory predefined or custom field:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Fields** tab.
3. Open **Customer Fields**, **Case Fields**, **Follow-up Fields**, or **Task Fields**.
4. Click to add a custom field, or to edit an existing field.
5. Enter the field properties.
6. Select the **Mandatory** check box.
7. Click **Save**.



In Agent Console, a red * appears next to the mandatory field to indicate that a value must be added.

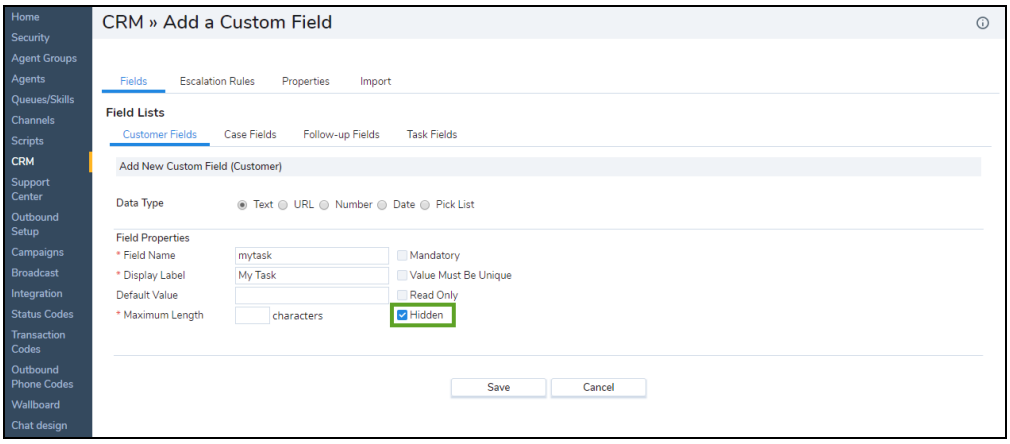
Hide CRM Fields

You can hide any existing or new predefined and custom fields. The hidden fields can be part of the **Customer**, **Case**, **Task**, and **Follow-up** objects.

To hide a CRM field:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Fields** tab.
3. Open **Customer Fields**, **Case Fields**, **Follow-up Fields**, or **Task Fields**.

4. Click to add a custom field, or to edit an existing field.
5. Enter the field properties.
6. Select the **Hidden** check box.
7. Click **Save**.



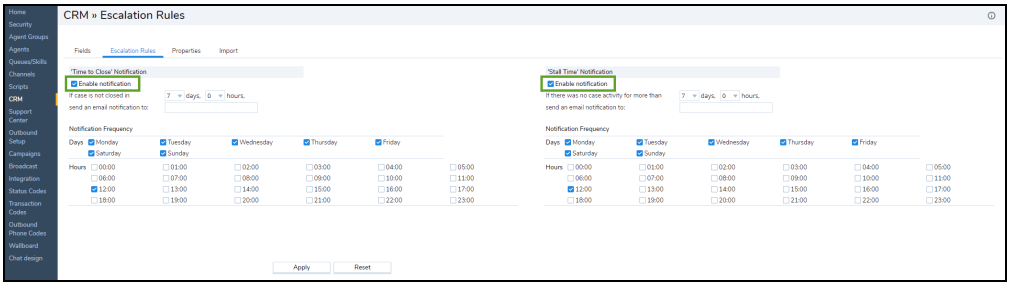
Configure Case Notification

Supervisors can receive an email notification if a customer case has been inactive for some time. CRM escalation rules allow you to configure case notification for cases that have been open but not updated within the specified time.

To configure case notification:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Escalation Rules** tab.
3. Select the **Enable notification** check box.
4. Enter the number of days and hours that a case must be closed before sending an email notification to the supervisors.
5. Enter the supervisor's email address.
6. Select the day and time to receive the notification.

7. Click **Apply**.



The following table summarizes the options under **CRM > Escalation Rules**:

Escalation Rules Option	Description
Enable notification (Time to Close Notification)	If enabled, Virtual Contact Center sends an email notification to the supervisor if a case has not been closed within the time specified time.
If the case is not closed in	Select the time interval, in hours and days, that a case must be closed.
Send an email notification to	Enter an email address to which Virtual Contact Center sends the email notification when a case has not been closed within the specified period.
Notification Frequency	Select the frequency with which Virtual Contact Center sends email notifications about unclosed cases to the specified email address.
Enable notification (Stall Time Notification)	If enabled, Virtual Contact Center sends an email notification to the supervisor if a case has been stalled (no activity) for the duration time specified.
If there was no case activity for more than	Select the time interval, in hours and days, during which a case activity must occur.
Send an email notification to	Enter an email address to which Virtual Contact Center sends the email notification when a case has been inactive for the specified duration of time.
Notification Frequency	Select the frequency with which Virtual Contact Center sends email notifications regarding cases that are not closed or do not have any activities.

An email notification is sent to the supervisor.

The following untouched cases have exceeded the maximum time of 7 days, = 0 hours:

Showing 3 oldest cases out of 3

Last Updated	Assigned To	Case #	Priority	Severity	Status	Company	Subject
06/04/18 10:33	Sasha Solovey	3	Medium	Information	Open	Specialty Cookies New York	Customer Request Additional
06/04/18 10:33		4	Medium	Information	Unassigned	Specialty Cookies New York	Customer Request Additional Follow-up
06/04/18 12:59	Sasha Solovey	5	High	Information	Open	Specialty Cookies New York	Customer Request 2

Configure CRM Properties

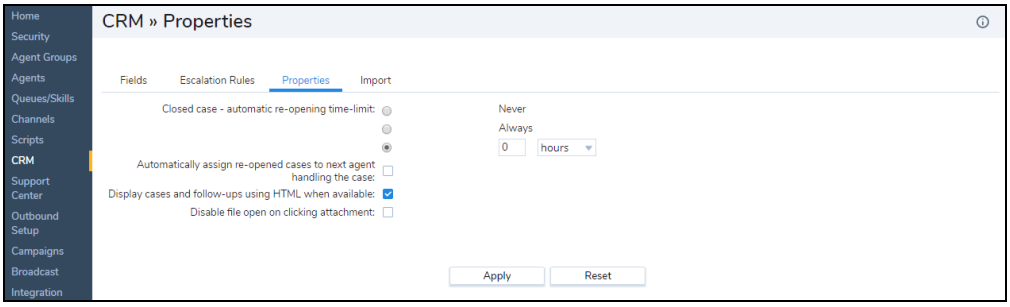
Configure the Properties tab to specify CRM behavior in the following areas:

- To define time limit to reopen closed cases
- To assign reopened cases to agents
- To display case and follow-up records using HTML in Agent Console
- To disable opening files attached to emails by clicking attachment

To configure CRM Properties:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Properties** tab.

3. Configure the desired setting, and click **Apply**.



The following table summarizes the options under **CRM > Properties**:

CRM Properties Option	Description
Closed case - automatic re-opening time-limit	Select the time interval that a closed case automatically reopens within a specified time limit. Specify one of the three possible values: ■ **Never**: Never opens a closed case automatically. ■ **Always**: Always reopens a closed case in the event of a customer follow-up via email. ■ **Time limit**: Specifies the maximum amount of time a case can be closed before it automatically reopens. If a follow-up is received within the time limit, the case reopens automatically. The case remains closed if a follow-up is received after the time limit. For example, if you set the time limit to 10 days, a case that is closed today can potentially be reopened within the next ten days in the event of a customer follow-up by email. Once the time limit expires, the system creates a follow-up case, but will not reopen the case. **Note:** When you change a parameter's value, it takes effect immediately.
Automatically assign re-opened cases to next agent handling the case	If enabled, assigns reopened cases to the next receiving agent automatically. Reopened cases normally retain their previous agent assignment. If disabled, assigns reopened cases to the agent who handled the case previously.
Display cases	If enabled, supports HTML formatting during the following tasks:

CRM Properties Option	Description
and follow-ups using HTML when available	■ Creating and editing case records. ■ Creating follow-up records. ■ Creating notification emails. If disabled, an agent is restricted to plain-text data while creating or notifying case and follow-up records.
Disable file open on clicking attachment	If selected, the email attachment sent by the CRM customers cannot be opened from within Agent Console. Agents can still save the attachment, but are prevented from opening the insecure attachments.

Understand CRM Import

If you have customer data in a CSV file, you can import this data to your Virtual Contact Center customer file using the **Imports** tab of the CRM page. To import data from a CSV file, map each column name from the CSV file to an existing customer contact field. If you have additional fields that do not map to the existing fields in the contact record, you must create custom fields to hold this data.

The data import feature allows a maximum of 50,000 records to be loaded per session, and the records are loaded in increments of 100. Use the Imports tab to view the progress of the current import, including error message for records that cannot be loaded.

To prevent any failure, complete the following tasks before importing:

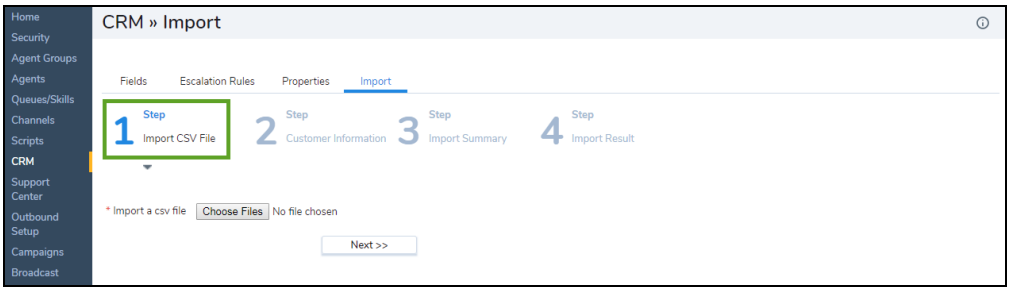
- Match the columns in the CSV file with the existing CRM fields.
- Create custom fields for additional fields in the CRM page.
- Verify that the email information is unique for each record.
- Confirm that the records with pick list values match the pick list values defined in the CRM field of pick list data type.
- Enter dates in MM/DD/YYYY format.
- Verify you have data for all mandatory fields, such as First Name and Last Name.
- Confirm the data length of mapping column in the CSV file matches the data length of the mapped customer field in the CRM.
  The following table provides the data length of CRM customer fields:

CRM Customer Field	Data Length
First Name	30
Last Name	30
Email	40
Company	50
Voice	38
Fax	38
Alternative	38
Password	15
Comments	400
Primary Address, Secondary Address	
Street (line 1)	50
CityStreet (line 1)	50
State	40
Zip	30
Country	15
Custom field - Text	85
Custom field - Number	255

Import Customer Data into Local CRM

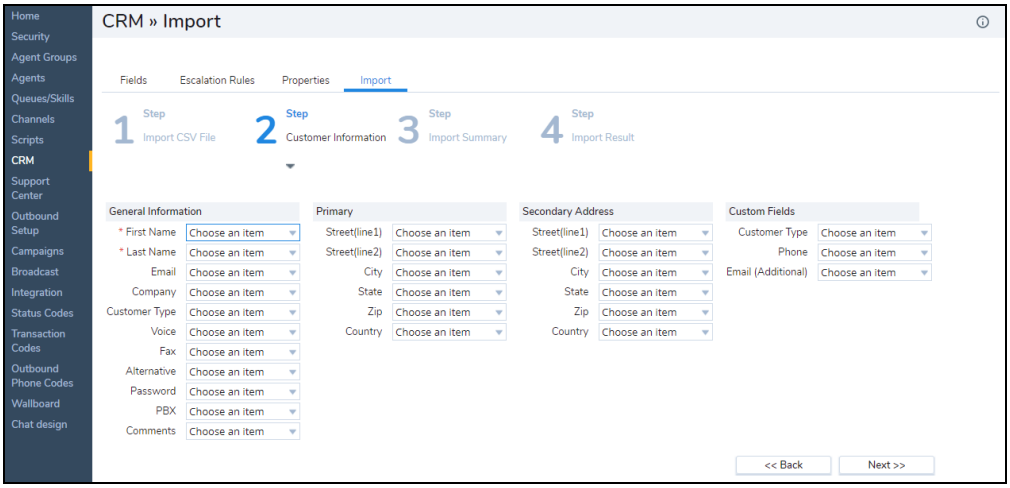
To import customer data into Local CRM:

1. From the Configuration Menu, open **CRM**.
2. Go to the **Import** tab.



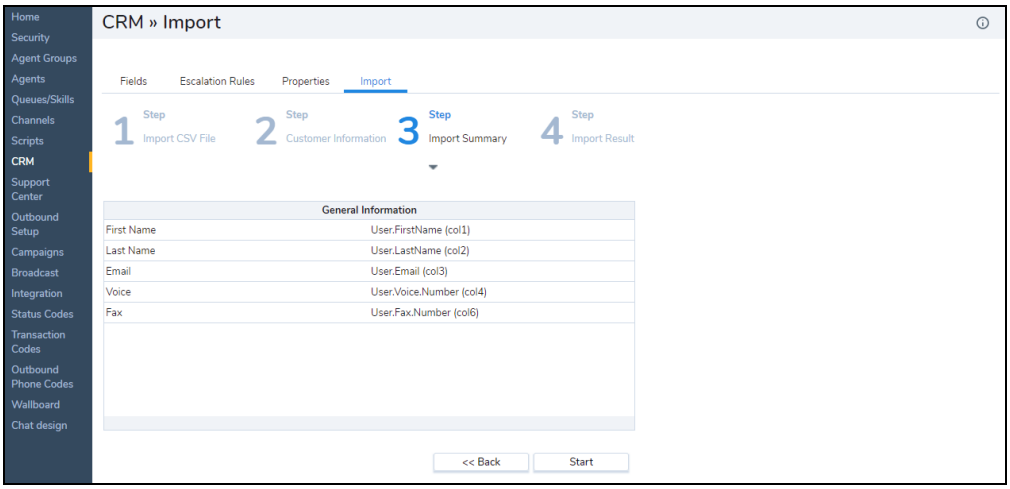
3. Click **Choose Files** to select the Comma-Separated Value (CSV) file containing your customer information from your file system.
4. Click **Next**.

   The mapping screen appears. This screen allows you to map a column in the CSV file to a field in the customer file of the Virtual Contact Center CRM. The column names from the CSV file are available in the pull-down menu, as shown below. Select a column name of the CSV file from the pull-down menu, and map it to the matching field in the Virtual Contact Center customer file.



5. Click **Next**.

   The summary page opens and shows the mappings selected.



6. Click **Start** to initiate the import.

   OR

Click **Back** to modify the settings.

On initiating the import, the progress is displayed on the screen. The import is committed to the database in increments of 100 records at a time. Statistics about the import are displayed as well.

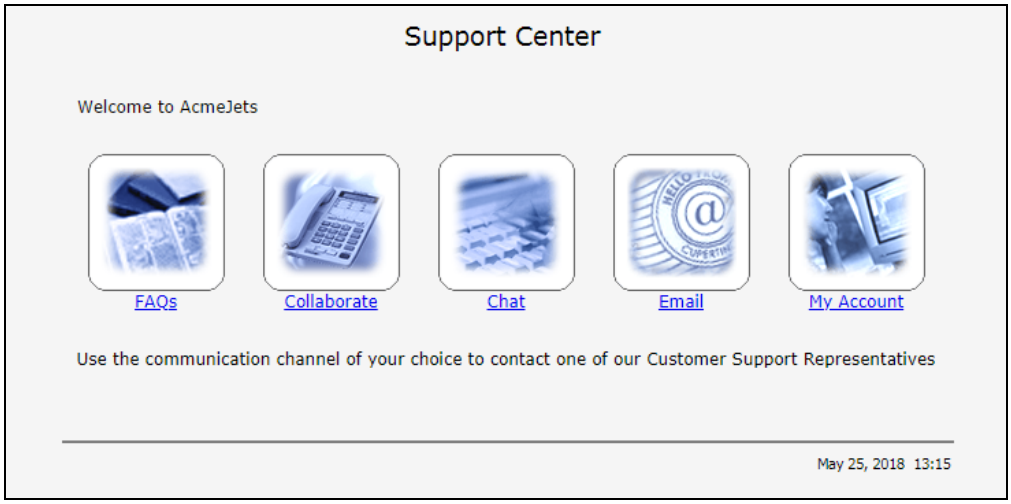
7. You can **save** the import report on the local file system.

Support Center Services

Support center offers communication channels and information services for your customers to reach your contact center agents and get help. Virtual Contact Center offers direct URLs to the default or custom support center which can be embedded in your company website.

With Support Center, you can offer the following services to your customers:

- **FAQ**: A repository of frequently-asked questions and answers for customers to access.
- **Collaborate**: A mechanism for agents to remotely access and control a customer's computer.
- **Chat**: Chat channels for customers to initiate a chat request with live contact center agents.
- **Email**: An email channel for customers to send emails to agents.
- **My Account**: A customer self-portal to submit information requests or open cases and receive responses to requests. Customers can even check the status of their cases, or close cases using the My Account portal.



A new customer accessing the Support Center must register the first time to use the My Account portal. After registration, an email will be sent with the account number and password to access the portal. The new registration serves to create a new customer record in the Local CRM. For details on account registration, refer to Configure Support Center Registration.

This chapter discusses the following tasks:

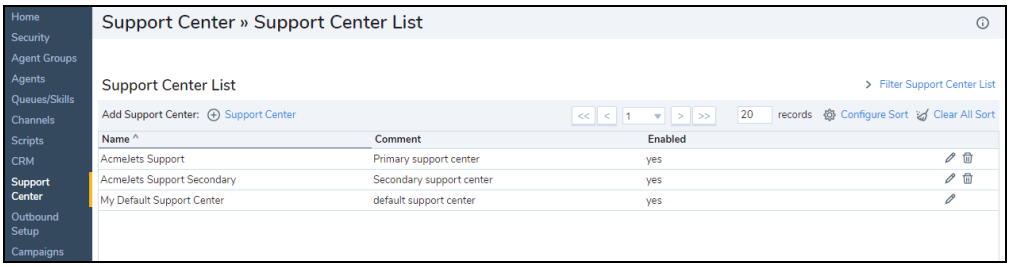
- Configuring support centers
- Configuring support center properties
- Configuring support center assignment
- Configuring support center greetings
- Configuring support center registration
- Acquiring a support center's access URLs
- Adding private labeling to a support center

Configure Support Centers

As an administrator, you can create a new Support Center or configure an existing one in Configuration Manager.

To create or configure a Support Center:

1. From the Configuration Menu, open **Support Center**.



2. In the list of Support Centers:

   - Click **Support Center** to create a new Support Center.
   - Click **Edit** to view or modify an existing Support Center.

- Click **Delete** to delete an existing Support Center.
  Virtual Contact Center does not enable you to delete the **My Default Support Center** group.

If you click to add a new support center or edit the existing one, Virtual Contact Center involves:

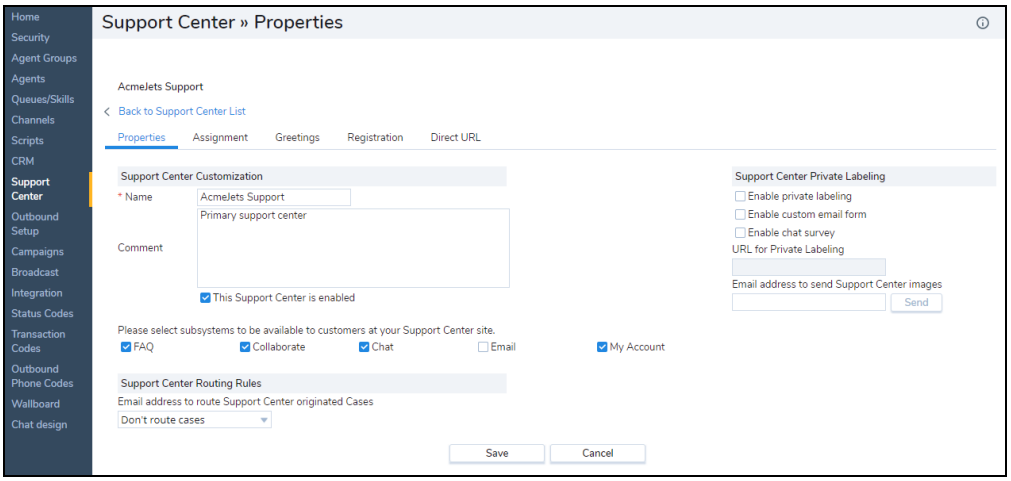
- Configuring support center properties to configure the primary characteristics of the support center.
- Configuring support center assignment to assign a chat channel which serves to direct chat requests from customers to agents.
- Configuring support center greetings to specify the title and messages displayed on the support center's home page.
- Configuring support center registration to create or customize an email message sent in response to the customer's request for a new user account.
- Acquiring a support center's access URLs to generate direct URLs for the desired service, launch them for testing , and embed them in your website.

Configure Support Center Properties

Use Support Center > Properties to configure the primary characteristics of a Support Center.

To configure the Properties:

1. From the Configuration Menu, open **Support Center**.
2. In the list of Support Centers:
   - Click **Support Center** to create a new Support Center.
   - Click **Edit** or double-click an existing Support Center from the list to view or modify.



3. Click the **Properties** tab.
4. Enter or select properties.
   The following table summarizes the options under **Support Center > Properties**:

Support Center Properties Option	Description
Name	Type the name of the Support Center.
Comment	Type a description of the Support Center.
This Support Center is enabled	Select to put this Support Center into service.
Select subsystems	Select the links presented on the Support Center's home page. ■ **FAQ** presents frequently-asked questions about Virtual Contact Center and their answers. ■ **Collaborate** enables your support representatives to connect to and control a

Support Center Properties Option	Description
	customer's computer for the purpose of providing technical assistance. ■ **Chat** enables a customer to use instant messaging to interactively send and receive text inquiries and answers. ■ **Email** enables a customer to contact a specific part of your organization with a request for information or assistance. To enable the Email option, in the Email address to route the support center-originated Cases list, choose an Email channel, then click **Save**. ■ **My Account** enables customers to create support requests. You can enable or disable the support center authentication option. Authentication requires the customer to enter an account number and password to access the support request dialog.
Email address to route Support Center originated Cases	Select the Virtual Contact Center email channel that receives email inquiries to this Support Center. To enable the Email Contact Center subsystem, type an email address then click **Save**. For details on email channels, refer to Set up Email Channels.
Enable private labeling	Select to customize the Support Center with a non-default style sheet and image files. Refer to: ■ Email address to send Support Center images, described earlier in this table ■ URL for Private Labeling, described later in this table ■ Add Private Labeling to a Support Center
Enable custom email form	Select to customize the Support Center with a non-default email service request form. Refer to: ■ Email address to send Support Center images, described earlier in this table ■ URL for Private Labeling, described later in this table ■ Add Private Labeling to a Support Center
Enable chat survey	Select to enable a pre-chat survey. Pre-chat surveys ask customers to clarify their interests before initiating a chat. Place the pre-chat survey form in the URL specified by the URL for the Private Labeling text entry area, described later in this table.

Support Center Properties Option	Description
URL for Private Labeling	Type the URL for your customized Virtual Contact Center HTML, CSS, and icon files. Store the files in the root directory of the URL, not a sub-directory. For details on customizing a Support Center, refer to Add Private Labeling to a Support Center.
Email address to send Support Center images	You can customize the HTML page and icons displayed by the Support Center. To begin customizing the Support Center, type the email address where the Virtual Contact Center sends an archive containing the customization files set, and click **Send**. For details on customizing a Support Center, refer to Add Private Labeling to a Support Center.

5. Click **Save**.

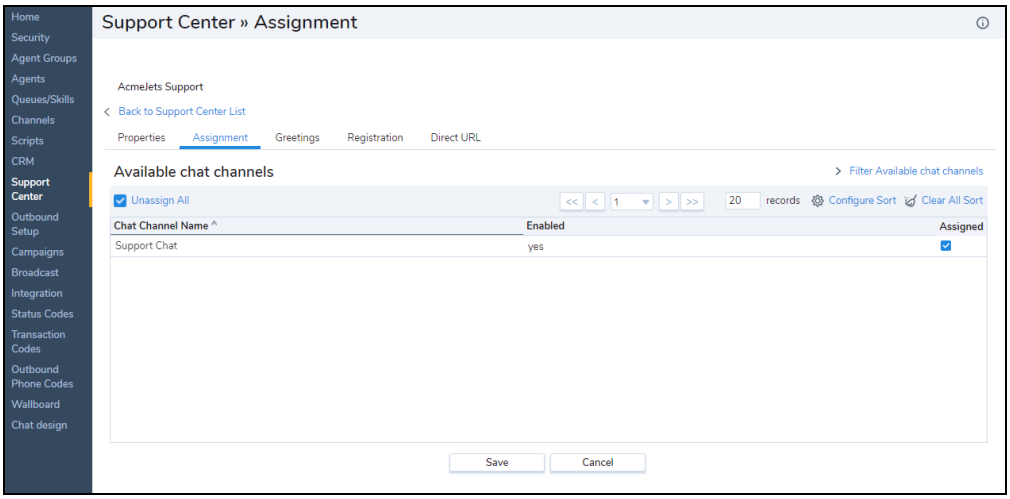
Configure Support Center Assignment

Use the Support Center Assignment to assign a Chat Channel that serves to direct chat requests from customers to agents.

To configure the Assignment Tab:

1. From the Configuration Menu, open **Support Center**.

2. Click or double-click an existing support center from the list to view or modify.



3. Click the **Assignment** tab.
4. Choose an available Chat Channel from the list and select the **Assigned** check box.
   You can assign more than one chat channel to a support center.
5. Click **Save**.

Configure Support Center Greetings

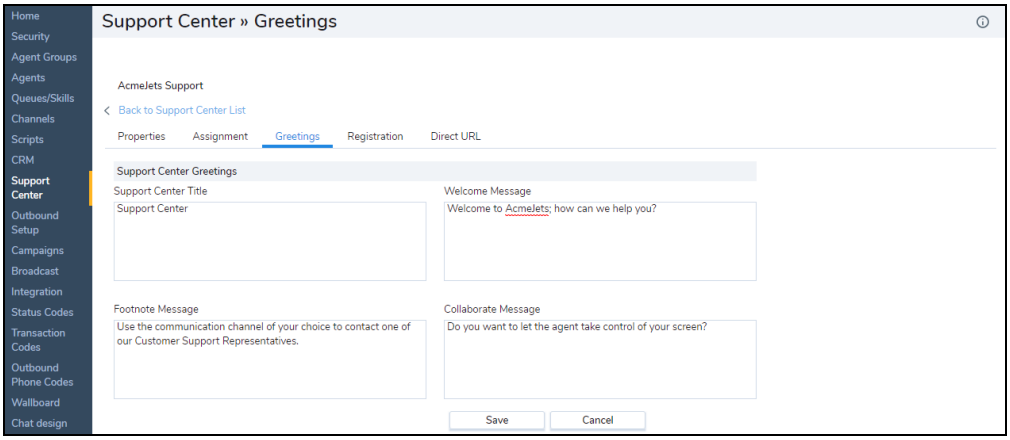
Go to Support Center > Greetings to specify the title and messages displayed on the Support Center home page.

To configure the Greetings:

1. From the Configuration Menu, open **Support Center**.

2. Click or double-click an existing support center from the list to view or modify.

3. Click the **Greetings** tab.



4. Type the Support Center title and messages.
   The following table summarizes the options under **Support Center > Greetings**:

Support Center Greetings Option	Description
Support Center Title	Type the heading that the Support Center displays at the top of the Home page.
Welcome Message	Type the information that the Support Center displays above the Title and above the Support Center subsystem icons.
Footnote Message	Type the information that the Support Center displays below the subsystem icons.
Collaborate Message	If you enabled the Collaborate subsystem, type the sentence that the Support Center displays at the top of the Collaborate page. For details on the Collaborate subsystem, refer to Configure Support Center Properties.

5. Click **Save**.
   To brand a support center with your organization's look and feel, refer to Add Private Labeling to a Support Center.

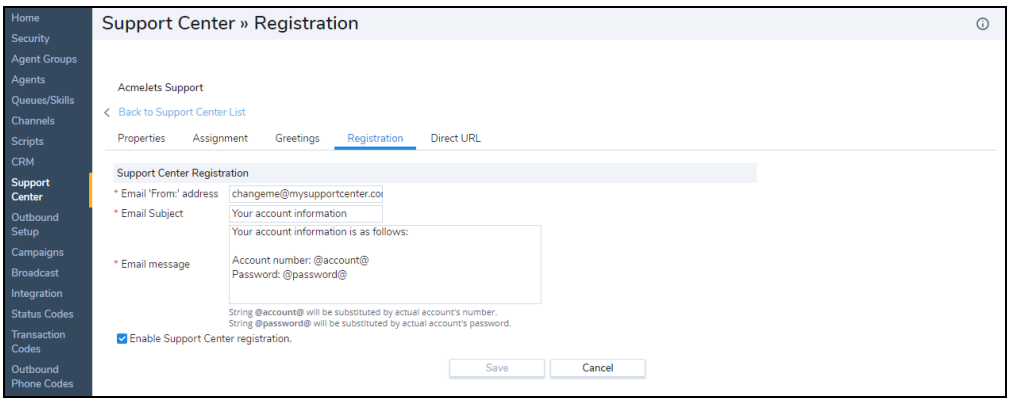
Configure Support Center Registration

Use the Support Center Registration tab to create or customize an email message sent in response to the customer's request for a new user account. When a new user registers using the Support Center, Virtual Contact Center creates a new customer account in the Local CRM. The email message contains the account number and password for the

account. The Support Center account enables customers to create support requests. To request a new account, in the **My Account** page of the Support Center, click **Click here to register**, then complete the online account request form.

To configure the Registration:

1. From the Configuration Menu, open **Support Center**.
2. Click or double-click an existing Support Center from the list to view or modify.



3. Click the **Registration** tab.
4. Enter an email address in the **email 'From:' address** field.
   Support Center shows this email address on the **From** field of the emails sent to the customers. The email message is sent in response to the customer who registers to create a Support Center account.
5. Enter a subject for **Email Subject**.
   Support Center shows this subject on the **Subject** field of the emails sent to the customers.
6. Enter a message for **Email message**.
   Type the strings used to present the requester of a new Support Center account, account name, and password. The Virtual Contact Center replaces the `@account@` and `@password@` strings with an account number and password.

   Note: Customers can change the password using their **My Account** portal.

7. Select **Enable Support Center registration**.
   If you enabled the My Account subsystem in the Properties tab, use the Support Center **Registration** page to configure the response email sent to users who request a new Support Center account.

The following table summarizes the options available under **Support Center > Registration**:

Support Center Registration Option	Description
Email 'From:' address	Type the email address that the Support Center places in the **From** field of the email message sent in response to a customer who registers to create a Support Center account.
Email Subject	Type the email subject that the Support Center places in the **Subject** field of the email message sent in response to a customer who registers to create a Support Center account.
Email message	Type the strings used to present the requester of a new Support Center account, account name, and password. In the reply email, the Virtual Contact Center replaces: ■ `@account@` with the Support Center account number. ■ `@password@` with the Support Center account's password.
Enable Support Center registration	Select to enable the Support Center registration feature. The registration feature uses the information in the **From** address, **Subject**, and **Message** fields described earlier in the table.

8. Click **Save**.

Acquire a Support Center's Access URLs

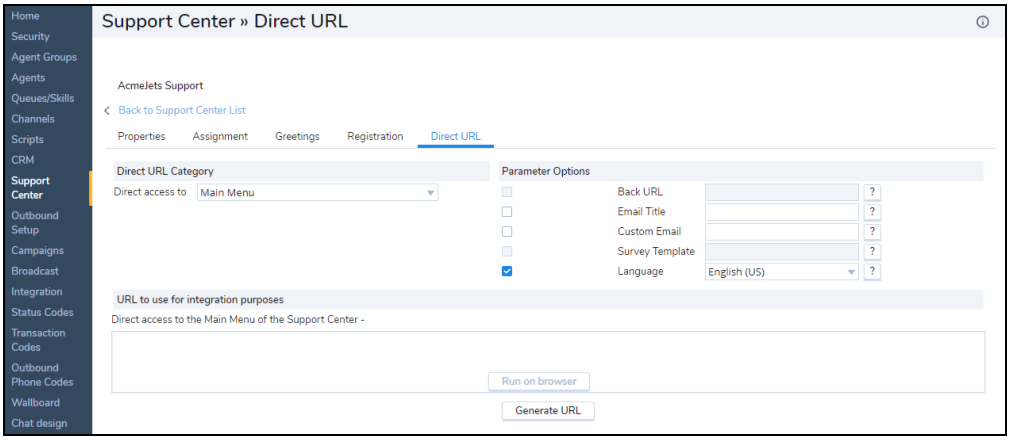
Use the Direct URL tab for a list of URLs required to access various Support Center services. The Direct URL tab allows you to generate direct URLs for the desired service, launch them for testing, and embed them in your website. You can also customize back URLs wherever applicable.

To enable customers to access one or more services of a Support Center, copy the URLs into customer-facing websites.

To generate direct URLs:

1. From the Configuration Menu, open **Support Center**.
2. Click or double-click an existing support center from the list to view or modify.
3. Click the **Direct URL** tab.

4. Select a service from the drop-down menu in the **Direct URL Category**.



5. Enter the required parameter options.

   The Support Center Direct URL tab allows you to generate URLs used to access specific Support Center pages. Use the URLs to enable your customers to access specific Support Center features.

   The following table summarizes the URLs available under **Support Center > Direct URL**:

Support Center Direct URL Category	URL Destination	Parameters
Main Menu	Top-level Menu of the Support Center	■ **Email Title** overrides the default title of the email page of the Support Center. ■ **Custom Email** overrides the default email address to which the email notification should be sent. ■ **Language** lets you choose the language to display the page in.
Collaborate Menu	Collaborate session login page	■ **Back URL** is used to navigate away from the page. ■ **Language** lets you choose the language to display the page in.
Email Menu	Email Support Request form	■ Back URL ■ Email Title

Support Center Direct URL Category	URL Destination	Parameters
		■ Custom Email ■ Language
Chat URL	Chat URL	■ Back URL ■ Language
Chat Channels	List of available chat channels	■ Back URL ■ Language
Chat Queue	List of available chat queues	■ Back URL ■ Language
Stylised Chat	Direct access to the stylized chat interaction window	■ Survey Template: Specify the URL for a chat survey template. ■ Language
My Account login page	Support Center Account Login dialog box	■ Back URL ■ Language
My Account as a user logged in	For users already logged in to the Support Center, direct link to My Account page	■ Back URL ■ Language
Submit a new case	For users already logged in to the Support Center, direct link to the Submit Support Request page	■ Back URL ■ Language
my profile as a user logged in	For users already logged in to the Support Center, direct link to the My Profile page	■ Back URL ■ Language
FAQ URL	Top level menu for Frequently Asked Questions	Language
FAQ Category	A selected category of Frequently Asked Questions	Language
FAQ Question	A specific question within a selected category of FAQs	Language

6. Click **Generate URL** to get a live link.
7. Click **Run on browser** to test if the link works as intended.
   You can embed these links in your website.

Add Private Labeling to a Support Center

In addition to the basic customizations you can perform in the Support Center's Greetings tab, you can brand the Support Center to adopt your organization's look and feel.

Before You Begin

Customizing a Support Center requires the following resources and skills:

- A directory on a Web server from which the customized Support Center files can be uploaded by Virtual Contact Center.
- If you plan to modify the Support Center icons, you need the ability to use an image editing program.

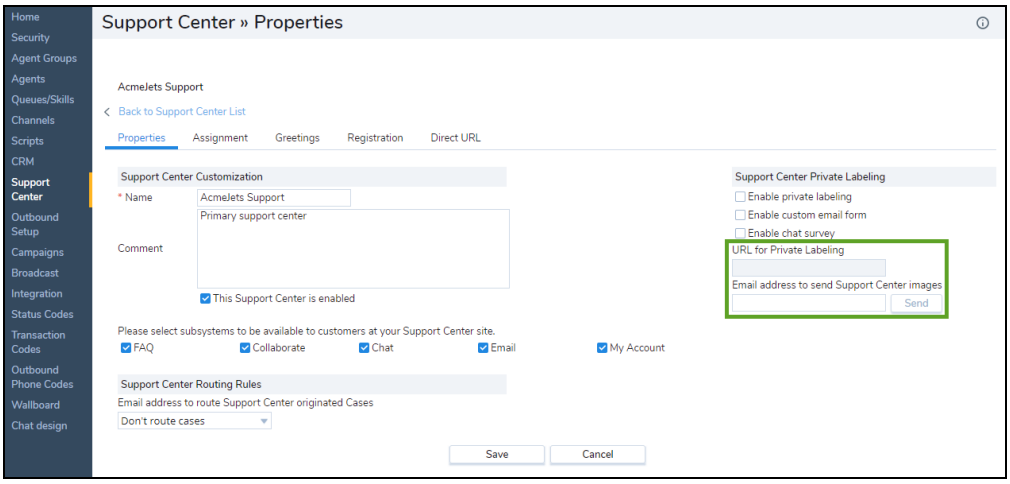
> **Note:** If you replace the icons with different image files, the new image files must be named identically to the default set.

- If you plan to modify the appearance of the Support Center's HTML page, you need the ability to edit a CSS stylesheet.
- If you plan to modify the Support Center's Email form, you need the ability to edit HTML.

Customize a Support Center

To customize a Support Center, perform the following tasks:

1. From the Configuration Menu, open **Support Center**.
2. Click **Properties**.



3. Type your email address in the **Email address to send Support Center images** field.
4. Click **Send**.
   Virtual Contact Center sends an email to that address. Attached to the email is a TGZ archive (contactual_sc.tgz) that contains the HTML, CSS, and GIF files used in the default Support Center.
5. Unpack the TGZ archive, then perform any combination of the following:
   - Modify or replace the GIF icon files. The GIF files correspond to the icons shown on your website. If you replace the icons with different image files, the new image files must be named identically to the default set of six files: icon_sservice.gif, icon_chat.gif, icon_email.gif, icon_faq.gif, icon_phone.gif, and logo.gif.
   - Modify the Support Center's CSS (sc.css).
   - Modify the Email form (customer_email.html).
6. Upload the complete set of Support Center files, including files that you did not modify, to a web server directory.
7. Type the URL containing the complete set of Support Center files in **URL for private labeling** text box.
8. Click **Save**. Virtual Contact Center uploads the customized Support Center files: icon_sservice.gif, icon_chat.gif, icon_email.gif, icon_faq.gif, and icon_phone.gif

Dialer with Campaign Management

Dialer with Campaign Management enables retrieving data from your Virtual Contact Center CRM and Salesforce Customer Resource Management (CRM) system, creating campaigns, executing campaigns, and tracking responses.

A campaign enables you to search, generate, and feed a campaign call list to an outbound phone queue, facilitating automated outbound dialing. Campaigns pull data from the customer object of our built-in CRM, or any CRM object, such as lead, account, or contact containing phone data from the Salesforce CRM. Campaigns are assigned to outbound phone queues, while agents assigned to these queues process campaign calls.

The Dialer uses CRM programming interfaces to select and extract information to build a dial campaign list. Once a campaign is setup and initiated in the Virtual Contact Center, agents sequentially receive screen pops showing contact information in Agent Console. After previewing the contact information, the agent clicks a button to dial an outbound call to reach a contact. As with an ordinary call, the agent is always on the line before the called party answers. When the call connects, the agent uses the respective CRM to manually update the contact record.

After completing an outbound dial, the agent enters the call disposition, such as the call reached, the targeted individual, an answering machine, a third party, a ring no answer situation, a busy number, an invalid, or disconnected number. This information allows a systematic determination of how the campaign list will be re-processed over time.

Features

Dialer provides capabilities to generate a campaign call list, create, run, and recycle campaigns. The Dialer allows you, as an administrator, to:

- Manage and automate outbound dialing campaigns extracting data from your Virtual Contact Center CRM and the Salesforce CRM application.
- Support blended call centers; agents can be setup to process inbound and outbound calls with priorities, skills, and skill levels.

- Define CRM global properties for campaign management, which include selecting CRM objects and fields, and uploading audio messages for campaigns.
- Map transaction codes to automated disposition actions to schedule a call back, or try to call again.
- Search and retrieve records from your CRM to generate a campaign call list, and feed the list to an outbound queue.
- Assign a campaign to an outbound queue.
- Control and monitor campaigns.
- Upload and assign pre-recorded messages to campaigns.
- Offers a campaign call to an agent, presents the contact record details, and optionally allows a fixed amount of time for the agent to preview the record.
- Initiates a call to the contact if an agent accepts the call.
- Allow an agent to start playing a pre-recorded message on reaching a voice mail, then immediately switch back to available status, and attend the next interaction.
- Allow an agent to schedule calls in the event of reaching a contact at a busy time. The scheduled call generates a call reminder.
- Allow an agent to set up retrial attempts for an unsuccessful call, placing the retrial call back in the queue. The Retrial call is offered to any available agent on the queue at the specified time interval.
- Allow a supervisor to access real-time campaign statistics, campaign status, and generate historical reports exclusive to campaigns.

Limitations

The limitations of Dialer are that it is:

- Limited to customers who use Virtual Contact Center CRM, and Salesforce CRM.
- Available only to agents who are logged in to the Salesforce CRM Multi Channel interface. CTI Connect is not supported.

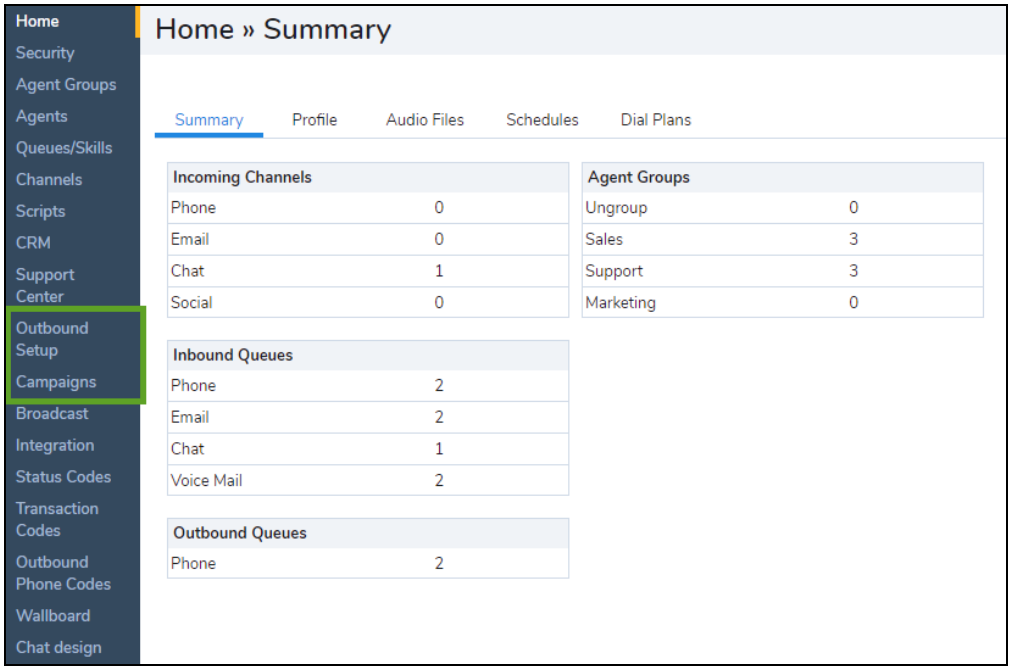
Dialer Campaigns Work in Cycles

A key characteristic of nearly all dialer campaigns is that it is rare to reach the desired number of contacts after a single pass through a list. Therefore, campaign lists are recycled again and again using disposition codes from earlier cycles to alter selection and sort strategies to create new campaigns.

Configure the Dialer

If your tenant is provisioned with the Dialer with Campaign Management functionality, the Configuration Manager's Configuration Menu shows the following tabs:

- **Outbound Setup** allows you to define global properties for managing all campaigns.
- **Campaigns** allows you to create and control campaigns.



Configure Outbound Setup

For campaigns to function successfully, they need to connect to the Virtual Contact Center CRM or Salesforce CRM, extract data from a specific CRM object, and generate a target call list. Outbound setup enables you to define global properties for campaigns by:

1. Specifying the target CRM properties
2. Defining CRM objects and fields relevant to campaigns
3. Uploading pre-recorded messages to be accessed by campaigns
4. Mapping transaction codes to disposition actions

Specify Target CRM Properties

A campaign requires a call list for automated outbound dialing. To generate a call list, you must access and extract data from your Virtual Contact Center CRM or Salesforce CRM. To access data from your CRM, you must configure CRM information under Outbound Setup > Properties.

The Properties tab enables you to:

- Select a target CRM to extract the call list data.

  Note: Dialer supports Virtual Contact Center CRM and Salesforce CRM only.

- Provide and validate the login credentials of your Salesforce CRM account.

To extract data from your Virtual Contact Center CRM:

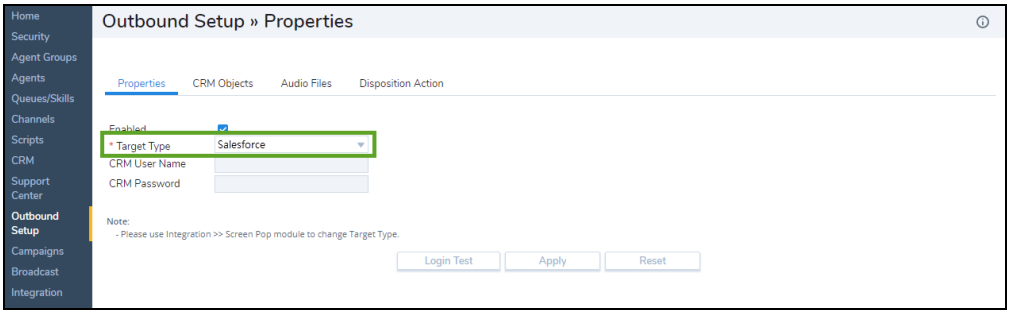
1. From the Configuration Menu, open **Outbound Setup**.
   The Properties tab opens.
2. Select **Local** from the Target Type. Target type specifies the CRM application that stores the data used for campaigns.

   Note: For the Virtual Contact Center CRM, username and password information are not required.

3. Click **Save**.

To extract data from your Salesforce CRM account:

1. Select **Salesforce** from the Target Type drop-down list.



2. Enter your Salesforce **CRM User Name** and **CRM Password** to log in to the account. For Salesforce, add the security token to the password. [1]
3. Click **Login Test** to validate Salesforce account credentials. If the username and password are correct, the login test passes.
4. Click **Save**.

Define CRM Objects

You can create campaigns based on the Customer object defined in your Virtual Contact Center CRM, or any object in your External CRM, provided the object has a phone field. To generate a call list based on an object, you should configure the object with its desired fields in Outbound Setup.

Outbound Setup > CRM Objects enables you to define CRM objects and fields to be used in campaigns.

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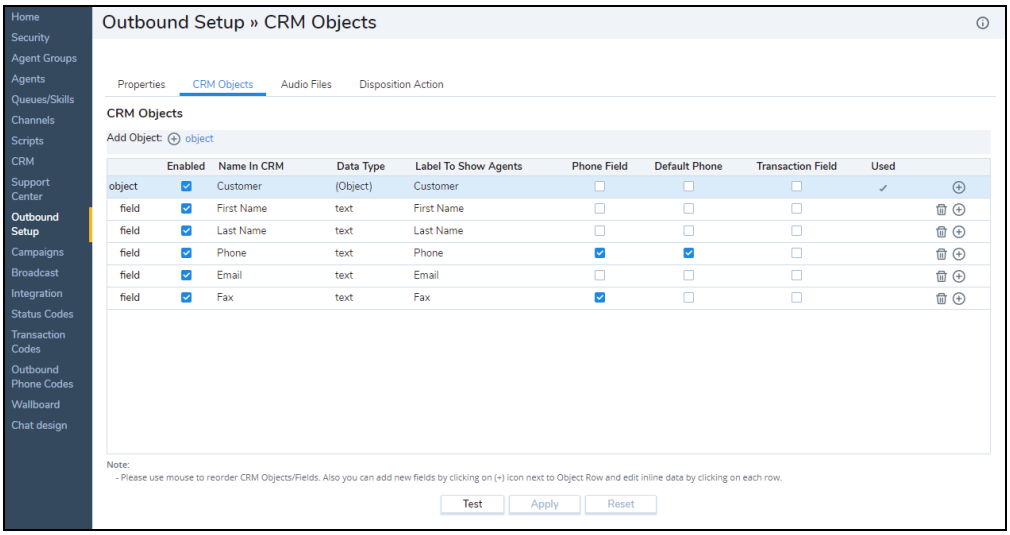
[1] Obtain your authentication token from the original Salesforce email communication or from your Salesforce administrator.

To add a CRM object:

1. From the Configuration Menu, open **Outbound Setup**.
2. Go to the **CRM objects** tab.



3. Click ⊕ **Object**.
4. Enter an object name for **Name in CRM**.
   The data type for the object is automatically populated.

> **Note:** You must enter the object name as it appears in the CRM.

5. Enter a value for **Label to Show Agents** in Agent Console.
   The following table summarizes the options under **CRM Objects**:

CRM Objects Option	Description
Add Object	Lets you add an object from your CRM. If enabled, automatically populates the CRM Objects field while creating a campaign. If disabled, prevents creating a campaign based on the CRM object. Enter the following information to add a CRM object:

CRM Objects Option	Description
	■ **Name in CRM**: Enter the name of the object from your CRM. Make sure the object name matches the value in the CRM. ■ **Data Type**: Select the most appropriate data type from the drop-down list. ■ **Label to Show Agents**: Enter a label to show on the transaction panel of Agent Console. ■ **Phone Field**: Applies to a phone field only. If checked, displays the phone number to the agent on the transaction panel. ■ **Default Phone**: Applies to a phone field only. If checked, dials the number if an agent fails to select a number. ■ **Transaction Field**: Applies to any field. Shows the field on the transaction panel of Agent Console. ■ **Revert Edits**: Reverses edits before the last save.
Add Field	Lets you add a field under the selected object. You can add any number of fields to filter your campaign call list. If disabled, prevents filtering a call list based on the CRM field. Enter the following information to add a CRM field under an object: ■ **Name in CRM**: Enter the field name from your CRM. Make sure the name matches the value in Field Name. ■ **Data Type**: Select the most appropriate data type from the drop-down list. ■ **Label to Show Agents**: Enter a label to show on Agent Console. ■ **Phone Field**: Applies to a phone field only. If checked, displays the phone number to the agent. ■ **Default Phone**: Applies to a phone field only. If checked, dials the number if an agent fails to select a number. ■ **Transaction Field**: Applies to any field. If checked, shows the field on the transaction panel of Agent Console. ■ **Revert Edits**: Reverses the edits before the last save.
Move Up	Moves a CRM object or field up from its current position.
Move Down	Moves a CRM object or field down from its current position.

CRM Objects Option	Description
Delete	Deletes a selected object or field. For more information on deleting objects and fields, see how to delete CRM objects below. **Note:** You cannot delete an object without deleting its fields.
■ Save ■ Revert ■ Revert Edits	■ Saves all changes. ■ Reverses all changes before the last save. ■ Reverses the previous edit.

To add a CRM field:

1. From the Configuration Menu, open **Outbound Setup**.
2. Go to the **CRM objects** tab.
3. Click ⊕ next to the **Object** in the top row. Notice that another field is added.
4. Enter a name in **Name in CRM** for the field.

   Note: You must enter the field name as it appears in the CRM.

5. Select Data Type to match the CRM field data type. If you do not find an exact match, enter the most appropriate data type. The Dialer supports the Boolean, Integer, Text, Date, and DateTime data types.

   Note: Boolean may be used for check box values.

6. Enter a value for **Label to Show Agents** in Agent Console.
7. Check the **Phone Field** to indicate a phone number. Phone Field is used to populate the list of phone numbers for a particular contact. The number shows on the control panel of Agent Console.
8. Check the **Default Phone** to assign a default phone number if a contact has more than one number. A default phone number initiates an outbound call if an agent fails to select a particular number from the list. The number shows on the control panel of Agent Console.
9. Check the **Transaction Field** for the field data to show on the control panel of Agent Console and in the External Transaction Data field of Campaigns.
   For example, you can select key information such as company name and phone number to show on the control panel, minimizing the agent's effort to retrieve this information from the contact record details. Custom objects and fields are supported as well. You can add any number of fields to filter your campaign call list.

   Note: For custom objects and fields, suffix the object and field name with <_c>, such as in <Client_c>.

To delete CRM objects:

1. From the Configuration Menu, open **Outbound Setup**.
2. Go to the **CRM objects** tab.
3. Select a field or object from the list.
4. Click or **Delete**. The field is deleted from the list.
5. Click **Save**.
6. Select the object and click **Delete** after deleting all the fields under the object.

   Note: If an object is referenced in a campaign, the **Delete** button is disabled.

7. Click **Save**.

To delete a CRM field:

Select the field, and click **Delete**.

Note: If a field is referenced in a campaign, the **Delete** button is disabled.

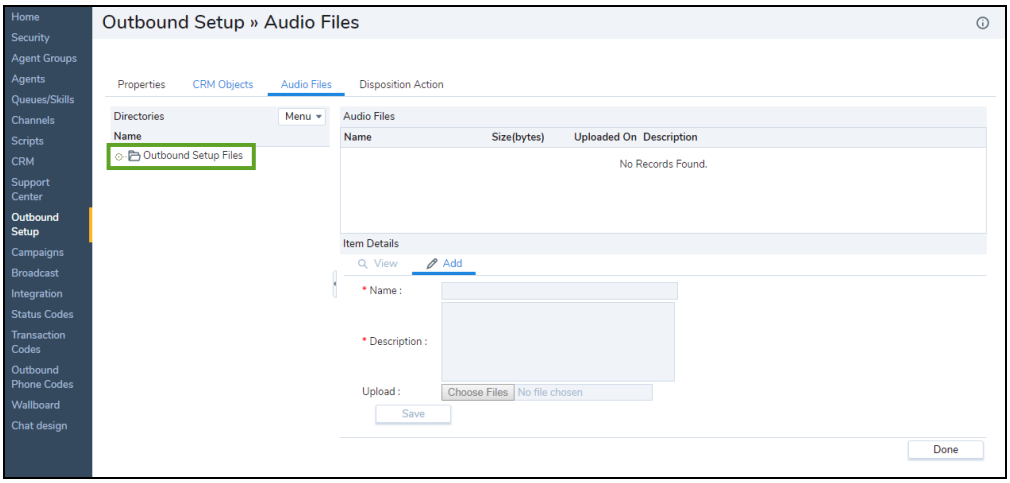
Upload Pre-recorded Messages

During a campaign call, an agent can access and play pre-recorded messages defined for that campaign to ensure a uniform delivery of the campaign message to all customers. During Outbound Setup, you can upload a set of pre-recorded messages which can be accessed by campaigns. When you create a campaign, you can assign messages specific to the campaign.

Note: Supports audio files in WAV format only.

To upload a pre-recorded message in Outbound Setup:

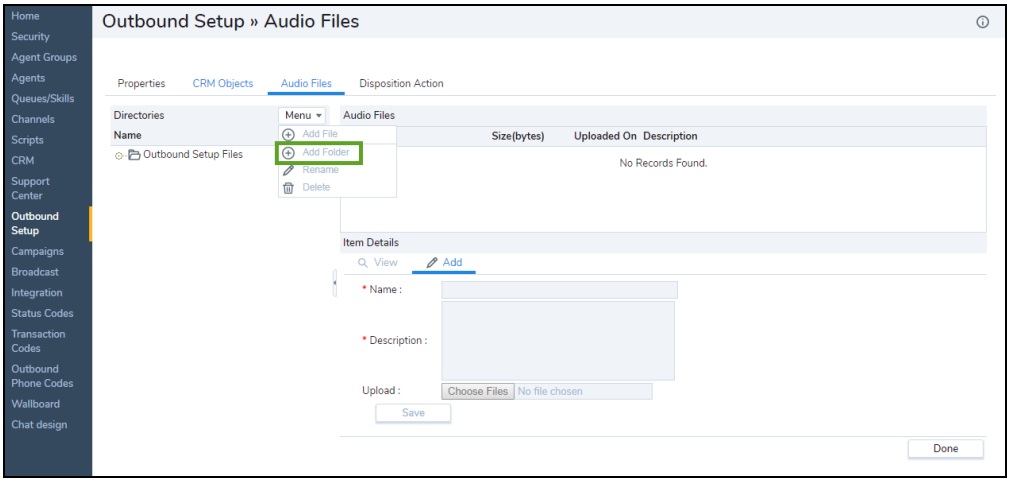
1. Go to **Outbound Setup > Audio Files**.



2. Select **Outbound Setup Files** in the Directories section.
3. Click **Menu**.
   The menu provides options to add, delete, or rename a folder. You can add files to folders only.

4. Select **Add Folder**.

   You are prompted to enter a name for the new folder.

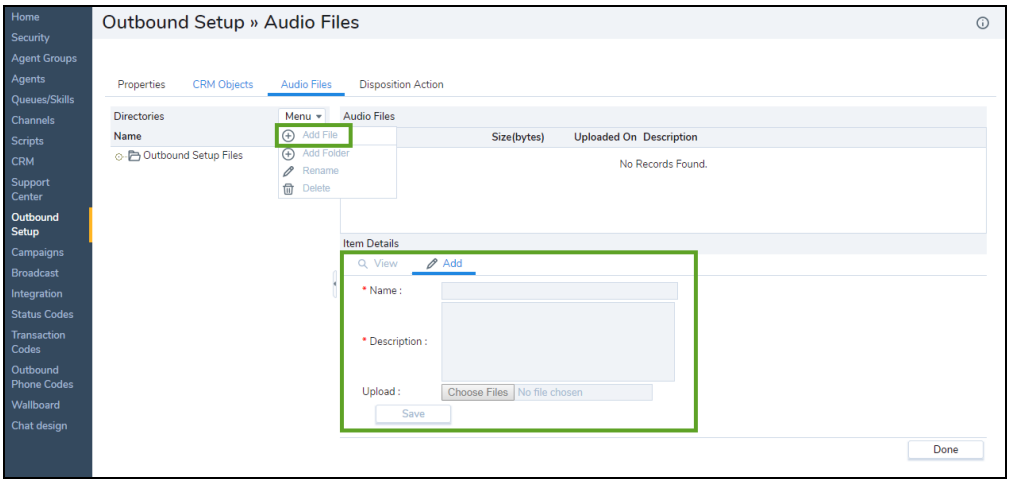


5. Enter a folder name, and select **Create**.

   The folder appears under the Outbound Setup Files.

> **Note:** Do not include special characters in the folder names.

6. Select the folder, click **Menu**, and select **Add File**.



7. Enter a **Name** and **Description** of the audio file.

8. Click **Choose File** and select an audio file of the message to upload.

> **Note:** You can upload audio files in WAV format only.

9. Click **Play Audio** to play and check content of the message.
10. Click **Save**. The audio file appears in the Audio File Items pane.

Map Disposition Code

Campaign calls seldom reach the desired number of contacts after a single pass through a list. Therefore, campaign lists are recycled using disposition codes from earlier cycles to alter selection and sort strategies to create new campaigns. The transaction codes, which indicate call outcomes, can be used to determine how a campaign call needs to be processed further. You can map transaction codes to automated disposition actions for better processing of campaign calls.

Every attempted campaign call may be labeled with a disposition action for follow-up. The supported disposition actions are Try Again, Schedule Call Back, and Do not Call.
The following table summarizes the resulting disposition actions with examples:

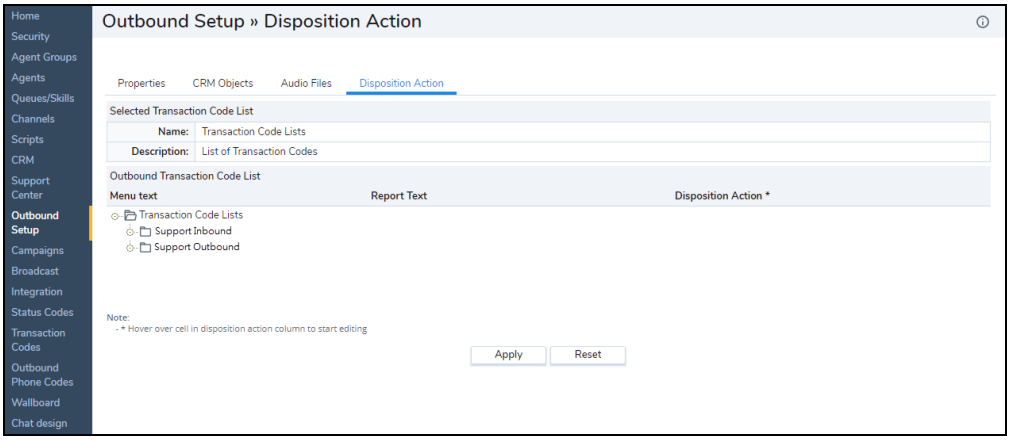
Disposition Action	Resulting Action
Schedule Call back	■ Prompts an agent to schedule a callback time. ■ Sends a reminder to the agent before the scheduled time if the agent is logged in to their Agent Console or Salesforce account. ■ Sends a past-due reminder If the agent logs in past the scheduled time. ■ The agent has to manually place an outbound call at the scheduled time. For example, if you mapped a 'Busy, Callback' code with a 'Schedule Call Back' action, when an agent selects the 'Busy, Callback' code, the agent is immediately prompted to schedule a time for the callback. A reminder is sent half an hour before the scheduled time.
Try Again	■ Offers a call to the contact based on the Retry properties defined for that campaign. ■ Retries the call as often and as many times as defined in the Retry properties. ■ Drops the record from the campaign list after going through the stated number of retry attempts. For example, if you failed to reach a contact, you mapped a ‘Reached Voicemail' code with a 'Try Again'

Disposition Action	Resulting Action
	action, the campaign offers a call to the same contact based on the retry properties defined for that campaign.
Do not Call	allows marking records, and updating a CRM field with Do not Call disposition information. For example, the Lead object in Salesforce CRM has a standard Do not Call field. During a campaign call, you can update this field automatically by mapping a transaction code with Do not Call disposition action.

The disposition actions get recorded in the Campaign Transaction Details report. A supervisor can monitor this report, and follow up with suitable actions.

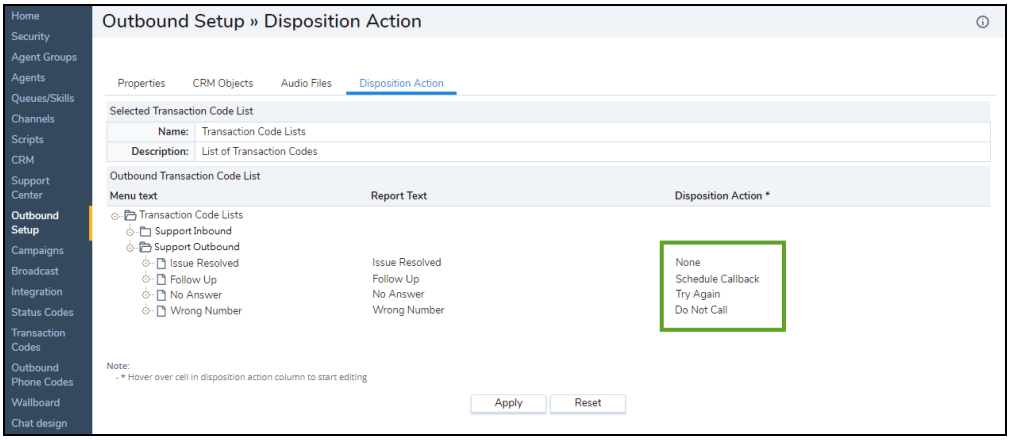
To access the Disposition Action tab:

1. Go to **Outbound Setup > Disposition Action**. The tab opens the existing transaction code lists assigned to queues.



Note: Disposition actions apply to transaction code lists assigned to queues only. You cannot map code lists assigned to agent groups.

2. Select a code from the list, and assign an appropriate Disposition Action from the drop-down list. The supported actions are Try Again, Schedule Callback, and Do not Call. Select None where other actions do not apply.



Create a Campaign

A campaign is an outbound phone-based dialer that enables you to search, generate, and feed a call list to an outbound queue, facilitating automated outbound dialing. You can create a campaign based on the customer object in your Virtual Contact Center CRM or any object defined in your Salesforce CRM, provided the object has a phone field. You can then define a search strategy to further filter the target call list. On initiating a campaign, the campaign manager fetches the target call list from the CRM and feeds records to an outbound phone queue. The agents assigned to the queue are offered the campaign calls. An agent previews a record, and then accepts, rejects, or skips the call. A call can be initiated automatically after the preview, if no action is taken, and if the autodial feature is selected.

The Campaigns tab in the Configuration Menu lets you quickly create, execute, and manage campaigns. Additionally, you can sort and filter campaigns based on custom searches.

Prerequisites

Here is a checklist of tasks you should complete before creating a campaign:

- Create and identify an outbound phone queue to assign the campaign.
- Assign agents to the outbound phone queue.
- Create a transaction code list to capture campaign call outcomes and assign it to the outbound queue.
- Identify and set up CRM objects and fields from the Virtual Contact Center CRM, or Salesforce CRM in Outbound Setup.
- Upload and assign audio files.
- Identify and map call outcomes that require disposition actions.

- Optionally you can:
  - Enable autodial for campaign calls after preview.
  - Enable Answer Machine Detected (AMD) service.
  - Enable Carrier Call Blocking (CCB).
  - Automatically apply Transaction Codes (Auto-TCL).
  - Update live campaigns.
  - Allow agents to skip campaign calls while on Auto Answer.
  - Determine a schedule to initiate and terminate a campaign.
  - Determine a daily calling schedule for the campaign.
  - Determine the campaign search and sort strategy.
  - Identify a CRM field to capture the call outcome through transaction codes for recycling a campaign.
  - Identify a CRM field to capture the Do not Call disposition.
  - Identify supervisors to monitor and/or control a campaign.

Creating a campaign involves the following tasks:

1. Defining campaign properties
2. Assigning supervisors to a campaign
3. Defining campaign search criteria
4. Specifying a sort order for a campaign
5. Assigning audio files to a campaign

Define Campaign Properties

In the Campaigns page, the Properties tab lets you define characteristics of a new campaign.

To define properties for a campaign:

1. In the Configuration Menu, click **Campaigns**.
2. Click ⊕ to add a new campaign.
3. In the Properties tab, enter or select values for the following properties of the new campaign:

Campaign Property	Description
General Properties	■ **Campaign Name**: Enter a campaign name. ■ **Queue**: Select the outbound queue to which the campaign is directed. ■ **Dial Plan**: Select one of the default dial plans or a custom dial plan from the drop down list of choices. ■ **Caller ID**: Select the phone channel number configured for the tenant to be presented as the outbound caller ID, or select *Anonymous*. ■ **CRM Objects**: Select a CRM object from the list configured in the Outbound Setup. **Note:** A campaign can extract data from only one CRM object. ■ **This campaign is enabled**: Select to enable the campaign. ■ **Answer Machine Detection**: If AMD service is provisioned for your tenant, the Virtual Contact Center administrators can activate it for the desired campaigns. When selected, AMD identifies calls answered by a machine instead of people and allocates the calls answered by people to the available agents. For a machine-answered call, AMD sends a one-way message to the call routing to end that call and resolve it automatically. For details, see our content on how to enable AMD.

Campaign Property	Description
	■ **Show skip button**: If selected, it offers agents the choice to skip a call by clicking the Skip button on Agent Console's Control Panel. For details, see our content on how to skip campaign calls while on Auto Answer. ■ **Automatically apply Transaction Code to system ended calls**. If this feature is provisioned for your tenant, the Virtual Contact Center administrator can activate it for the desired campaigns. When selected, it automatically assigns transaction codes to campaign calls when the destination party is not available to answer the call, or the call cannot be completed, such as when there is a busy tone or dead line. This also includes identifying calls that are answered by a machine. For details, see our content on how to automatically apply transaction codes (Auto-TCL). ■ **Override mandatory Transaction Code selection**: If selected, you can let the system enter system-defined transaction codes, such as blocked number instead of the mandatory codes selected manually by agents. ■ **Dynamic Campaign**: If selected, you can add or remove records from an active campaign. The new numbers can then be dialed within five minutes while maintaining the original list. Removing a campaign record does not delete it from the list but will keep the record for the future reports. For details, see our content on dynamic campaigns. ■ **Carrier Call Blocking**: If selected, it detects TCPA-listed phone numbers for US customers and checking whether or not the phone number is listed on a Do Not Call (DNC) or mobile block list. If listed, the call is terminated by the carrier and an appropriate Session Initiation Protocol (SIP) code response is sent back to the interaction router. The call is then handled by our Auto-TCL and completed. For details, see our content on Carrier Call Blocking.
Preview Properties	■ **Preview Timeout**: Define a time limit for previewing records before accepting a campaign call. You can select the agent's default preview time or enter a desirable preview time. ■ **Timeout Action**: Allows the system to follow one of the options below: ○ **Dial Call:** To place a call to the previewed party automatically once the preview time elapses. ○ **No Action:** To allow the agent to start, reject, or skip the call.

Campaign Property	Description
	Note: By default, the No action option is selected.
Start and End Time (Optional)	Select **Start and End Date** and **Time** values to schedule a campaign. You can specify a start date and an end date. If start date and time is not provided, you must start the campaign manually. If end date is not provided, the campaign stops after processing all the records. ■ **Start Date**: Specify a date to initiate the campaign. ■ **Start Time**: Specify a time of the day to initiate the campaign. ■ **End Date**: Specify a date to end the campaign. ■ **End Time**: Specify a time of the day to end the campaign. **Note:** A scheduled campaign follows the tenant time zone.
Daily Call Start & End Time (Optional)	Enable and select a daily schedule to further control the time campaign calls are offered to agents daily. This setting ensures the calls are offered based on a default schedule, or a custom schedule, and uses either the area code or the time zone of a destination number. For example, if a campaign follows a default schedule with a daily start and end time configured at 9:00 and 17:00, the application initiates calls daily only between 9:00 AM and 5:00 PM. The current time at the destination is computed based on the area code of the destination number or the time zone specified. ■ **Enabled**: Select to enable the daily call start and end time. ■ **Schedule**: Select a default schedule, or a custom schedule. ■ **Area Code (US & Canada only)**: Select this option to offer calls based on the area code of the outbound phone number. ■ **Time Zone**: Selecting a time zone from the drop down menu offers calls in the specified time zone. Select from 35 different time zones catering to all over the world. **Note:** Default or custom schedule refers to the schedule specified for the tenant

Campaign Property	Description
	under **Home > Schedules**.
Retry Properties (Optional)	Define retry attempts for unsuccessful campaign calls. You can define the retry frequency and the maximum number of retry attempts before dropping the number from the call list. When a campaign runs, the disposition action Try Again places retrial calls based on values defined in Retry Properties.
Auto Update (Optional)	Select a CRM field to be updated with transaction code report text or short codes. This data may be used to filter a campaign for further processing. **Note:** The CRM field must be included in the Outbound Setup. You may create a new CRM field to capture the disposition of each attempted campaign call. For each campaign cycle, create a new CRM field to capture the disposition for the cycle. Otherwise, the disposition from the next campaign cycle overwrites the disposition in the current cycle.
Do not Call (optional)	Select a CRM field to be updated with Do not Call disposition information.

4. Click **Save**.
   You created a campaign successfully. Optionally, you may assign supervisors, create a search query, label a sort order, and assign pre-recorded messages to the campaign.

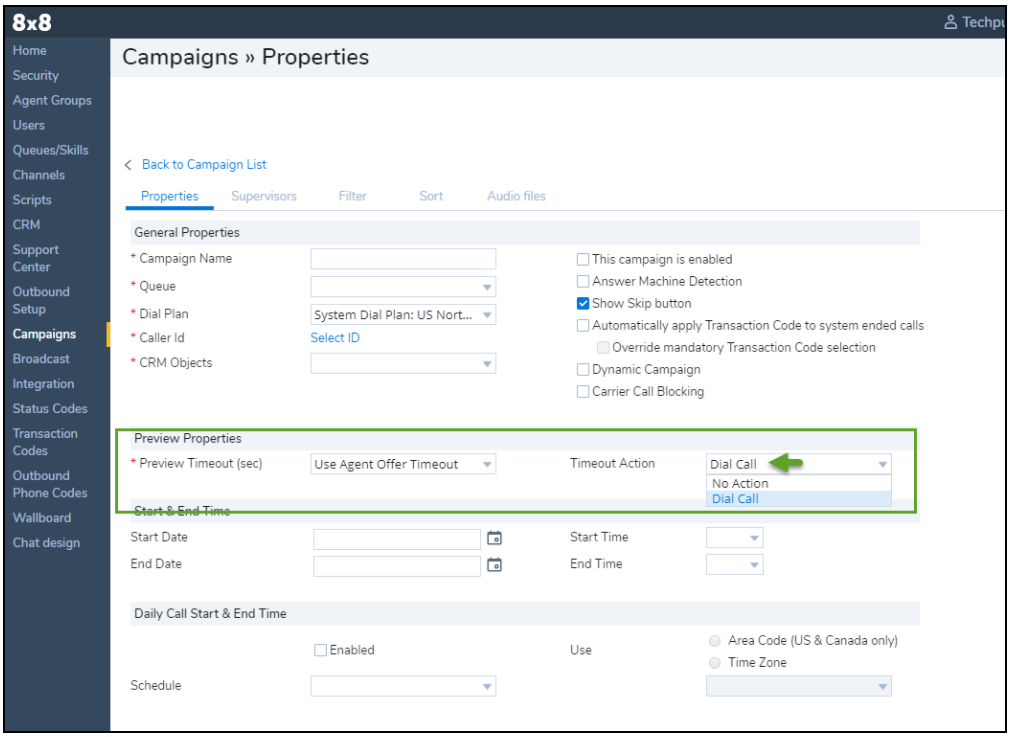
Note: On initiating a campaign, you cannot modify properties of the campaign.

Enable Autodial Campaign Calls After Preview

Campaign calls can automatically dial numbers when an agent who has spent all the preview time has not taken any action. At the end of the preview time if no action is taken, calls are initiated automatically eliminating the need for manual action by the agent. The Virtual Contact Center administrators can enable autodialing for each campaign when an agent's preview countdown ends. The minimum preview duration is 15 seconds.

To set up autodial for campaign calls after preview:

1. Log in to Configuration Manager as an administrator.
2. Navigate to **Campaigns** from the menu.
3. Select to edit a campaign and scroll down to **Preview Properties**.
4. For the **Preview Timeout** (sec), select use **Agent Offer Timeout**. The default is 15 seconds.



5. For Timeout Action, select the **Dial Call** option.
   Timeout action allows the system:

- **Dial Call:** To place a call to the previewed party automatically once the preview time elapses.
- **No Action:** To allow the agent to start, reject, or skip the call.

Note: By default, the No action option is selected.

Enable Answer Machine Detection (AMD) Service

In 8x8 Virtual Contact Center when the dialer is used in its aggressive mode, it can call more numbers than available agents to maximize agent efficiency. The dialer needs a service which detects the calls answered by a machine instead of people and filters them. We have introduced the Answer Machine Detection (AMD) service to identify such calls and allocate the calls answered by people to the available agents. When the AMD service identifies a machine-answered call, it sends a one-way message to the call routing to end that call and resolve it automatically. AMD is a learning service and it needs some time to build an effective library of known audio samples before it reaches the maximum efficiency. Once the library is created, the AMD service resolves a machine-answered call quicker than the manual effort of an agent.

AMD resolves a machine-answered call when the following acceptance criteria are met:

- There is an active interaction on an outbound call (non-active interactions include wrong numbers, numbers not in use, system messages).
- The call has a campaign ID from an AMD-enabled campaign.
- The elapsed time of an identified call can be terminated within the locally-configured threshold (two seconds in UK and US).

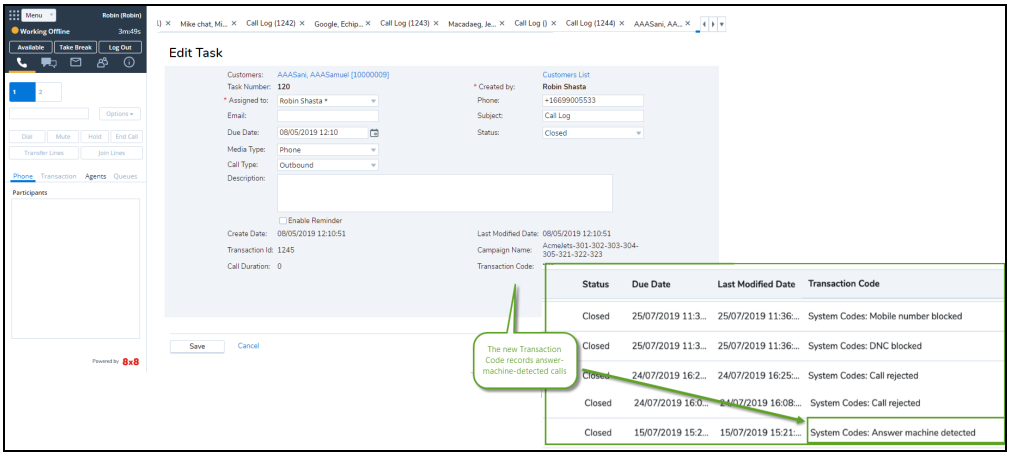
Enabling Answering Machine Detection Service

Once AMD is provisioned for a tenant, the Virtual Contact Center administrators can activate it for desired campaigns under Campaigns.

To enable AMD in Configuration Manager:

1. Log in to Configuration Manager and go to **Campaigns**.
2. Click to create a new campaign or edit an existing campaign.
3. Under Properties, select **Answer Machine Detection**.
4. Click **Save**.

   AMD works in conjunction with our new Auto-TCL. The transaction code for such calls appears as "Answer machine detected" in CRM Cases or under Historical reports.



Note: The AMD service is only applicable to the calls routed via campaigns, but not the outbound calls placed by an agent.

Enable Carrier Call Blocking (CCB) Service

8x8 Virtual Contact Center is able to detect TCPA-listed phone numbers via Carrier Call Blocking (CCB) service. This feature is available for US customers only. The Telephone Consumer Protection Act (TCPA) designed to safeguard consumer privacy restricts telemarketing communications via calls, SMS texts, and fax. To comply with TCPA, we have introduced Carrier Call Blocking (CCB) service for campaign calls which allows the campaign manager in the Dialer to apply special routing to two carriers: Brightlink and RSquared. They will then run dialer calls through a service that checks whether or not the phone number is listed on a Do Not Call (DNC) or mobile block list. If listed, the call is terminated by the carrier and an appropriate Session Initiation Protocol (SIP) code response is sent back to the interaction router. The call is then handled by our Auto-TCL and completed.

Enabling Carrier Call Blocking (CCB) Service

Once CCB is provisioned for your tenant, the contact center administrators can activate it for the desired campaigns.. If CCB is enabled, the campaign dialer checks whether the outbound call's phone number is listed on TCPA list.

To enable CCB in Configuration Manager:

1. Log in to Configuration Manager and go to **Campaigns**.
2. Click to create a new campaign or edit an existing one.
3. Select **Carrier Call Blocking**.
4. Select **Automatically apply Transaction Code to system ended calls**. Transaction codes record the outcome of each interaction using codes such as "Successful call", "Call back", "Do not call back", "Reached voicemail", "Faulty number", etc.
5. Select **Override mandatory Transaction Code selection** to allow the system enter system-defined transaction codes such as "Mobile number blocked" or "DNC blocked" instead of mandatory transaction codes selected by agents.
6. Click **Save**.

   When you run a campaign, the campaign dialer begins calling numbers fed from the CRM. When it detects a TCPA-listed phone number, the CCB terminates the call. A transaction code such as "Mobile number blocked" or "DNC blocked" is then generated by the system and recorded in the call log via Auto-TCL.

Automatically Apply Transaction Codes (Auto-TCL)

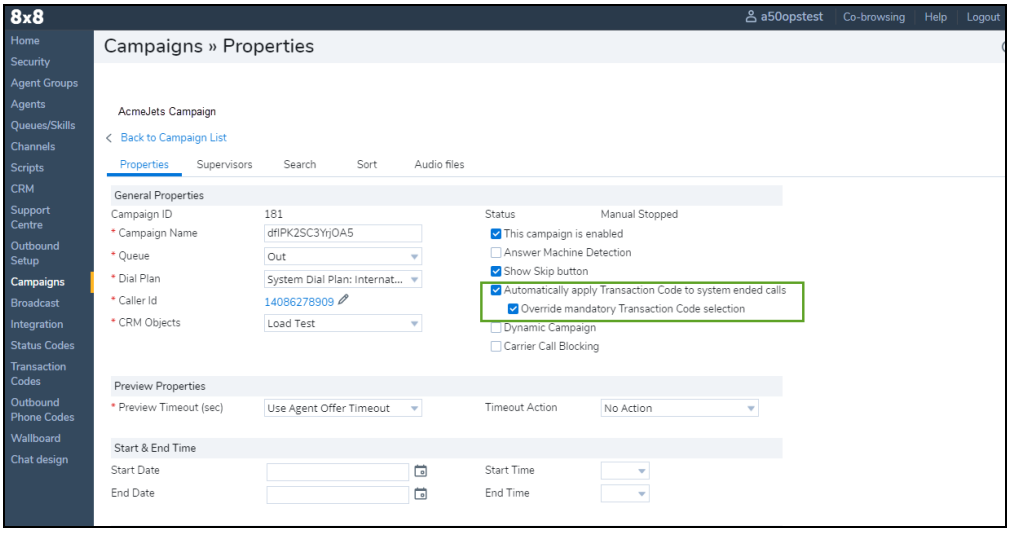
8x8 Virtual Contact Center automatically assigns transaction codes to campaign calls when the destination party is not available to answer the call, or the call cannot be completed, such as when there is a busy tone or dead line. The new feature also identifies the calls that are answered by a machine. Auto-TCL works with Answering Machine Detection (AMD) service to identify such calls and automatically disposition them. It then moves onto the next call with minimal agent disruption. This feature allows agents to be more efficient with their time. Auto-TCL feature must be provisioned to the tenant. Administrators can then set it up in Configuration Manager.

Set up Automatic Transaction Codes for Campaigns

If Auto-TCL is provisioned for your tenant, you can enable it at the campaign level.

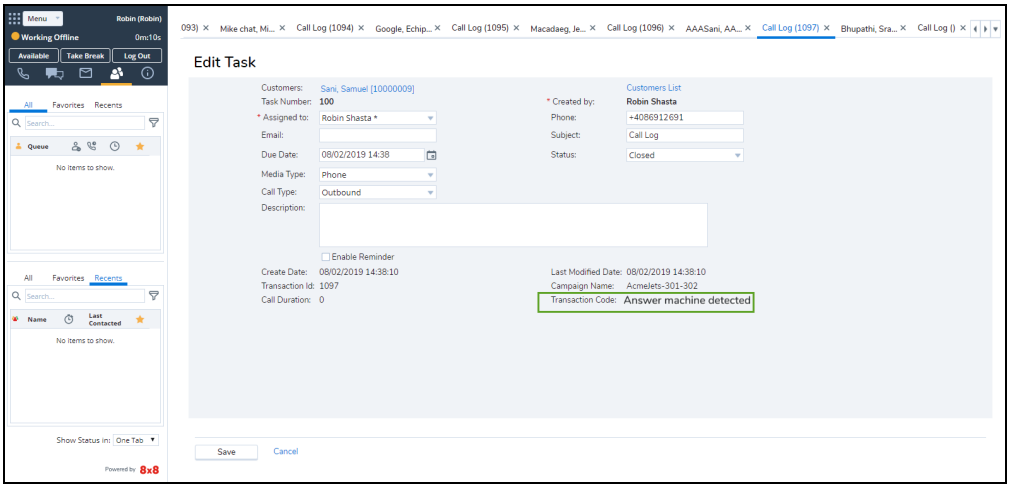
To set up Auto-TCL for campaigns:

1. Log into Configuration Manager and go to **Campaigns**.
2. Click to edit or create a new campaign.
3. Under **Properties**, select **Automatically apply Transaction Code to System ended calls**. Transaction codes record the outcome of each interactions using codes such as "Answer machine detected", "Call rejected", "Mobile number blocked", "Temporary failure", etc.
4. Select **Override Mandatory Transaction Code selection** to let the system enter system-defined transaction codes such as "Blocked number", instead of the mandatory codes selected manually by agents.



Note: Auto-TCL supports campaign calls only.

In Agent Console, the call log or task under a customer logs the automatic transaction code such as "Answer machine detected".



Dynamic Campaigns: Ability to Update Live Campaigns

In 8x8 Virtual Contact Center, Dynamic Campaigns allow you to add or remove records from an active campaign via campaign API. Prior to this release we could not add or remove records from a campaign after it started running. This supports integrated lead capturing systems which feed new prospects into the corresponding campaign in real time so they can be dialed within five minutes. Removing a campaign record will not delete it from the list but will keep the record for future reports.

For API configuration details, see our support article on how to configure Virtual Contact Center Dynamic Campaign API.

Features

- Ability to add a record to an active campaign via campaign API. The new record appears at the end of the record set.
- Ability to remove a record from an active campaign via campaign API.
- Ability to return a list of active records.
- Ability to return the status and information of a specific record.
- A record that is on a Do Not Call list (DNC) cannot be added into the campaign. An error message is returned for that particular record on the multi-status response.
- Ability to schedule a callback for a maximum of seven days in advance via campaign API.
- Ability to schedule a maximum of five million records to be uploaded via campaign API.
- Copying a campaign with the Dynamic Campaign option does not copy this option for the new campaign.

To set up Dynamic Campaigns:

1. Log in to Configuration Manager and go to **Campaigns**.
2. Click to edit an existing campaign or create a new one.
3. Select **Dynamic Campaign**.
4. Click **Save**.

You can filter campaigns in the campaign list using the newly introduced columns: **Campaign ID** and **Dynamic**

Campaign. Right-click on the campaign list and select to show the desired columns. For example, Dynamic Campaign appears in the campaign columns, but is not selected by default.

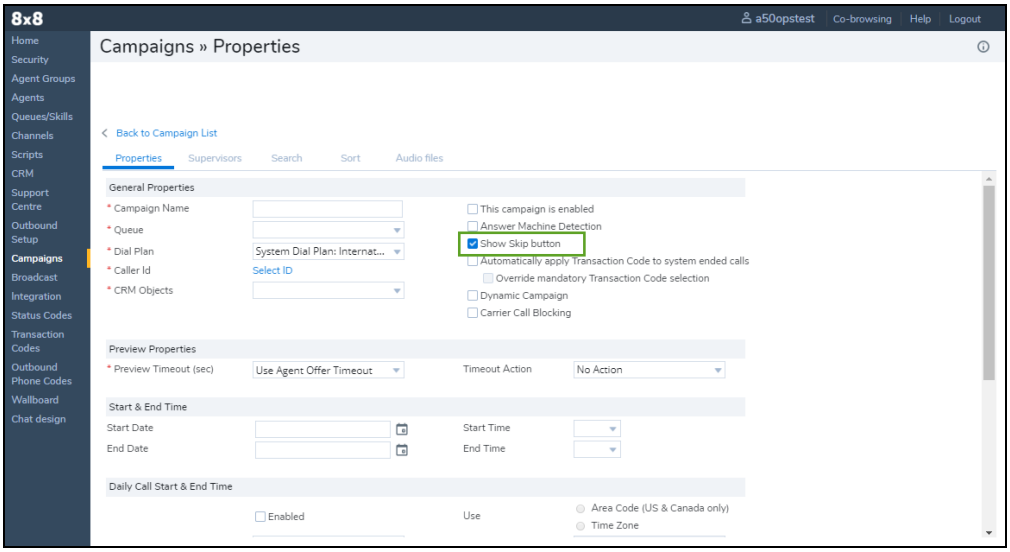
Check out how you can Skip Campaign calls during a campaign.

Skip Campaign Calls While on Auto Answer

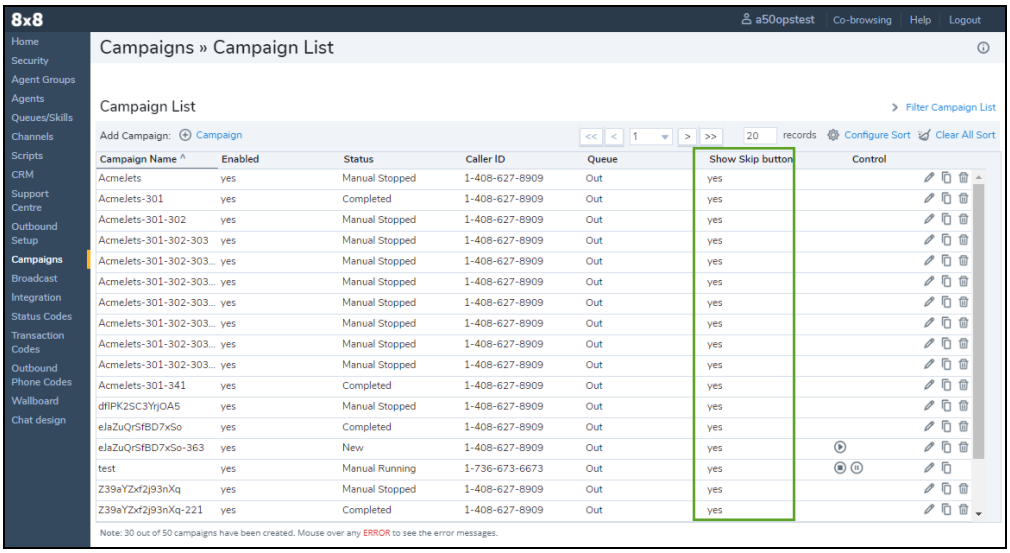
8x8 Virtual Contact Center is now offering agents the option to skip the campaign calls during a campaign. To give the agents this capability, you must enable this option under **Campaign > Properties** .

To set up the Skip Campaign option:

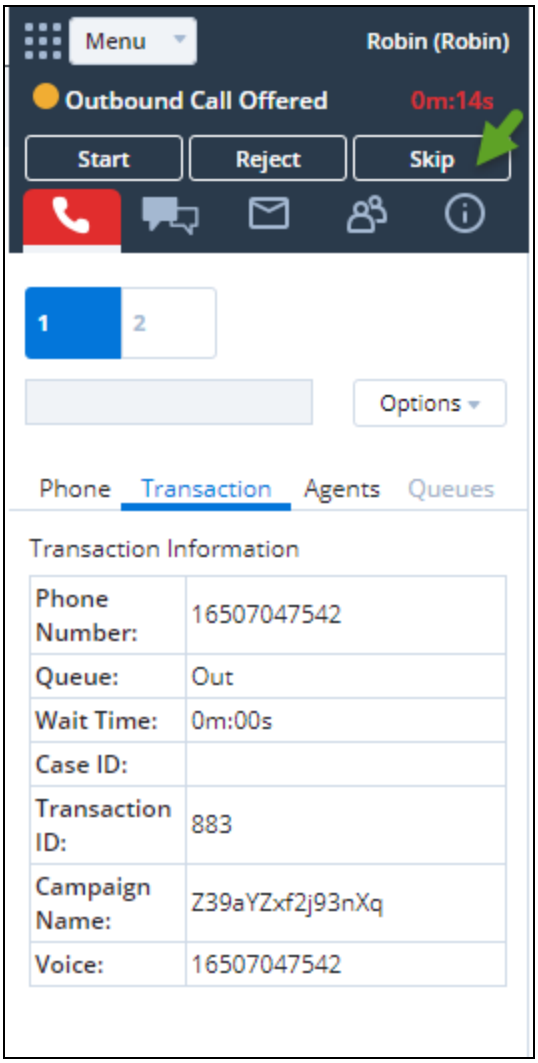
1. Log in to Configuration Manager.
2. Go to **Campaigns > Properties** and click to create or edit an existing campaign.
3. Select **Show Skip button**.



The campaign list also indicates if displaying skip button for agents is enabled or disabled for each campaign. Make sure the **Show Skip** button is selected in the column settings.



In Agent Console and during a campaign call, if the Skip button is enabled, it offers agents the choice to skip a call by clicking the **Skip** button on their Control Panel.



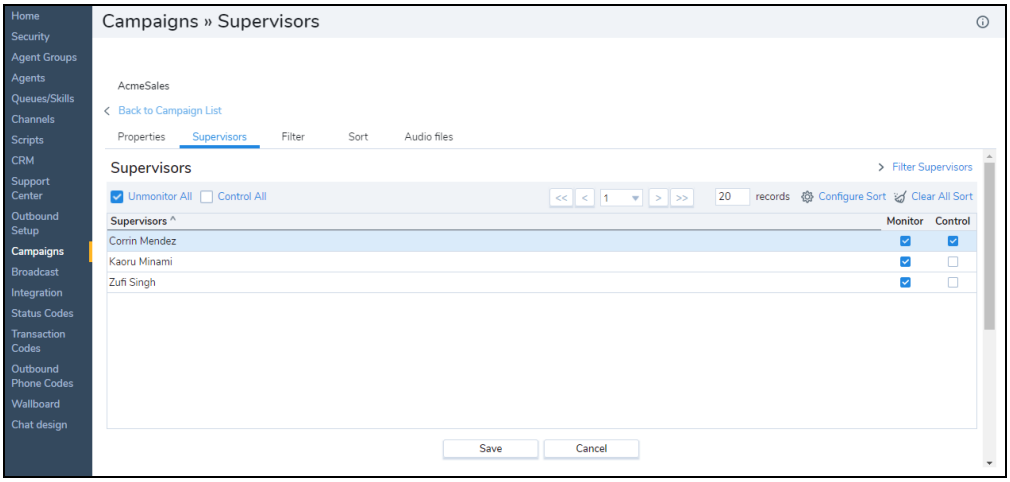
Assign Supervisors to a Campaign

A Campaign Supervisor controls and/or monitors real time campaign status. A supervisor can run campaign reports to get statistical information on the campaign calls processed. You can assign the following campaign supervising privileges to supervisors at any time during the campaign's life cycle.

- **Monitor**: Allows a supervisor to monitor real-time statistics of the campaigns they monitor.
- **Control**: Allows a supervisor to start, schedule, pause, purge, resume, and purge campaigns they control.

To assign Supervisors to a campaign:

1. Click the **Supervisors** tab for a campaign.
   A list of supervisors appears.



2. Select the **Monitor** check box to allow supervisors to access real-time statistics about the campaigns.
3. Select the **Control** check box to allow supervisors to start, pause, purge, and stop a campaign through the Campaign Management tab in their Supervisor Console.

> **Note:** You can alter supervisor assignments even after initiating a campaign.

4. Click **Save**.

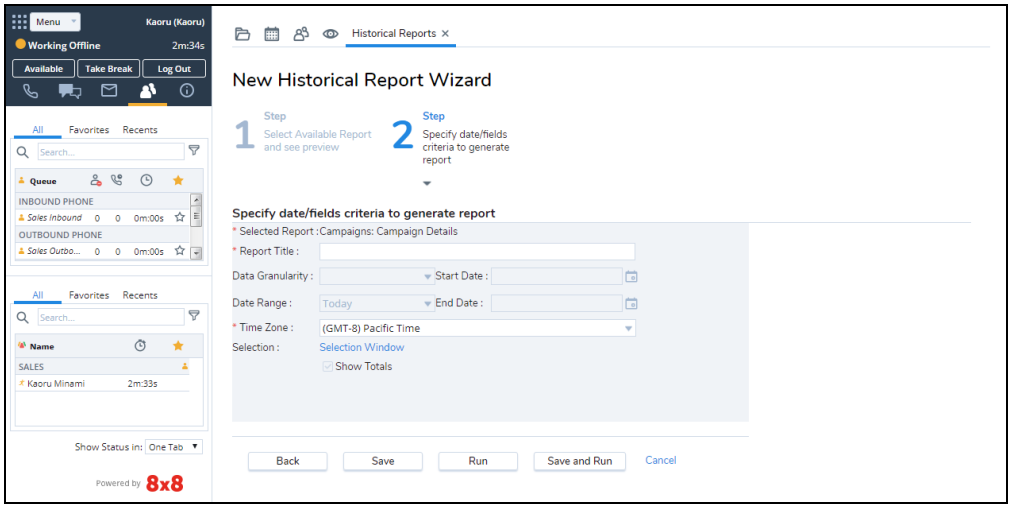
Monitor a Campaign

After creating and executing campaigns, supervisors assigned to campaigns can monitor live campaign status, access real-time campaign statistics, and track responses to campaigns through reports.

Supervisors monitor campaigns on the Supervisor Console in the Campaign Management tab.

Supervisors generate historical reports of the campaigns they supervise. If you are generating a campaign report, it is

not possible to specify a limited date range.



Define Campaign Search Criteria

A campaign call list can be filtered based on a custom search query. You can define a custom query, and generate a custom call list based on specific CRM fields and values under the CRM object.

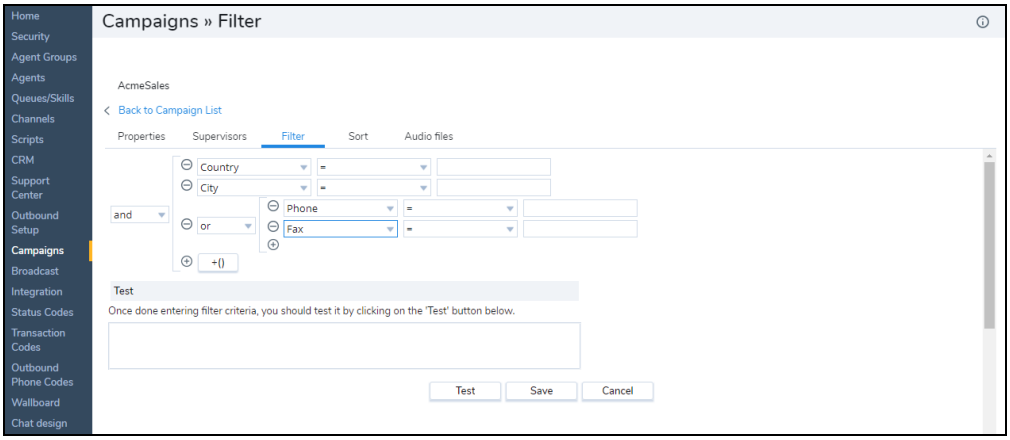
Campaign > Filter allows you to define a custom search query. You can validate a query by test running the query.

Note: You cannot alter a campaign filter after initiating the campaign.

To define search criteria for a campaign:

1. Click the **Search** tab for a campaign.
2. Select a field name from the drop-down list and enter a value. You can nest multiple search criteria to create a complex query.
3. Click ⊕ to nest search criteria. Let's say a complex query retrieves customer records with <Credit Rating greater than 700>, <Expense in the last 6 months greater than 30000>, <Expense in the last year greater than 100000>,

and <Income Range between 3 and 4>.

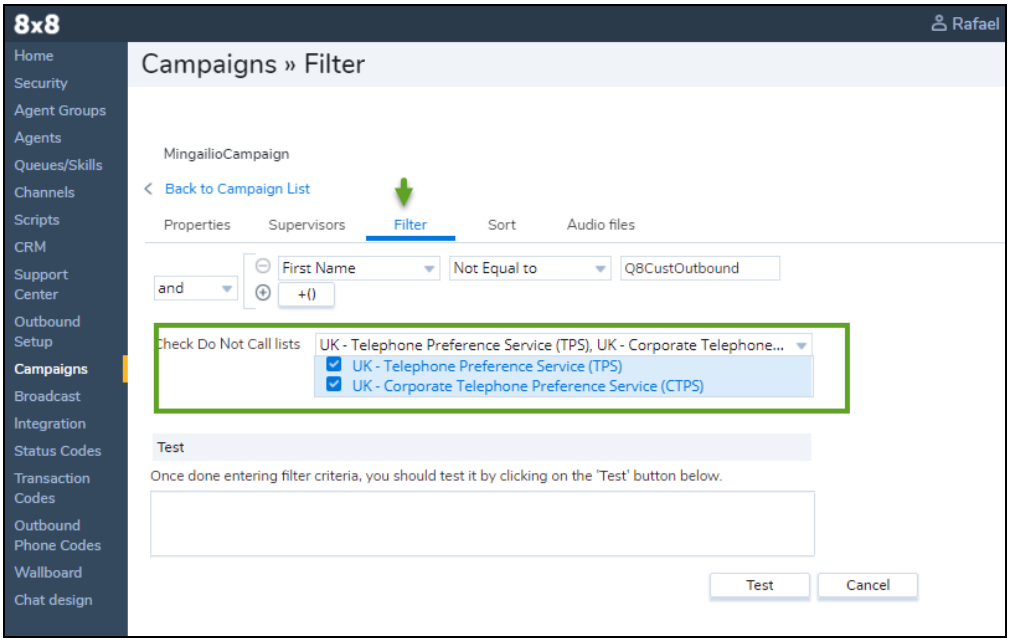


4. Click **Test** to validate the search criteria. If the test passes, you have defined a valid filter. If the test fails, check for any errors and redefine the filter.
5. Click **Save**.

Filter Campaign Lists Based on Do Not Call Preferences

While creating a campaign filter, you can filter those numbers from Local CRM records that are registered with the Telephone Preference Service (TPS) and Corporate Telephone Preference Service (CTPS), to be compliant with TPS and CTPS. This feature is currently supported for UK phone numbers, but will be extended to other countries in future

releases.



This feature helps customers to be TPS/CTPS compliant, but does not guarantee it. Customers are responsible for their own compliance. It is recommended not to run campaigns longer than 28 days.

Note: The Telephone Preference Service (TPS) is a UK register of domestic telephone numbers whose users have indicated that they do not wish to receive sales and marketing telephone calls.

Note: The Corporate Telephone Preference Service (CTPS) is a list of organizations (limited companies, public limited companies and Scottish partnerships) who have registered their wish not to receive unsolicited direct marketing calls.

To filter campaign list based on Do Not Call lists:

1. Log in to Configuration Manager.
2. Open **Campaigns** and select a campaign from the list, or click **Edit**.
3. Go to the **Filter** tab.

4. Make sure **check Do Not Call lists** is selected.
5. Click **Test** to check your filter criteria.
   For details, see our content on how to define campaign search criteria.

Specify Sort Order

You can sort a campaign call list based on applicable CRM fields. The call list takes priority based on the sort order you specified. When a campaign runs, calls are placed based on the sorted order. For example, you can sort a call list by Expense Last 6 Months in descending order to place calls to the customers bearing highest expenses first.

Note: You cannot modify the sort order after initiating a campaign.

To specify sort order for a campaign call list:

1. Click the **Sort** tab for a campaign.
2. Select a field from the drop down list, and select the sort order.

   Note: You can sort any text field in the ascending or descending order.

3. Click ⊕ to nest more sort criteria.
4. Click **Save**.

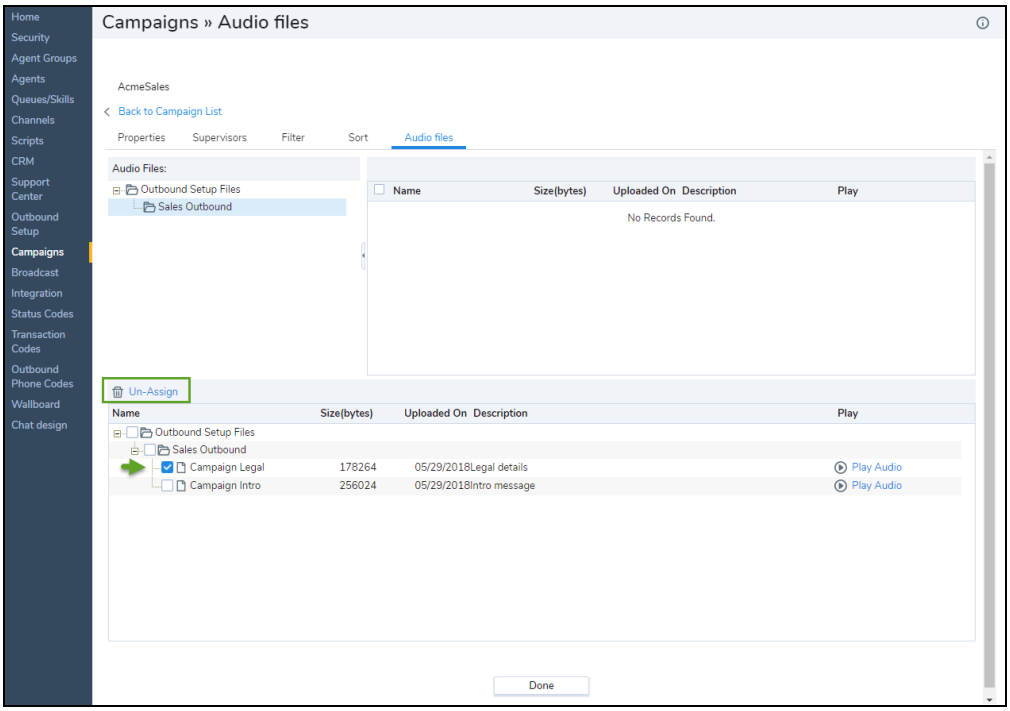
Assign Audio Files to a Campaign

During a campaign, an agent can play pre-recorded audio messages defined for the campaign to ensure a uniform delivery of the campaign message across all campaign calls. If you uploaded audio files of pre-recorded messages during Outbound Setup, you can assign those messages to the campaign now. An agent accepting campaign calls can access and play pre-recorded messages at any point during the call. On reaching a voicemail, an agent can play a pre-recorded message, then immediately switch back to available status, and attend the next interaction.

To assign a pre-recorded message to a campaign:

1. Go to **Campaign > Audio Files**.
2. In the Audio Files pane, select a folder. The voice messages in this folder appear in the list.
3. Select the voice message you would like to assign to the campaign.
4. Click **Assign** above the check boxes.

   A dialog box appears with a message confirming the assignment.



5. To un-assign an audio file, select the file from the Assigned Audio Files window, and select Un-assign from the menu.
6. Click **Done**.

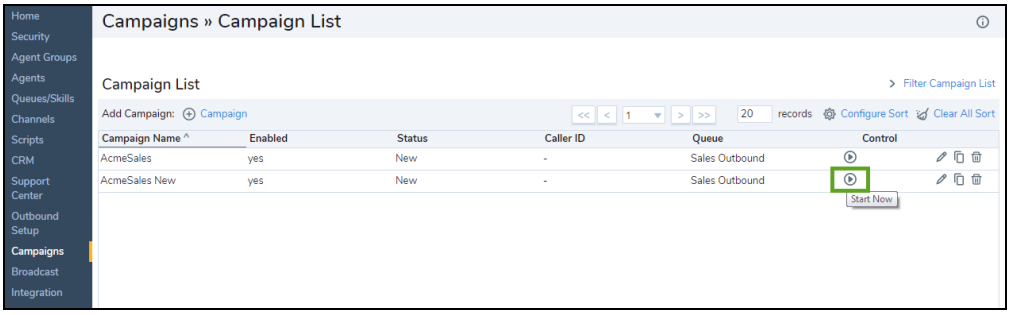
Control a Campaign

After creating a campaign, you can manually start or schedule the campaign. If you defined scheduling attributes in the campaign properties, the campaign executes as scheduled. If not, you should start the campaign manually. As an administrator or a privileged supervisor, you can start, pause, purge, or stop a running campaign at any time. You can execute a new campaign either by manually starting it or scheduling it.

Note: Campaigns are controlled by administrators and privileged supervisors only. An administrator controls the campaigns from Configuration Manager, while a supervisor controls campaigns from the Campaign Management tab of Agent Console.

To initiate a campaign manually:

1. Click **Campaigns** in the Configuration Menu.
2. Select the desired campaign, and click to manually start the campaign.



Note: The status changes from New to Manually Started. For details on campaign status, refer to Understand Campaign Status.

To run a scheduled campaign:

1. Click **Campaigns**.
2. Select a campaign and click **Control > Schedule** to initiate a campaign on schedule.

Note: For a campaign to run on schedule, you must have specified a schedule in the Campaign Properties tab. For details on scheduling a campaign, refer to Define Properties.

Pausing a Campaign

Pausing a campaign stops the campaign temporarily retaining calls in the queue. Calls in the queue continue to be offered to agents until completed. You can resume or abort a paused campaign.

To pause a campaign:

1. Select a campaign, and click **Control > Pause** to pause the campaign.
2. Click **Control > Resume** to resume the paused campaign.

Purging a Campaign

Purging a paused campaign aborts the campaign by flushing all calls in the queue. You can resume a purged campaign. Resuming feeds calls back to the queue.

To purge a campaign:

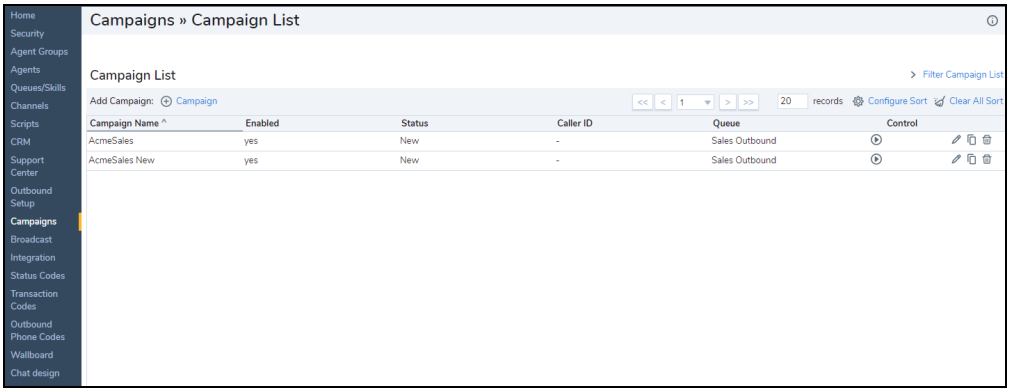
1. Select a campaign, and click **Control > Purge** to pause the campaign.
2. Click **Control > Resume** to resume the paused campaign.

Based on how a campaign is controlled, the campaign status changes accordingly. For details, refer to Understand Campaign Status.

Understand Campaign Status

A campaign can assume varying statuses based on how it is managed. The campaign status informs you if the campaign is ready to run, scheduled to run, running, stopped, or completed running.

To view a campaign status, go to **Campaigns** in the Configuration Menu. You can see a list of all your campaigns with their corresponding status.



The following table summarizes the various campaign statuses:

Campaign Status	Description
New	A newly-created campaign that has not been scheduled to start. You should manually start this campaign.
Manual Running	A campaign that is manually started and is currently running.
Manual Stopped	A campaign that is manually stopped by clicking **Stop**.
Scheduled	A campaign with a scheduled start time that has not been reached.
Scheduled Running	A campaign that has reached scheduled start time and is currently running.
Paused	A campaign that, when paused, stops feeding calls to the outbound queue until resumed. The campaign retains calls already in the queue and offers them to the agents.
Purged	A paused campaign that, when purged, removes all calls from the queue. You can resume purged campaigns.
Schedule Stopped	A campaign that has reached the scheduled stop time and is currently stopped.
Completed	A campaign whose records have been successfully processed.

Manage a Campaign

Once you create a campaign, you can perform the following functions:

- Edit a campaign
- Control a campaign
- Copy a campaign
- Delete a campaign

Edit a Campaign

You can edit a campaign's settings before running it. Once a campaign runs, you cannot edit any of its properties except changing the supervisor assignments.

To edit a campaign:

1. Click **Campaigns** in the Configuration Menu.
2. Choose the campaign you wish to edit, and click **Edit**.
3. Make the necessary edits, and click **Save**.

Control a campaign

After creating a campaign, you can manually start or schedule the campaign. See Control a Campaign for details.

Copy a Campaign

You might want to copy a campaign and run it again, in cases such as:

- The campaign call list was not processed as expected.
- There were too many dropped calls or skipped calls.

To copy a campaign:

1. Click **Campaigns** in the Configuration Menu.
2. Select a campaign you wish to copy, and click **Copy**. A new copy of the campaign is created, and shows in the updated list of campaigns.

Delete a Campaign

After completing campaigns, you may want to remove them if you no longer need them. Deleting a campaign removes all historical information related to the campaign.

To remove a campaign:

1. Click **Campaigns** in the Configuration Menu.
2. Select a campaign from the list, and click **Delete**. The campaign is removed from the list.

Broadcast Messages

Use the Broadcast page to send messages to one or more agent functional groups. This feature allows the administrator to mass-communicate a message to the agents.

To broadcast a message:

1. From the Configuration Menu, click **Broadcast**.
2. For **Group**, select a group or All Groups from the list.
3. For **Alert Level**, select low, medium, high, or pop-up.
4. For **Only send to logged-in agents**, choose whether you want to send the message to the agents who are logged in or to all agents.
5. For **Message**, type what you like to broadcast to agents.
6. Click **Broadcast** to send the message.
   The following table describes the options under **Broadcast**:

Broadcast Option	Description
Group	Select agent functional groups you are sending the broadcast to. It can be a specific group or all groups. For details on creating Virtual Contact Center Groups, refer to Create Agent Functional Groups.
Alert Level	Sets the importance or type of alert sent to agents: Low, Medium, or High alert, or Pop-up.
Only send to logged-in agents	If you select Yes, it only sends the broadcast to the agents who are logged in. If you select No, it sends the broadcast to all agents. The agents who are not logged in at the time of broadcast will see the message the next time they log in to Agent Console.

Broadcast Option	Description
Message	The broadcast message that is sent to all or all logged-in agents.

Note: You cannot undo or delete a message once it is broadcast.

Integrate with External CRM

Virtual Contact Center offers integration capabilities with Local CRM and external Customer Resource Management (CRM) systems. Integrating with an External CRM enables you to expand the capabilities of Virtual Contact Center CRM, and to incorporate your existing CRM system data into your tenant's interaction processing workflow. The integration supports phone, voicemail, chat, and email channels, allowing you to access data from External CRM through an integrated Agent Console.

Virtual Contact Center provides out-of-the-box integration with:

- NetSuite
- Salesforce
- Zendesk
- Microsoft Dynamics
- Local CRM

Additionally, Virtual Contact Center supports custom integration with your CRM.

Virtual Contact Center’s ability to integrate with External CRM offers the following benefits:

- Provides out-of-the-box integration with minimal configuration.
- Increases agent productivity with integrated one-click dialing out of the CRM application.
- Informs an agent about the caller by popping the caller's account information to the agent as soon as a call is offered to an agent.

Features

The CRM integration allows you to perform your CRM account activities using the integrated Agent Console with the following features:

- Multimedia interaction support
- Fully integrated Agent Console
- Complete Telephony Integration
- Single Sign-On functionality
- Visibility to queue status and agent presence
- Availability of custom landing pages
- Customer CRM records appear via screen pop during inbound interactions
- Integrated Chat Management
- Ability to save chat transcripts
- Ability to use click-to-dial directly from native Salesforce account
- Ability for agents to toggle between Agent Console and CRM accounts
- Support for screen pop for outbound campaign calls
- Support for screen pop for web callback transactions
- Creates Auto Logs for all transactions automatically

The core feature set is common to all CRMs supported by integration, but varies slightly.

Overview of Integration Functionality

Use the **Integration** tab in Configuration Manager to find and configure the following options:

- **CRM API**: Specify the access credentials and rights an External CRM uses to access the Local CRM database. The external system can access data from the Local CRM for purposes of producing customized reports or synchronizing database data between the two systems.
- **CRM Triggers**: Configure Virtual Contact Center to transmit URLs that include activity parameters to an external HTTP server whenever an agent creates, edits, or deletes a customer, case, follow-up, or task record in the Local CRM.
  The HTTP server uses the URL received from Virtual Contact Center to run an interaction-specific synchronization, such as a database synchronization.
- **Screen pop**: Configure Virtual Contact Center to transmit a URL to an External CRM product when an agent is offered, accepts, or completes an interaction. The External CRM responds by sending an HTML document containing supplementary information about the interaction to the agent's browser as a pop-up.
- **API Token**: Create and copy the secure access tokens required to enable an external system to access the following Local CRM data:

- Statistical reporting data
- Recording API
- External IVR API
- Real-time statistics reporting data

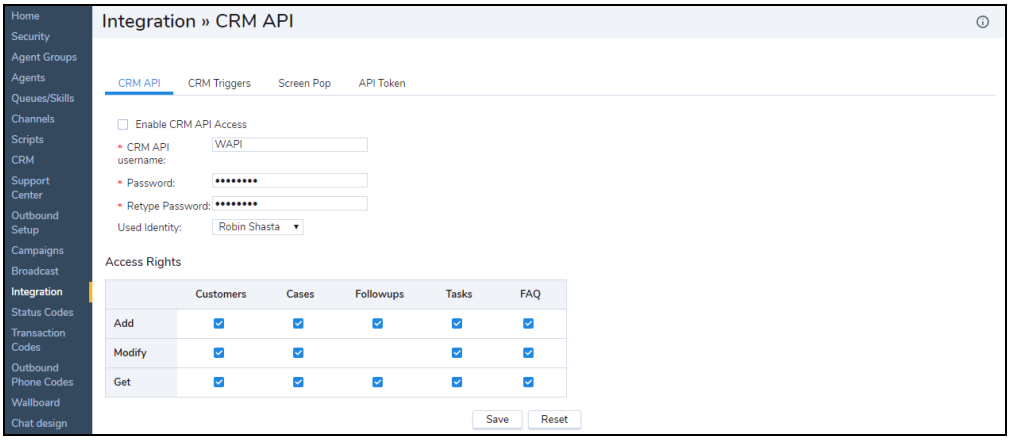
Configure External CRM API Access

To access Virtual Contact Center CRM data, you can use CRM API. The CRM API component of the integration suite enables you to develop external programs to access data for customers, cases, tasks, follow-up records, as well as FAQs.

The CRM API uses HTTP or HTTPS to transmit requests and receives responses formatted as Extensible Mark-up Language (XML). All these API queries are authenticated by account access credentials.

To configure CRM API:

1. From the Configuration Menu, open **Integration**.
2. Go to the **CRM API** tab.
3. Specify the account credentials and access rights used by an external process to access the Local CRM database.



The following table summarizes the options under **Integration > CRM API**:

CRM API Option	Description
Enable CRM	Select to enable a third-party process to access the Local CRM database.

CRM API Option	Description
API Access	The third-party process uses the credentials entered for CRM API username and password.
CRM API username	Do not reuse a user account name. Type a username created exclusively to service CRM API XML access to the Local CRM database.
Password, Retype Password	Type the password required to access the Local CRM database.
Used Identify	Select the user account name associated with activities performed by the CRM API. In reports, interaction activity performed by the CRM API matches the value of Used Identify.
Access Rights	Choose the operations the third-party process allows to perform on the Local CRM. ■ Select **Add** to enable the third-party process to create a new CRM database record. ■ Select **Modify** to enable the third-party process to change an existing Local CRM database record. ■ Select **Get** to enable the third-party process to read the Local CRM database record. The Add, Modify, and Get permissions can be selected for each the following categories of Local CRM database records, including: ■ Customers ■ Cases ■ Followups (No Modify option) ■ Tasks ■ FAQ Access Rights specify the operations CRM API is allowed to perform: The CRM API does not inherit the access rights of the user specified in the Used Identify list. **Note:** The CRM API cannot delete data from the Local CRM.

To completely configure bi-directional exchange of information to and from an external process and the Local CRM database, use the CRM Triggers page to transmit URLs to a third-party process when the Local CRM database records are modified. For details on CRM Triggers, refer to Configure External CRM Triggers.

Configure External CRM Triggers

If you maintain an External CRM database not integrated with Virtual Contact Center, you may access the CRM data querying the CRM API and synchronize the database. The CRM triggers notify you of changes to the Virtual Contact Center CRM, and invoke a script for further action. The CRM triggers also pass parameters which can be used for further data mining.

Our CRM API allows tenants to interact with Virtual Contact Center application on events from their own applications. The CRM triggers allow them to make Virtual Contact Center interact with their applications.

CRM API can be designed to synchronize a CRM database with the tenant's database using CRM triggers. A CRM trigger is actually a URL that targets a script on an external HTTP server. When an event such as customer creation occurs in the CRM application, this script is executed with the appropriate parameter value (such as the customer account ID) sent using an HTTP method. It is then up to the script the administrator has configured to use that parameter to access the object data using CRM API, and populate the tenant's database with it. The script uses the parameter value to access the object data using CRM API, and populates the tenant's database. The script may use the data for synchronization, auditing purposes, and creating simple dashboards.

For example, on creating a new customer, the CRM triggers the script by passing the Account ID. The script in turn uses the Account ID, and makes an instant call using CRM API to gather the record details and updates its in-house database for data synchronization.

Configure the CRM Triggers

You can configure CRM triggers for changes to CRM objects under specified events. The URL executes when those events occur, and those parameters are passed to the script targeted by the URL.
The following table summarizes the CRM objects, corresponding events that invoke CRM triggers, and parameters passed to the script:

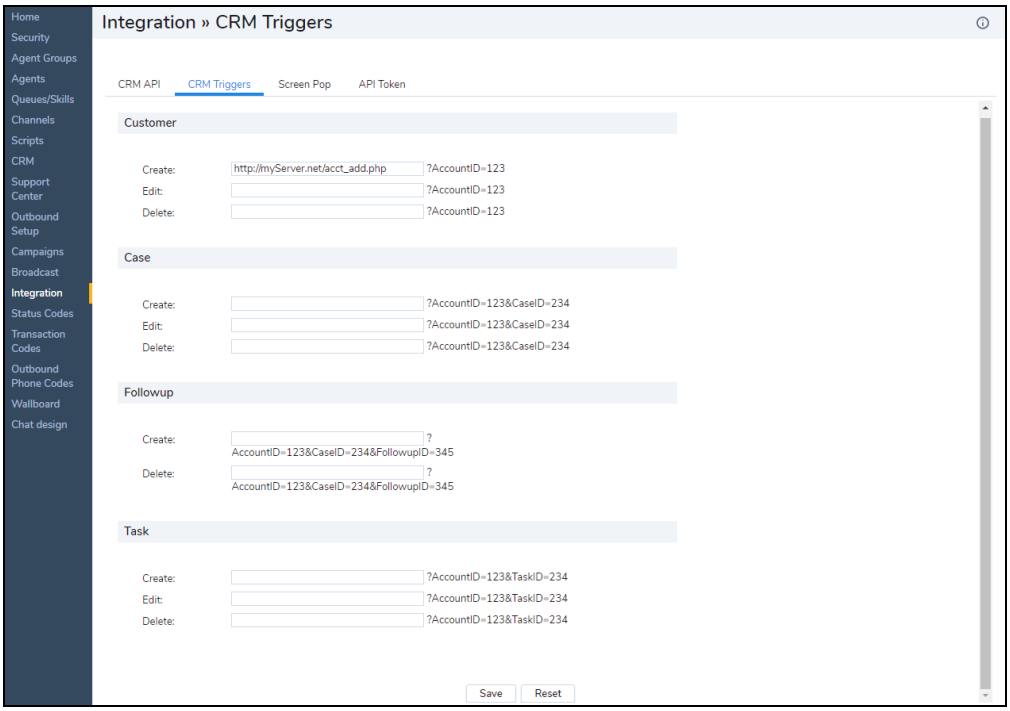
CRM Object	Events	Parameters
Customer	■ Create ■ Edit ■ Delete	■ Account ID
Case	■ Create ■ Edit ■ Delete	■ Account ID ■ Case ID

CRM Object	Events	Parameters
Followup	■ Create ■ Delete	■ Account ID ■ Case ID ■ Followup ID
Task	■ Create ■ Edit ■ Delete	■ Account ID ■ Task ID

Use the CRM Triggers tab to transmit URLs pointing to scripts from Virtual Contact Center to an external process when the Virtual Contact Center CRM database records are modified. The external process uses the URL to synchronize its database records with the Virtual Contact Center CRM database.

To configure CRM Triggers:

1. From the Configuration Menu, open **Integration**.
2. Go to the **CRM Triggers** tab and enter values.



The following table summarizes the options under **Integration > CRM Triggers**:

CRM Triggers Option	Description
Customer	To enable Virtual Contact Center to notify a third-party process of changes to customer account data, type a URL for the Create, Edit, and Delete areas under **Customer**. When an agent creates, edits, or deletes customer data in the Local CRM database, Virtual Contact Center transmits a formatted string to the URL specified for the customer. For customer data, the formatted string has the following format: ?AccountID=aaa, where aaa specifies the customer account identifier.
Case	To enable Virtual Contact Center to notify a third-party process about changes to case data, type a URL for the Create, Edit, and Delete areas under **Case**. When an agent creates, edits, or deletes case data in the Local CRM database, Virtual Contact Center transmits a formatted string to the URL specified for the case. For case data, the formatted string has the following format: ?AccountID=aaa&CaseID=ccc, where: ■ aaa specifies the customer account identifier. ■ ccc specifies the case identifier.
Followup	To enable Virtual Contact Center to notify a third-party process about changes to case follow-up data, type a URL for the Create, Edit, and Delete areas under **Followup**. When an agent creates or deletes follow-up data in the Local CRM database, Virtual Contact Center transmits a formatted string to the URL specified for the follow-up. For follow-up data, the formatted string has the following format: ?AccountID=aaa&CaseID=ccc&FollowupID=fff, where: ■ aaa specifies the customer account identifier. ■ ccc specifies the case identifier. ■ fff specifies the follow-up interaction identifier.
Task	To enable the Virtual Contact Center to notify a third-party process about changes to Task data, type a URL for the Create, Edit, and Delete areas under **Task**. When an agent creates, edits, or deletes task data in the Local CRM database, Virtual Contact Center transmits a formatted string to the URL specified for the task. For task data, the formatted string is of the format: ?AccountID=aaa&TaskID=ttt, where: ■ aaa specifies the customer account identifier.

CRM Triggers Option	Description
	■ ttt specifies the case identifier.

3. Click **Save**.
   CRM API configuration allows an external process to access the Local CRM database and exchange information to and from an external process and the Local CRM database. For details on CRM API, refer to Configure External CRM API Access.

Overview of Exchanging Data

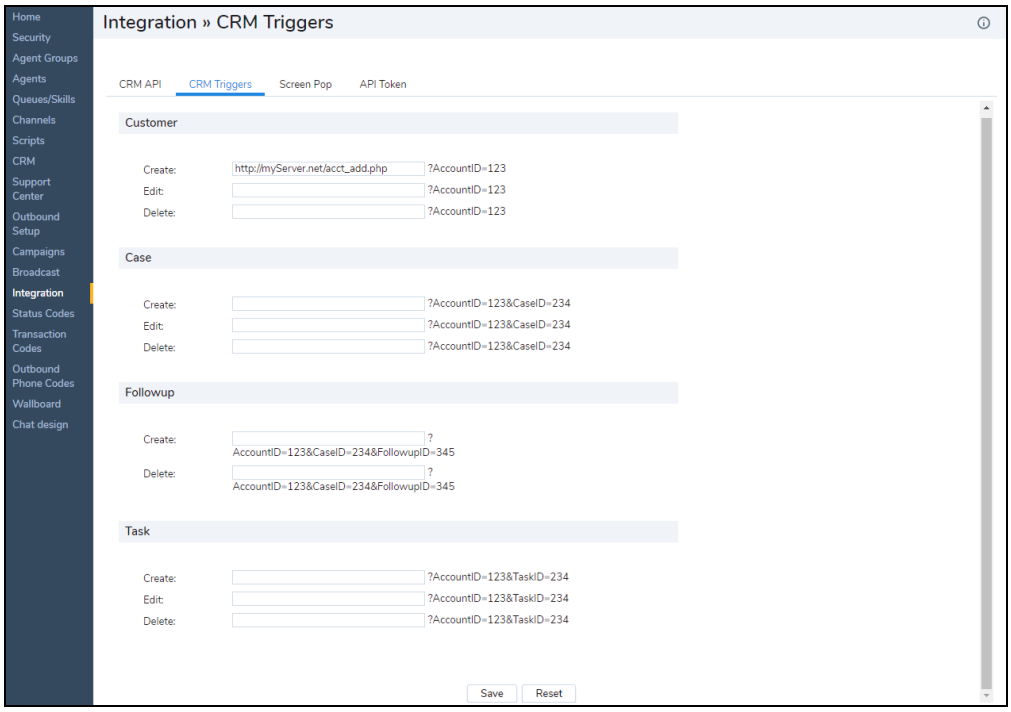
Use **Integration > CRM API** and **Integration > CRM Triggers** to configure data, such as customer, case, follow-up, or task data.

The following sequence describes the two-way exchange of data between Virtual Contact Center and an external process:

1. An agent uses Agent Console to update customer, case, follow-up, or task information contained in the Local CRM database.
   If a URL has been specified for the interaction under CRM Triggers, then Virtual Contact Center transmits a formatted URL that includes the customer, case, or follow-up information.
   For details on formatted strings transmitted by Virtual Contact Center to an external process, refer to Configure External CRM Triggers.
2. The external process receives the formatted string, then uses the CRM API to read additional information about the interaction from the Local CRM database.
   For details on configuring the CRM API to enable an external process to access the Local CRM database, refer to Configure External CRM API Access.
3. The external process updates its database with the information read from the Local CRM.
4. The external process sends the Local CRM database any information required to synchronize the two databases. For example, the external process may use internal logic to revise the priority of the case.

Example of a CRM Trigger

The following example illustrates a trigger specification via **Integration > CRM Trigger**.



In the above image:

- <myServer.net> specifies a valid HTTP server
- <acct_add.php> specifies a PHP script that creates a log file of the account ID written to myfile.txt

The following example shows a PHP script invoked by the Virtual Contact Center CRM trigger illustrated in the above image.

```
/* acct_add.php - log creation of new accounts*/
<?
if(is_file('myfile.txt')) {
  $fp = fopen('myfile.txt','a+');
}
else {
  $fp = fopen('myfile.txt','w');
}
if($fp) {
  $now = date( "[m/d/Y H:i:s] - ", time());
```

```
  fwrite($fp, $now.'AccountID: '.$AccountID." - action: CREATE CUSTOMER\n");
  fclose($fp);
}
```

The script reads the account ID referenced by an agent interaction, and writes the account ID to a file called myfile.txt.

Define Screen Pop Settings for External CRM

A screen pop presents customer data to an agent automatically during an interaction, eliminating the need to manually search for the customer data. During an inbound call, Virtual Contact Center looks up the caller ID in the existing customer data. On finding a record with matching number in the Phone field, Virtual Contact Center fetches and pops the record details to the agent presented with the interaction. If the search does not yield a matching record, it pops a new record entry screen.

A screen pop appears for:

- Inbound transactions, including phone, voicemail, chat, and email media
- Outbound campaign phone transactions
- Transactions involving web callback

To enable an External CRM integration for a tenant, you have to configure screen pop settings in Configuration Manager. You need to select a target CRM, specify events that trigger screen population of customer data, and specify screen pop window properties. An agent has to then save the login credentials of the External CRM account in the agent's profile. Integration enables searching for records containing phone data matching caller ID, and pops up the corresponding record(s) for specific events.

The events triggering a screen pop may be one or more of the following:

- An agent is offered an interaction.
- An agent has accepted an interaction.
- An agent has completed an interaction.

Use **Integration > screen pop** to configure the contents and appearance of the messages sent to the Web browser associated with a particular interaction.

To display the screen pop page

1. From the Configuration Menu, open **Integration**.
2. Go to the **screen pop** tab.
3. Select the CRM of your choice from the available options. For other details refer to the table below.
   The following table summarizes the options under **Integration > Screen Pop**:

Screen Pop Option	Description
Enable Screen Pop	If enabled, screen pop is offered during an interaction.
Target Type	Select a third-party CRM product. The selection of a product enables and disables other features on the screen pop page.
Integration Type	If you have selected NetSuite, then choose one of the following: ■ Legacy ○ Displays External CRM information in a separate browser window. ■ SSO ○ Allows the External CRM user to enter Virtual Contact Center via NetSuite's website. ○ Provides Single Sign-On; the user presents the authentication information only once per NetSuite session.
	If the Target type specifies Salesforce, then choose one of the following: ■ Legacy ○ Displays information from the Salesforce database in a separate browser window. ○ Provides less integration with Salesforce than Enhanced mode. ■ Enhanced If you choose Enhanced, Configuration Manager disables the Size and Position area described later in this table. ○ Displays information from the Salesforce database in a frame with Agent Console window. The agent can optionally move the Salesforce frame to a separate browser window. ○ Provides more complete integration with Salesforce than Legacy mode.
Account	If the Target type is NetSuite or custom, then type the account name required to access the data the third-party CRM incorporates into the screen pop message.
Service Name	Service name is the URL used to log in to your External CRM account.
Login URL	Enter the login URL starting with <https://>
Branding URL	The custom URL provided by your CRM if you have customized your help desk to match your brand’s look and feel.

Screen Pop Option	Description
URL	For the Custom target type only. Type the URL where Virtual Contact Center sends information about the interaction reported on by the screen pop.
Enable Customization	This option instructs the On Demand Contact Center to execute a custom XML Salesforce integration script using the specified Script URL.
Script URL	If Customization is enabled, the Script URL must contain a valid URL that points to the location of the custom script. Once the Script URL is specified and the screen pop page is saved, all features and functionality of the standard integration are replaced with the custom functionality. Agents see the changes with their next login.
Use Remote Login	This option enables Single Sign-On security settings in the Zendesk account.
API Token	Enter a valid API token to enable searching of the CRM.
Use Client Login Session to pop	Select the option to enable support for the Salesforce security setting: Lock sessions to the IP address from which they originated. Check the Launch native login window at agent login setting to have Agent Console automatically launch a Salesforce login window when the agent logs in to Agent Console. If the Launch native login window at agent login is not set, the agent must manually log in to Salesforce using the next tab of the same browser window used for the Agent Console session.
Launch native login window at agent login	This option enables the native login window to launch when the agent logs in.
Select and assign all agents	Enable this option to grant access to all agents for Salesforce integration, or click (choose agents) to grant the permission to a selected group of agents.
Landing Pages	Virtual Contact Center enables the custom landing page, and provides three built-in landing tabs from the Virtual Contact Center CRM: ■ Enable Custom: If enabled, enter a title for the landing page, and a URL to navigate to. ■ Enable 8x8 CRM

Screen Pop Option	Description
	Note: Availability of the tabs depends on the External CRM the tenant is integrated with.
Trigger an Auto Log Window after interactions	■ For these Media: Select media for auto log from Phone, Voice Mail, and Chat. Auto Log Window is offered after Interactions. You can disable auto log for certain media by clearing the check box of the option. ■ Select the type of log window for auto log from the following choices: ○ No screen pop: Prevents screen pop for auto log. ○ Pop the log for edit: Offers the ability to edit auto logs. ○ Pop the log for view: Limits auto log to view mode.
Trigger a Popup Window	■ For these events: ○ When agent is offered transaction: Virtual Contact Center displays a screen pop when an agent is presented with a new interaction. ○ When agent accepts transaction: Virtual Contact Center displays a screen pop when an agent accepts a new interaction. ○ When agent completes transaction: Virtual Contact Center displays a screen pop when an agent has completed an interaction. ■ For these media: Choose Virtual Contact Center channels that use screen pop. The choices are Phone, Voicemail, Chat, and Email.
Window Properties	If enabled by the administrator, the agents can see and configure the setup under **Agent's Profile > External Setup**. The following options are available in this section: ■ **Open new window for screen pop:** This option allows agents to see screen pop, and the new Salesforce URL launches in new windows instead of tabs within the Agent Console window. This option opens a new window for each transaction and each new URL. ■ **Use single window only:** This option allows only one single window to display screen pop notifications and URL launch. ■ **Hide result listing if one search result is found:** The application supports multiple search results displayed on screen pop. With the option enabled, the tab with one result

Screen Pop Option	Description
	listed will not be open. The screen pop window still will pop with the search result record. Note that with this option enabled, if multiple results are found, tab is open with all the result records listed. If the Salesforce window is collapsed, it will be automatically expanded. ■ **Show toolbar:** ○ If the Target type is Salesforce, and the Integration Type is Legacy, then click **yes** to display the Internet Explorer toolbar at the top of the stand-alone pop-up window. ○ If the Integration Type is Enhanced, Virtual Contact Center ignores the value of Show toolbar. ■ **Size and position:** ■ In the width and height text entry areas, type the size as an integer number pixels of the screen pop window. ■ In the top and left text entry areas, type the screen position as an integer number of pixels of the screen pop window's upper-left corner.

4. **Save** your settings.
   For detailed instructions on setting up an external integration such as NetSuite or Salesforce, refer to the respective CRM integration guides on our documentation page.

Overview of Screen Pop

In Virtual Contact Center, screen pop describes the mechanism that enables a third-party CRM to display supplementary information in an HTML page that pops into the agent's browser.

Configuration Manager's screen pop feature directly supports the following CRM applications:

- **NetSuite**: Use Integration > Screen Pop to specify the NetSuite account ID used to access the NetSuite CRM. The agent email address and password (used to log in) are set in the agent's profile in Agent Console.
- **Salesforce**: Configure Integration > Screen Pop in Configuration Manager, and set up the external username and password in the agent's profile in Agent Console.
- **Zendesk**: Configure Integration > Screen Pop in Configuration Manager, and set up the external username and password in the agent's profile in Agent Console.
- **Microsoft Dynamics**: Configure Integration > Screen Pop in Configuration Manager, and set up the external username and password in the agent's profile in Agent Console.

- **Custom**: Virtual Contact Center allows custom CRM integration. For more information regarding custom CRMs, consult the 8x8 Support team.

Screen Pop Event Types

A screen pop is triggered by events or by steps in the process of handling an interaction. You can configure screen pop for one or more events. There are three events that can cause a screen pop:

- Agent is offered an interaction, but has not yet accepted.
- Agent accepts an interaction (for example, is connected to a caller).
- Agent completes an interaction (for example, hangs up after a call).

Screen Pop Data Exchange

The following sequence must be performed to enable Virtual Contact Center to transmit a screen pop request to a third-party CRM.

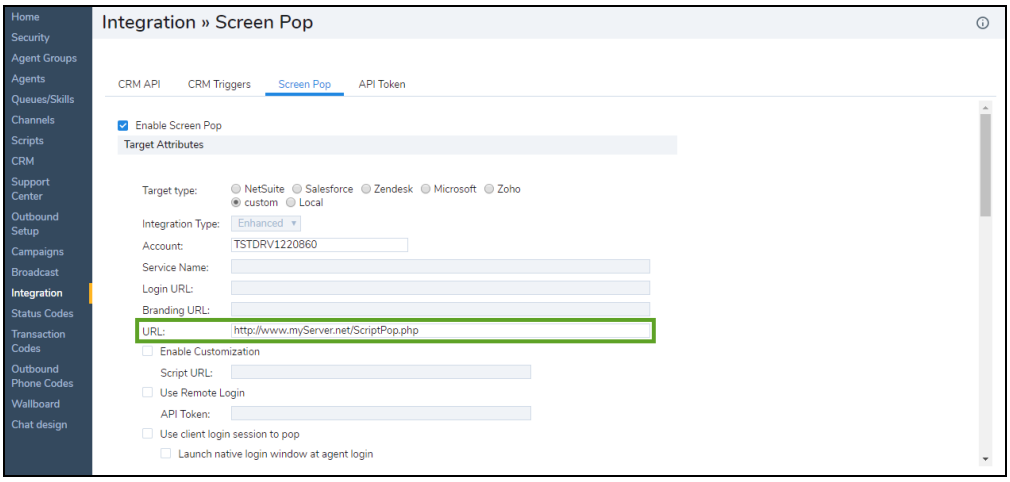
1. Virtual Contact Center uses the information you entered in the screen pop tab to transmit interaction parameters to the third-party CRM as an HTTP POST message.
   The following table summarizes screen pop parameters transmitted by Virtual Contact Center in HTTP Post message:

screen pop parameter	Description
Channel	Virtual Contact Center channel name that received the interaction
Queue	Virtual Contact Center queue name that received the interaction
ANI	For phone channels, the caller's ANI information
Wait Time	The length of time this interaction waited before being accepted by an agent
Event	Interaction statuses: offered, accepted, or completed
Media	Virtual Contact Center phone, voicemail, chat, and email channels
ExtVar1, ExtVar2	Optional CRM-specific variables

2. The third-party CRM uses the received information to access its database, construct a pop-up message about the interaction, then transmit the pop-up message to Agent Console, processing the interaction.

Example of a Screen Pop

The following example illustrates how to configure screen pop.



In the above image:

- <myServer.net> specifies a valid HTTP server.
- <ScriptPop.php> specifies a PHP script that displays either of two HTML pages.

The following example shows a PHP script invoked by the screen pop configuration illustrated in the above image.

```
<?php
/* scriptPop.php - This script should return a web page depending on the phone
number dialed */
$channel=$_POST['Channel'];
if (is_null($channel)) {
  printf("No channel data was given");
}
else {
  switch ($channel) {
  case '18005551212':
    header('Location: http://www.8x8.com');
    break;
```

```
  default:

    header('Location: http://www.example.com');

    break;

}

}
```

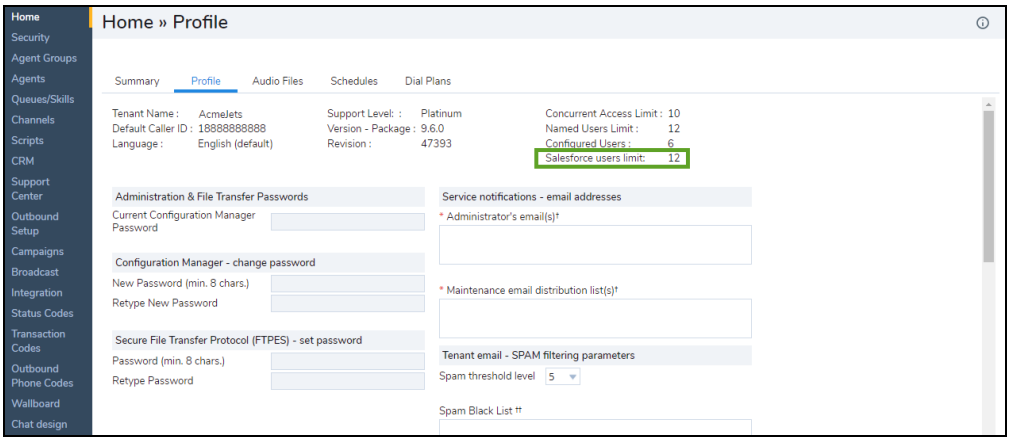
The script evaluates the Call ANI:

- If the interaction arrived on the 800-555-1212 phone channel, then the 8x8 homepage opens up in a new browser window.
- If the call arrived on a different channel, then the script opens http://www.example.com in a new browser window.

Access Control for Salesforce Integration

As a contact center administrator, you can now control agent access to Virtual Contact Center Integration with Salesforce. Access to the integration can now be controlled via Configuration Manager.

In Configuration Manager, you can grant access to Salesforce integration to a selective group of agents. While provisioning Virtual Contact Center, your sales agent assigns the desired number of users allowed to use Salesforce integration. To check the number of authorized Salesforce users, go to **Home > Profile**.

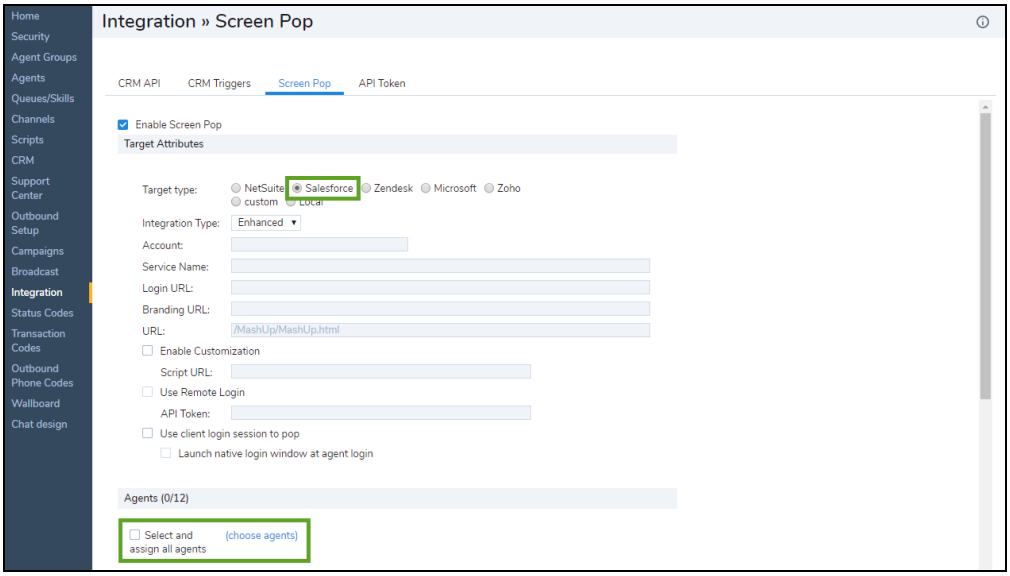


To grant access to Salesforce integration:

1. From the Configuration Menu, open **Integration**.
2. Go to the **Screen Pop** tab.

> **Note:** You must have enabled and configured Salesforce integration.

3. Under Agents, select the **Select and assign all agents** check box.



> **Note:** The check box is disabled if the number of named users assigned to the tenant exceeds the provisioned **Salesforce Users Limit**.

4. To select agents individually, click **choose agents**.
5. Select the desired agents from the list of agents configured in the tenant.
6. Click **Assign**.

> **Note:** If the number of selected agents exceeds the Salesforce user limit, you get an error message indicating the limit. You must readjust the selection accordingly.

7. **Save** your settings.

NetSuite Single Sign-On

NetSuite Single Sign-On (SSO) allows a user of NetSuite CRM to enter Virtual Contact Center via the NetSuite website, eliminating the need to remember or enter Virtual Contact Center user credentials. The user presents the authentication information only once per session. NetSuite's Single Sign-On eliminates the need for a separate login for Agent Console.

- There is no iframe for this release. Virtual Contact Center shows in a separate window.
- SSO is the only option for new customers. The existing customers cannot go back to non-SSO once it is selected.

Features

- Easy installation using SuiteBundler.
- SuiteSignOn for time saving convenience and secure Single Sign-On.
- Improved security; NetSuite user credentials and password are not stored in user interface.
- Enhanced user experience; users can seamlessly sign in to Virtual Contact Center from the NetSuite dashboard without the need to remember or enter Virtual Contact Center user credentials.
    - Full functionality of Virtual Contact Center and NetSuite.
    - No need to refresh Virtual Contact Center while using NetSuite.

Limitations

We can associate only one Virtual Contact Center tenant with each Virtual Contact Center Suitebundle. Contact 8x8 professional services for the available workaround.

Requirements

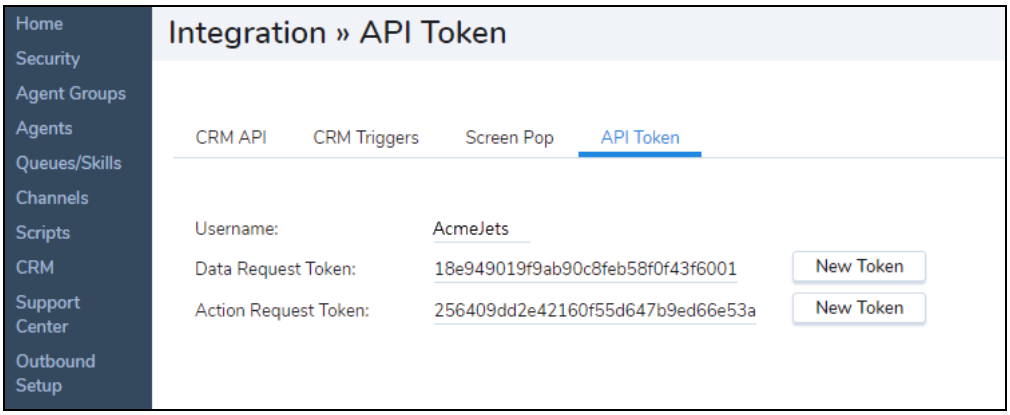
You must have NetSuite SSO enabled for your NetSuite account to proceed with the installation. In order to enable SSO, contact the NetSuite support team at www.netsuite.com.

To learn how to install and configure NetSuite SSO, refer to the NetSuite SSO Installation Guide.

Create Secure Access Token for External CRM

Go to Integration > API Token to create and copy a secure access token used by an external process to access the following Virtual Contact Center data:

- Statistical data for reporting
- Audio recordings data
- External IVR such as web callback
- Real-time statistical data



Both data- and action-request tokens are generated. Highlight and copy the tokens to paste into an email, file, or text entry area. To generate a new token for security reasons, click **New Token**.

Status Codes Overview

Status codes enable contact center supervisors to track how an agent functions through a workday. When an agent is logged in to Agent Console, the agent accepts or rejects interactions, takes breaks, works offline or logs out. Supervisors might want to know more details or reasons for an agent changing the status or rejecting an interaction. Agent statuses, such as On Break or Work Offline, do not point out the specific reasons for the status change by the agent. Status codes can be defined to bridge this information gap. The status codes associate an agent's status change with probable reasons for the change, and enable supervisors or managers to track the work pattern of agents.

For example, you can define status codes such as Attend Meeting or Complete Case Work as probable reasons for an agent to work offline.

Using the status codes functionality:

- An administrator predefines a list of status codes used to describe probable reasons for an agent's status change actions.
- An agent selects a reason for the status change from a predefined list of status codes when changing their status.
- A supervisor analyzes an agent's working pattern and contributes to improving call center's throughput.

When do you use status codes?

If your contact center's workflow requires a close supervision of agent's time, then you may define status codes to achieve that goal. The most common reasons to use status codes are:

- To know why an agent rejects an interaction.
- To know why an agent works offline.

The following table lists an agent's actions for which you can define status codes, as well as examples of corresponding status codes.

Agent Status action	Examples of Status Codes
Take Break	Lunch Short Break Restroom
Work Offline	Attend Meeting Project Work Training Outbound Call
Logout	End of shift PC Reboot
Reject Phone Reject Chat Reject Email	Working on a Case Technical Issue Not Ready for Interaction Nearing Break Time

How do you define status codes?

Before you define status codes, you need to understand your company's workflow. If your company has multiple workflows, you can create a separate status code list for each. For example, if your company has separate workflows for Support and Sales, you can define a separate code list for each department.

Each status code list contains a set of codes or reasons for a specific status change. A list of status codes can be assigned to a group of agents with the limitation that they only access one list of status codes. Within the agent group, specific agents can be enabled or disabled to have access to the status code list.

Defining status codes requires you to:

- Identify valid and acceptable reasons for status change.
- Identify groups or agents to apply status codes.
- Determine the need for multi-language translation of status codes.
- Create a status code list.

Creating a status code list involves the following tasks:

- Create status code lists by defining properties.
- Create individual status codes in the list to define possible reasons for actions.
- Translate status codes to a secondary language.
- Assign status codes to agent groups and specific agents.

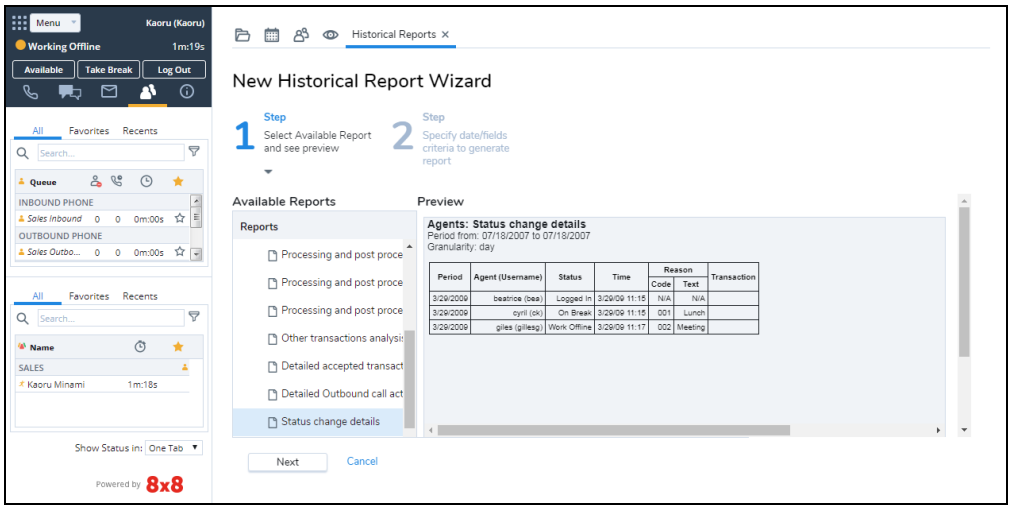
How do agents use status codes?

In Agent Console, agents assigned to a status code list are presented with individual status codes in the list. The agent must choose a code from the presented list that describes the reason for the status change, and only then are they allowed to proceed with the action. For example, when an agent who is active changes their status to Work Offline, a list of status codes associated with the action (such as Attend Meeting or Working on a Project) are presented to them in a drop-down list.

How do supervisors use Status Codes?

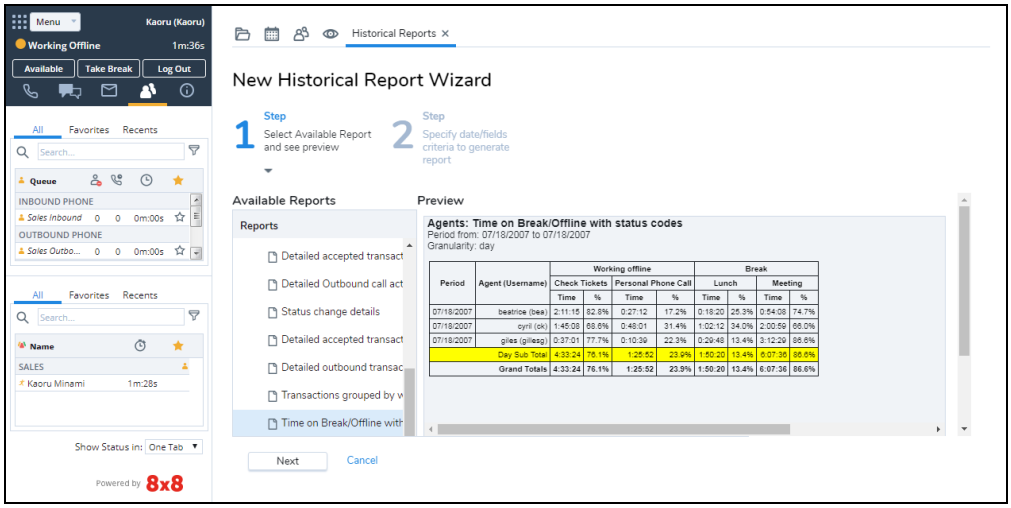
Supervisors can track how agents spend their time by generating the following historical reports:

- **Agent: Status change details**: The report gives detailed information on an agent's status changes, time at which an agent changed status, and an associated reason, if any. When the supervisor browses through the report, they get information about how often the agent changed their status, as well as the reason for the status change.



- **Agents: Time on Break/Offline with status codes**: The report indicates how an agent spends time on each task while working offline or on break. The report summarizes information on time spent by each status code, by

status, by agent, and by date. A sample report is shown below:



Create Status Codes

Virtual Contact Center allows you to define status codes for your company's agents. Status codes offer a mechanism to track agent activity during work hours. With codes, you can define reasons for changing status, such as Lunch, Attend Meeting, or Taking Break. These codes can be invoked for status change actions, such as Take Break, Work Offline, Logoff, and Reject Phone.

Creating a new status code list involves:

- Configuring properties of the codes list.
- Defining individual codes.
- Translating codes to secondary languages (optional).
- Assigning the codes to agent groups (required) and specific agents (optional).

Configure Properties of a Status Code

1. From the Configuration Menu, open **Status Codes**.
2. Click ⊕ or **Add**. The Properties tab opens.
3. Enter the required values in the **Properties** tab.
   The following table summarizes the options under **Status Codes > Properties**:

Properties Options	Description
Active	Select the check box to put this code list into service.
Name (Required)	Enter a name for the new code list.
Description	Enter a brief description of the purpose of the code list.
Category	A category distinguishes multiple code lists, and attributes a code list to a specific group. For example, you can create categories for Sales, Support, Services, and more. You can then assign each code list to a particular category. In the Category list, do one of the following: ■ Choose **Edit Categories** to create a new code category. ■ Choose an existing code category.
Sort Order	Select the order in which the codes should appear in Agent Console: ■ **Manual** allows organizing the order of the codes manually. ■ **Automatic** organizes the codes alphabetically.
Admin Notes	Type information that enables administrators to understand the purpose of the code list.
Primary Language (Required)	Select a primary language in which the codes are written. This information is required to create a list. **Note:** After saving the code list, you cannot change the Primary Language setting.
Secondary Language	Select the languages to translate the codes to. This option allows you to set up codes in languages other than English.

4. Click **Save**.

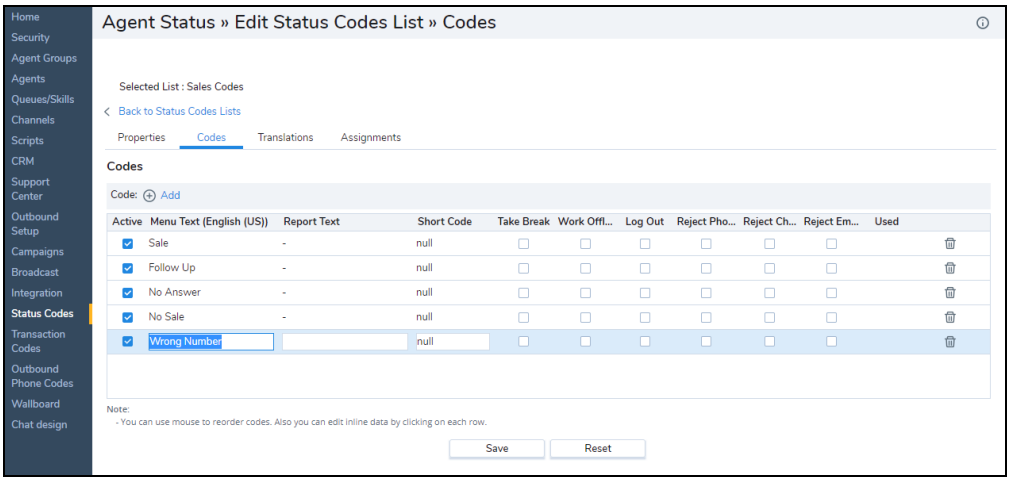
Define Status Codes

In the Codes tab, you can define individual status codes and assign them to an agent's action or status change. These codes are invoked when an agent performs one of the following actions:

- Take Break
- Work Offline
- Log Out
- Reject Phone
- Reject Chat
- Reject Email

To define status codes:

1. From the Configuration Menu, open **Status Codes**.
2. Click to **Edit** a status code.
3. Go to the **Codes** tab, and enter the required values.



The following table summarizes the options under **Status Codes > Codes**:

Status Codes Field Name	Description
Active	Select to activate the code.
Menu Text	Type the string that Agent Console displays when displaying the code, such as Attend Meeting.
Report Text	Type the string that Agent Console displays when listing the code in a report, such as Attend Meeting.
Short Code	Type the string that Agent Console uses when displaying the code's short identifier,

Status Codes Field Name	Description
	such as Mtg.
Status Action categories	Choose an optional primary category for the code: ■ Take Break ■ Work Offline ■ Log Out ■ Reject Phone ■ Reject Chat ■ Reject Email
Used	If an agent has applied a code in their Agent Console, then Configuration Manager adds a check mark to that code and its parent list. After a code has been used, the code and its code list cannot be deleted.

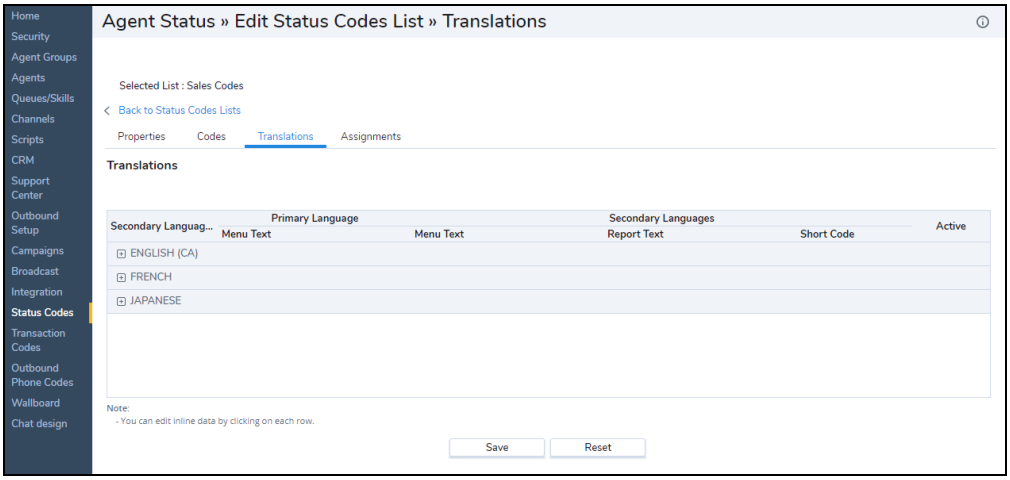
4. Select a status action check box to assign the code to an agent's action, such as Take Break, Work Offline, etc.
5. Repeat the above steps to create more codes.
6. Click **Save**.

Translate Status Codes (Optional)

The Translations tab allows you to translate codes from the primary language to the secondary languages supported by Virtual Contact Center. You must specify a secondary language in the Properties tab to enable translation. This procedure is optional based on your company's needs. Use the Translations tab to configure secondary language options for individual status codes.

1. From the Configuration Menu, open **Status Codes**.
2. Click to **Edit** a status code.

3. Go to the **Translations** tab.



4. Select a code from the read-only list of codes in the **Translations** tab.
5. Select a secondary language from the drop-down menu.
6. Enter the translated Menu Text[1], Report Text[2], and Short Code[3] in the secondary language of your choice.

The following table summarizes the options under **Status Codes > Translations**:

Translations Option	Description
Secondary Languages	Choose one of the secondary languages selected in the status codes Properties tab. When you select a secondary language, Configuration Manager changes the title of **Menu Text**.
Primary Language	Read-only list of status code descriptions in the code's primary language.
Menu Text (secondary language ID)	Choose a secondary language, and type the string in that language. Agent Console displays the menu code in the secondary language.
Report Text	Choose a secondary language, and type the string in that language. Agent Console displays the report text in the secondary language.
Short Code	Choose a secondary language, and type the string in that language. Agent

[1]Menu Text is the string Agent Console displays when displaying the code in the secondary language

[2]Report Text is the string Agent Console displays when listing the code in a report.

[3]Short Code is the string Agent Console uses when displaying the codes' short identifier.

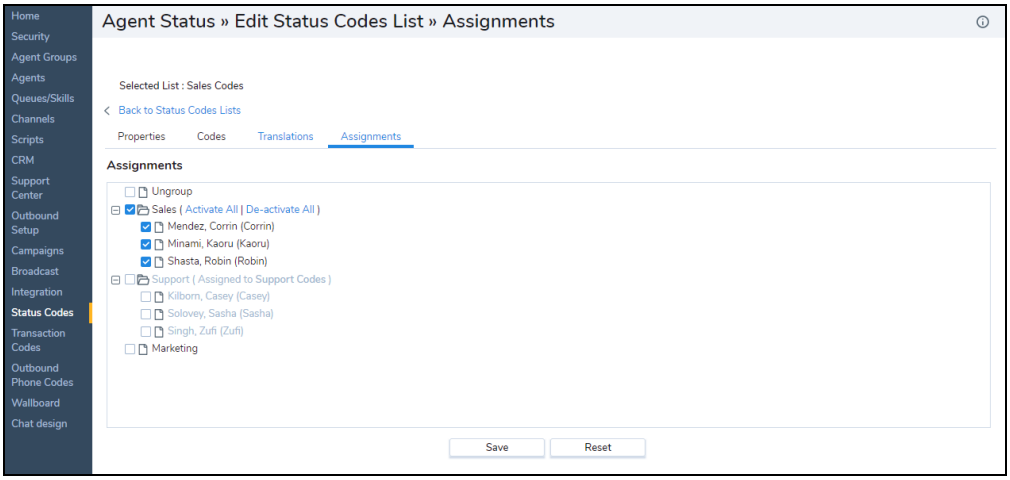
Translations Option	Description
	Console uses the short code when displaying the codes' short identifier.
Active	Shows the **Active** list of the status codes.

7. Repeat the above process for each of your secondary languages.
8. Click **Save**.

Assign to Agents or Groups

After creating the codes, choose the agent groups, and specify individual agents within each group to assign the code list to. Use the Assignments tab for this purpose.

1. From the Configuration Menu, open **Status Codes**.
2. Click to **Edit** a status code.
3. Go to the **Assignments** tab.



All agent groups in your contact center show. Groups that are currently assigned to other status lists are grayed out.

4. Select a group from the list. A menu appears on the same line.
5. Activate agents by checking the check box next to each name.
   OR
   Click **Activate All** to select all agents in the group.
6. Click **Save** to save the settings for the code.
   You have now defined a status code list.

7. To verify the behavior, log in to Agent Console as an agent belonging to the group. Change your status to invoke the status codes.

Edit and Delete Status Codes

You can edit or delete existing code lists at any time.

To edit a status codes list:

1. From the Configuration Menu, open **Status Codes**.
   A list of existing codes appears.
2. Select the code list you want to edit, and click .
3. Navigate through the tabs to make the desired changes.
4. **Save** your changes.

To delete an existing status code list:

1. Select a code list from the list, and click .
   You are prompted to confirm your action.
2. Click **Ok** to delete the list.

Note: You cannot recover a deleted list.

Transaction Codes Overview

Transaction codes offer a means to apply call disposition to inbound as well as outbound interactions. Each inbound or outbound interaction in a call center has some purpose and disposition. Transaction codes can be defined to collect call disposition information from the agents at the time of the call and supervisors can report on this information for analysis and to determine further processing.

For example, an ACME sales representative, who is processing a sales campaign for a new product, places outbound calls to prospect customers. The representative can record the result of each interaction with predefined transaction codes, such as Successful Sale, Prospect Interested - Call back, Prospect not Interested - Do not call back, Reached Voicemail, and Faulty Number. Further in the sales process, you can define transaction codes to identify various stages of the sales process, and apply the codes to convey the status and result of each interaction.

Using the transaction codes functionality:

- An administrator predefines a list of transaction codes used to describe the purpose of an interaction, or probable outcomes for an interaction.
- An agent applies a call disposition from the predefined list of transaction codes during the processing or post-processing stage of an interaction.
- A supervisor reports on call disposition for further analysis and to determine further processing.

When do you use transaction codes?

Transaction codes are mainly used to:

- State the purpose of interactions.
- Indicate the outcome of inbound and outbound interactions.

State the Purpose of Interactions with Transaction Codes

Each interaction from and into your call center has a purpose. You can define transaction codes to state the purpose of these interactions. When an agent processes an interaction, they can indicate the purpose of the interaction by selecting one of the transaction codes available.

For example, in a call center which combines Sales, Support, and Service calls, you can indicate the purpose of each interaction using a set of transaction codes, such as Sales Call, Support Call, and Service Call.

Indicate the Outcome of Interactions with Transaction Codes

Transaction codes allow your call center agents to record the purpose and outcome of inbound and outbound interactions. You are labeling an interaction with codes for further analysis or follow-up.

For example, when a ACME sales representative places sales calls, they can indicate the outcome of each interaction with predefined transaction codes, such as Successful Sale, Prospect Interested - Call back, and so on. At the end of the day, when the management runs a transaction report, the report indicates statistical information about sales, as well as transaction codes that prompt follow-up actions. For records that are labeled Prospect Interested - Call back, agents need to place follow-up calls. Records that are labeled Prospect not Interested - Do not call back must be filtered from the list.

Typically, you can define transaction code lists for a sales team to understand how many calls they made, how many resulted in sales, how many resulted in faulty numbers, etc.

The following table lists the uses of transactions codes with corresponding examples:

Reasons for Using Transaction Codes	Examples of Transaction Codes
State the purpose of an interaction	Sales Call Service Call Support Call
Indicate the outcome of an interaction	Prospect Interested – Call Back Prospect not Interested – Do not Call Back Reached Voicemail – Try Again Faulty Number

How do you create transaction codes?

Understanding the process flow of your company provides a good basis for defining transaction codes. You may create multiple transaction code lists to define the purpose and outcomes of interactions for a particular process. For example,

sales campaign interactions may have multiple outcomes that differ from support-related interactions. An agent can select one or more outcomes for an interaction.

Each transaction code list contains a set of codes to identify the call disposition. A transaction code list can be assigned to an agent group or to a queue. You can apply multiple disposition code lists to an agent group or a queue. When an agent accepts a call, all code lists assigned to the agent group or queue are presented in separate tabs. An agent may select one or more codes from a single list and/or save desired codes from multiple lists. A call coded from multiple lists shows as a separate record.

To define transaction codes for disposition, you must:

- Identify probable purposes and outcomes of an interaction.
- Identify queues or agent groups to apply the transaction code list to.
- Determine the need to translate transaction codes to a secondary language.
- Create a transaction code list.

To create transaction codes, you must:

- Create a transaction code list by defining properties.
- Define individual transaction codes in the list.
- Determine the need to translate transaction codes to a secondary language.
- Assign codes to agent group(s) or queue(s).

How do agents use transaction codes?

During the processing of an interaction, a transaction code list is presented to an agent in Agent Console under the following circumstances:

- The agent is a member of the group assigned with the code list.
- The agent is a member of the queue(s) assigned with the code list(s).

From the presented code list, an agent selects transaction codes:

- Before initiating the call.
- During the call.
- At the end of the call, during post-processing.

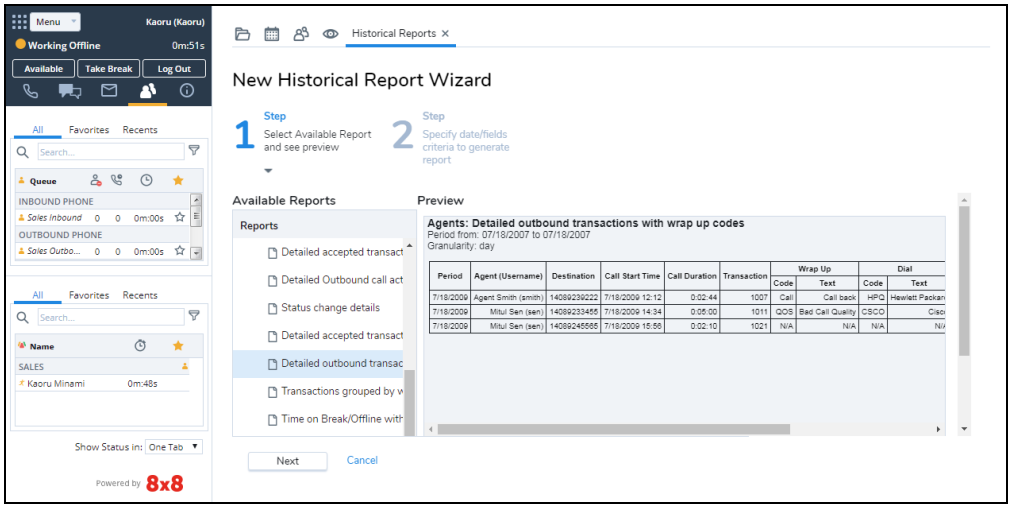
An agent assigned to a call disposition list is presented with the code list during an interaction. The agent may select and save one code or multiple codes from a list anytime during the interaction or post-processing. When an agent is a member of the group or queue assigned with multiple lists, all lists are presented to the agent in separate tabs when

they accept a call. The agent may select and save codes from multiple lists. The selected codes appear in historical reports.

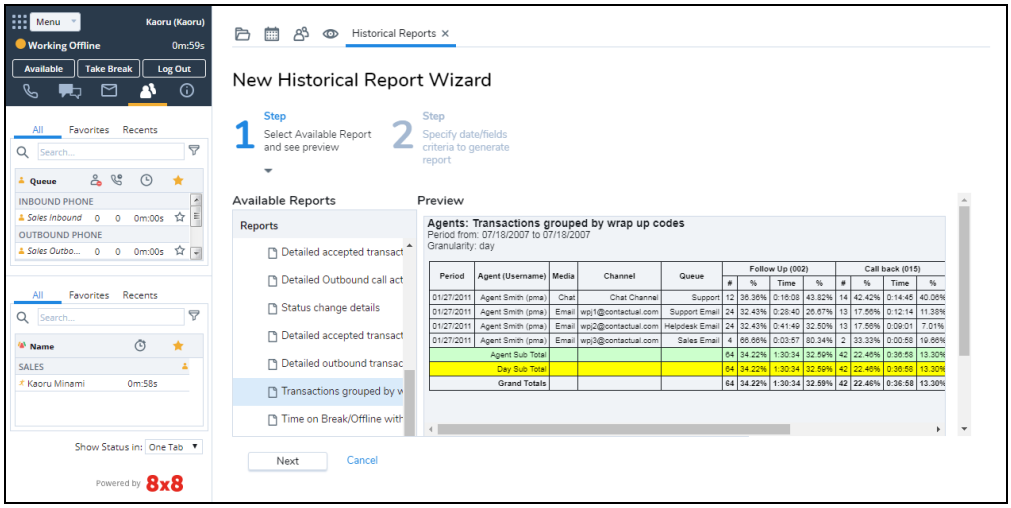
How do supervisors use transaction codes?

Supervisors generate historical reports to get call disposition information for analysis and to determine the need for follow-up actions based on transaction codes, also known as wrap-up codes. The following reports list transaction codes used during agent interactions:

- **Agents: Detailed accepted transactions with wrap up codes**: This report lists wrap-up codes used by an agent during all of their inbound accepted interactions. Wrap-up codes indicate call disposition information. You may find multiple instances of the same call to indicate multiple wrap-up codes applied to the same call.
- **Agents: Detailed outbound transactions with wrap up codes**: This report lists dial codes as well as wrap-up codes. Dial codes are caller ID-related codes, which appear before dialing the call. An agent can apply only one dial code to a call, but can apply multiple wrap-up codes.



- **Agents: Transactions grouped by wrap up codes**: The report groups transactions by wrap-up codes, queue, channel, media, and agent.



Create Transaction Codes

Creating a transaction code list involves:

- Configuring properties of the code list.
- Defining individual codes.
- Translating codes to secondary languages (optional).
- Assigning the codes to an agent's groups or queues.

Configure Transaction Code Properties

1. From the Configuration Menu, open **Transaction Codes**.
2. Click ⊕ or **Add**. The Properties tab appears.
3. Enter the required values in the **Properties** tab.
   The following table summarizes the options under **Transaction Codes > Properties**:

Properties Option	Description
Active	Select the check box to put this code list into service.

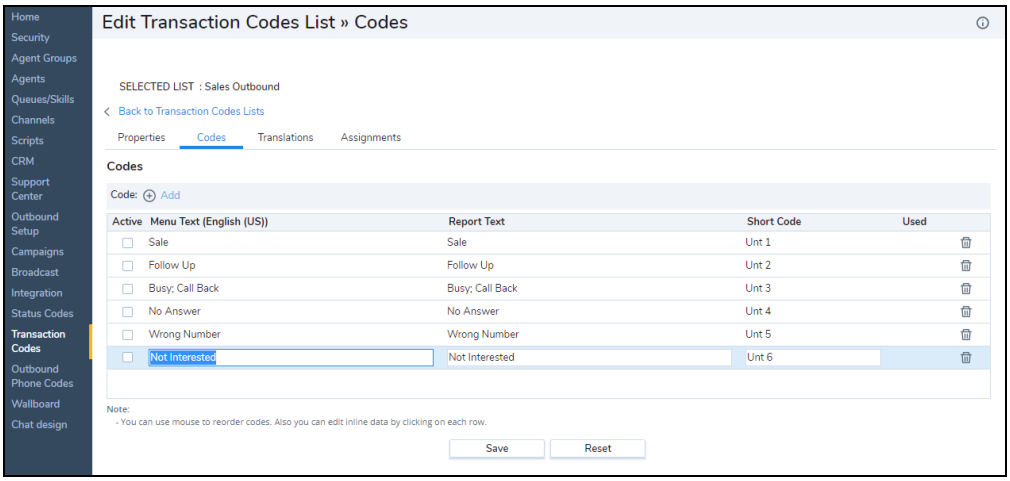
Properties Option	Description
Name (required)	Enter a name for the transaction code list.
Description	Enter a description for the transaction code list.
Category	Refers to a category of lists, such as Sales, Marketing, or Support. Within a single category, you can group multiple transaction code lists. You can create a new category or add a list to an existing category. In the Category list, do one of the following: ■ Choose **Edit Categories** to create a new transaction code category. ■ Choose an existing transaction code category.
Secondary Languages	Select other languages to translate the codes into.
Sort Order	Refers to the order in which the codes within the list are sorted when presented to an agent. ■ Choose **Manual** to list transaction codes yourself in a specific order. ■ Choose **Automatic** to have Virtual Contact Center sort transaction codes in alphabetical order.
Required	If enabled, the agent has to select a transaction code for all phone calls.
Multiple-choice	If enabled, the agent has to select multiple codes from the transaction codes list.
Assignment Type	Select an **Agent Group** or **Queue** to assign the list to. This option enables the members of the group or queue to access the list during phone calls.
Primary Language (required)	Select the primary language in which the codes are written. This information is required to create a list. **Note:** After saving the list, you cannot change the Primary Language setting.
Admin Notes	Type information that enables administrators to understand the purpose of the code list.

4. Click **Save**.

Define Transaction Codes

You can define individual transaction codes in the Codes tab.

1. From the Configuration Menu, open **Transaction Codes**.
2. Click to **Edit** a transaction code.
3. Go to the **Codes** tab and enter the required values.



4. Enter values for the following fields:
   - **Menu Text**: The code text that appears in the code list in Agent Console
   - **Report Text**: The code text that appears in the reports
   - **Short Code**: A short identifier for a code

   The following table summarizes the options under **Transaction Codes > Codes**:

Codes Option	Description
Active	Select **Active** to activate the specific transaction codes.
Menu Text	Type the string that Agent Console displays when displaying the code, such as Prospect Interested – Call Back.
Report Text	Type the string that Agent Console displays when listing the code in a report, such as Prospect Interested – Call Back.
Short Code	Type the string that Agent Console uses when displaying the code's short identifier, such as Int.
Used	If an agent has used a code in their Agent Console, then the code is marked with in the **Used** column. After a code has been used, the code and its code group cannot be deleted.

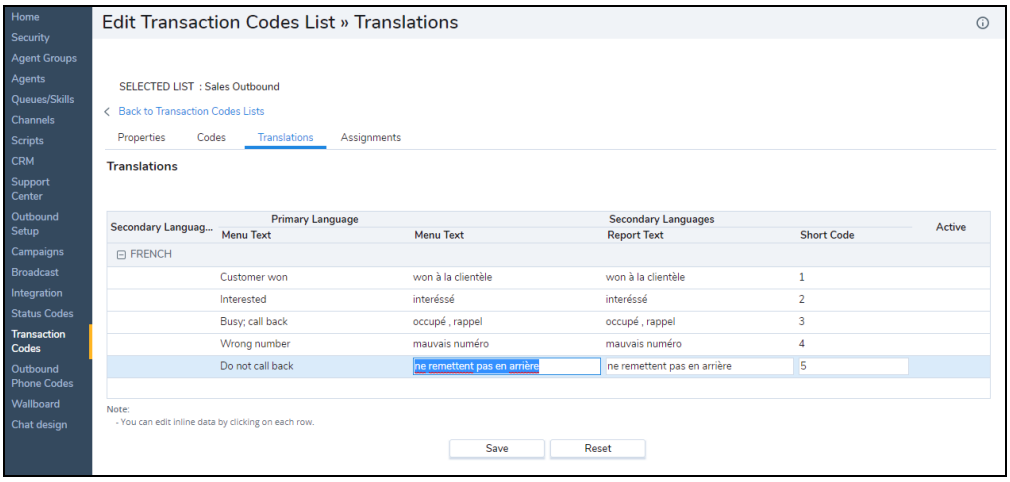
5. Repeat the above steps to create more codes.

6. Click **Save** to save the codes.

Translate Transaction Codes (Optional)

The Translations tab allows you to translate codes from the primary language to the secondary language supported by Virtual Contact Center. You must specify a secondary language in the Properties tab to enable translation. This procedure is optional.

1. From the Configuration Menu, open **Transaction Codes**.
2. Click to **Edit** a transaction code.
3. Go to the **Translations** tab.



For every transaction code you have created in the Codes tab, you find a new row under the secondary language.

4. Enter **Menu Text**, **Report Text**, and **Short Code** in the secondary language.
   The following table summarizes the options under **Transactions Codes > Translations**:

Translations Option	Description
Secondary Languages	Choose one of the secondary languages selected in the transaction codes Properties tab. When you select a secondary language, Configuration Manager changes the title of the **Menu Text** text entry area described later in this table.
Primary Language	A read-only list of transaction codes created in the Codes tab, and as written in the primary language.
Menu Text (secondary	Choose a secondary language, and type the string in that language. Agent Console displays the menu code in the secondary language.

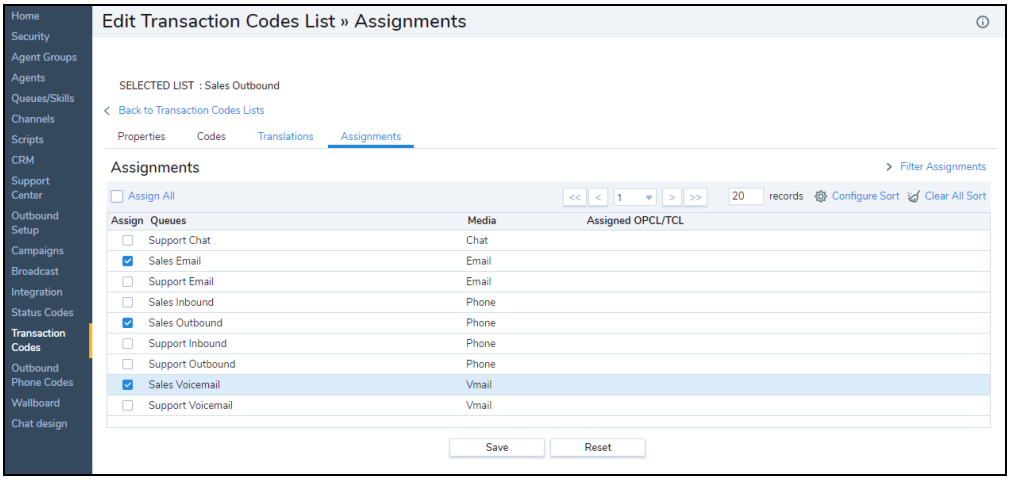
Translations Option	Description
language ID)	
Report Text	Choose a secondary language, and type the string in that language. Agent Console displays the report text in the secondary language.
Short Code	Choose a secondary language, and type the string in that language. Agent Console uses the short code when displaying the code's short identifier.
Active	Shows the Active list of transaction codes.

5. Select **Save** to save the translated codes.

Assign the Agent Groups and Queues

The Assignment tab enables you to select agent groups or queues to assign the code list. Based on your choice of assignment type in properties, the list of agent groups or queues setup in the tenant show up.

1. From the Configuration Menu, open **Transaction Codes**.
2. Click to **Edit** a transaction code.
3. Go to the **Assignments** tab and enter the required values.



4. Select an agent group or a queue from the list.
   OR
   Select the **Assign All** check box to assign all groups or queues in the list.
5. Click **Save** to finish defining the code list.

Note: A transaction code list is not functional until activated and assigned.

Edit and Delete Transaction Codes

You can edit or delete existing transaction code lists at any time.

To edit a transaction codes list:

1. From the Configuration Menu, open **Transaction Codes**.
   A list of existing codes appears.
2. Select the code list you want to edit, and click .
3. Navigate through the tabs to make the desired changes.
4. **Save** your changes.

To delete an existing transaction code list:

1. Select a code list from the list, and click .
   You are prompted to confirm your action.
2. Click **Ok** to delete the list.

Note: You cannot recover a deleted list.

Outbound Phone Codes Overview

Outbound Phone Codes offer a means to set a unique calling line identifier (caller ID) for outbound calls. You can define outbound phone codes to assign caller ID to outbound calls from your tenant. You can also use outbound phone codes to identify the purpose of each outbound call.

When placing an outbound call, you can use outbound phone codes to set the calling line identifier displayed to the called party. If your Virtual Contact Center provides technical support services to multiple companies on the same tenant but on different channels, you must ensure that the correct caller ID is applied to each company. This helps the customers of each company to identify a number with the company, and provides the best callback experience. You can define transaction codes to assign caller ID to outbound calls from your tenant. When an agent initiates an interaction, they set a caller ID to an outbound call, thus identifying the right callback number.

Note: Assigning calling line identifier is not supported by all telecommunication carriers.

For example, ACME uses their Virtual Contact Center to provide technical support services for two companies: Kids Zone for the Kids Entertainment company, and EMAC for Credit Recovery Services. ACME has two phone channels; one for callers to Kids Zone and one for callers to EMAC. The administrator defines transaction codes to map a phone number for each company. Before placing an outbound call to a customer of Kids Zone, the agent selects the code for Kids Zone. At the receiving end of the call, the phone number mapped with the code is displayed.

The following topics are discussed in this chapter:

- Creating outbound phone codes
- Assigning codes at the agent level

Using the outbound dial codes functionality:

- An administrator predefines a list of outbound phone codes to identify the calling line identifier to outbound calls.
- An agent assigns a calling line identifier to an outbound call from the predefined list of outbound phone codes before initiating the call to ensure the best callback experience for customers.

To create transaction codes, you must:

- Create a transaction code list by defining properties.
- Create individual transaction codes in the list.
- Translate codes to secondary languages.
- Assign codes to agent group(s) or queue(s).

How do agents use Outbound Phone Codes?

During the processing of an interaction, an Outbound Phone Code list is available to an agent in Agent Console under the following circumstances:

- The agent is a member of the group that is assigned the code list.
- The agent is directly assigned the code list(s).

An agent assigned an Outbound Phone code list is shown the list before initiating an outbound call. The agent must choose a code to dial out. The calling line identifier associated with the selected code sets the caller ID to the call.

Create Outbound Phone Codes

Creating an Outbound Phone Code list involves:

- Configuring properties of the code list.
- Defining individual codes.
- Translating codes to secondary languages (optional).
- Assigning codes to agent groups.

Configure Outbound Phone Code Properties

1. From the Configuration Menu, open **Outbound Phone Codes**.
2. Click ⊕ or **Add** to create a new list. The Properties tab opens.

3. Enter the following properties. Some fields are required, while others are optional.

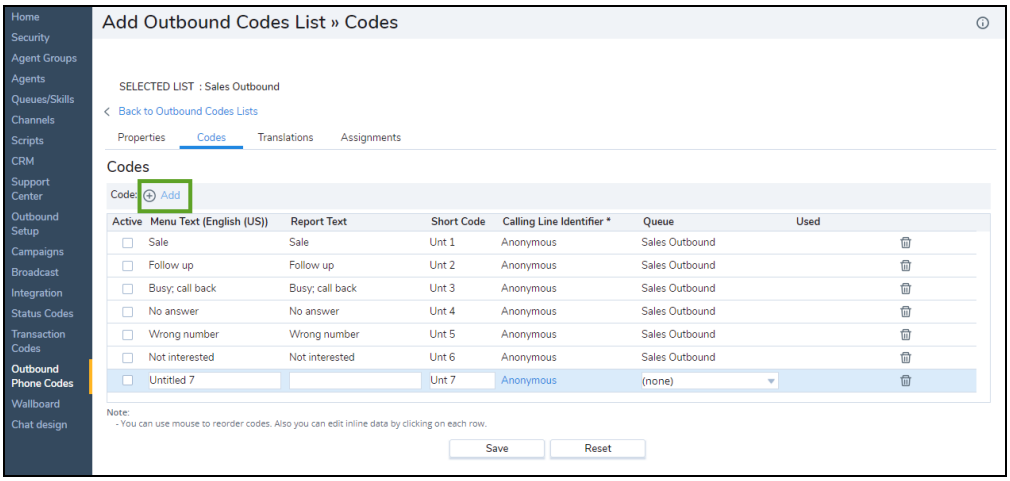
Properties Options	Description
Active	Select the check box to put this code list into service.
Name (Required)	Enter a name for the new code list.
Description	Enter a brief description of the purpose of the code list.
Category	A category distinguishes multiple code lists, and attributes a code list to a specific group. For example, you can create categories for Sales, Support, Services, and more. You can then assign each code list to a particular category. In the Category list, do one of the following: ■ Choose **Edit Categories** to create a new code category. ■ Choose an existing code category.
Sort Order	Select the order in which the codes should appear in Agent Console: ■ **Manual** allows organizing the order of the codes manually. ■ **Automatic** organizes the codes alphabetically.
Admin Notes	Type information that enables administrators to understand the purpose of the code list.
Primary Language (Required)	Select a primary language in which the codes are written. This information is required to create a list. **Note:** After saving the code list, you cannot change the Primary Language setting.
Secondary Language	Select the languages to translate the codes to. This option allows you to set up codes in languages other than English.

4. Click **Save** to save the properties.
   The Codes tab opens.

Define Outbound Phone Codes

In the Codes tab, you can define individual status codes and assign them to an agent's action or status change.

1. From the Configuration Menu, open **Outbound Phone Codes**.
2. Click to **Edit** an outbound phone code.
3. Go to the **Codes** tab and enter the required values.



The following table summarizes the options under **Outbound Phone Codes > Codes**:

Codes Options	Description
Active	Select **Active** to activate the specific outbound codes.
Menu Text	Type the string that Agent Console displays when displaying the code.
Report Text	Type the string that Agent Console displays when listing the code in a report.
Short Code	Type the string that Agent Console uses when displaying the code's short identifier.
Calling Line Identifier	Determine the Calling Line ID for a call that selects the code. ▪ **Use Agent Default Calling Line Id** sets an agent's default calling line ID. ▪ **Anonymous** applies the option to keep the ID anonymous. **Note:** Anonymous Calling Line ID is not supported by all telecommunication carriers. ▪ **Channel Numbers** sets the channel numbers available for the tenant.
Queue	Select an outbound **Queue** to channel the outbound call to.

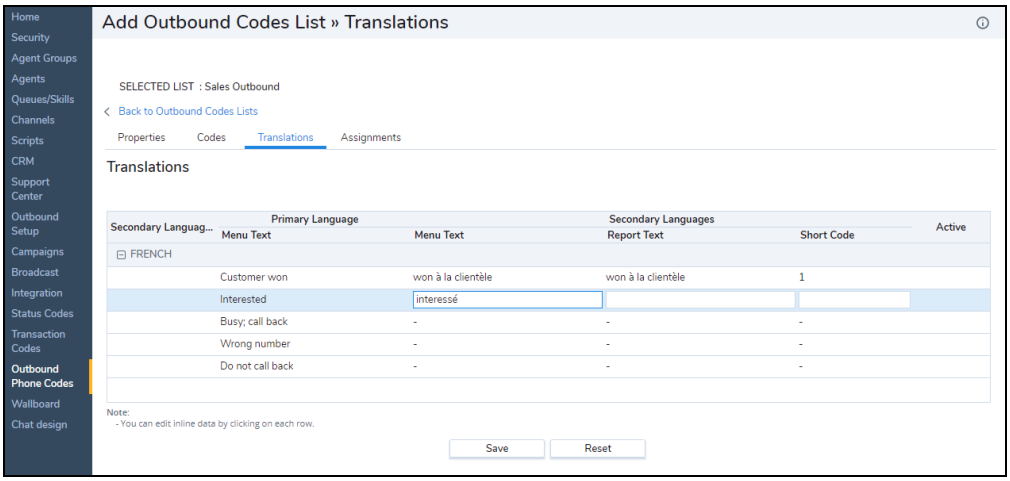
Codes Options	Description
	Note: When an agent selects the code before dialing out, the call channels through the outbound phone queue. Channeling an outbound call through a queue also changes the agent status to **Busy**, preventing any call offerings.
Used	If an agent has used a code in their Agent Console, then Configuration Manager adds a check mark to that code and associated code groups in the **Used** column. After a code has been used, the code and its code group cannot be deleted.

4. Repeat the above steps to create more codes.
5. Select **Save** to save the codes.

Translate Outbound Phone Codes (Optional)

The Translations tab allows you to translate codes from the primary language to the secondary language supported by Virtual Contact Center. You must specify a secondary language in the Properties tab to enable translation. This procedure is optional.

1. From the Configuration Menu, open **Outbound Phone Codes**.
2. Click to **Edit** a status code.
3. Go to the **Translations** tab.



4. Select a code from the read-only list of codes in the **Translations** tab.
5. Select a secondary language to translate the code to.

The following table summarizes the options under **Outbound Phone**:

Translations Options	Description
Secondary Languages	Choose one of the secondary languages selected in the outbound codes Properties tab. When you select a secondary language, Configuration Manager changes the title of the **Menu Text** text entry area described later in this table.
Primary Language	Read-only list of outbound codes descriptions in the code's primary language.
Menu Text (secondary language ID)	In the **Secondary Languages** list, choose a secondary language, and type the string in that language. The Agent Console displays the menu code in the secondary language.
Report Text	In the **Secondary Languages** list, choose a secondary language, and type the string in that language. The Agent Console displays the report text in the secondary language.
Short Code	In the **Secondary Languages** list, choose a secondary language, and type the string in that language. The Agent Console uses the short code when displaying the codes' short identifier.
Active	Shows the **Active** list of outbound codes.

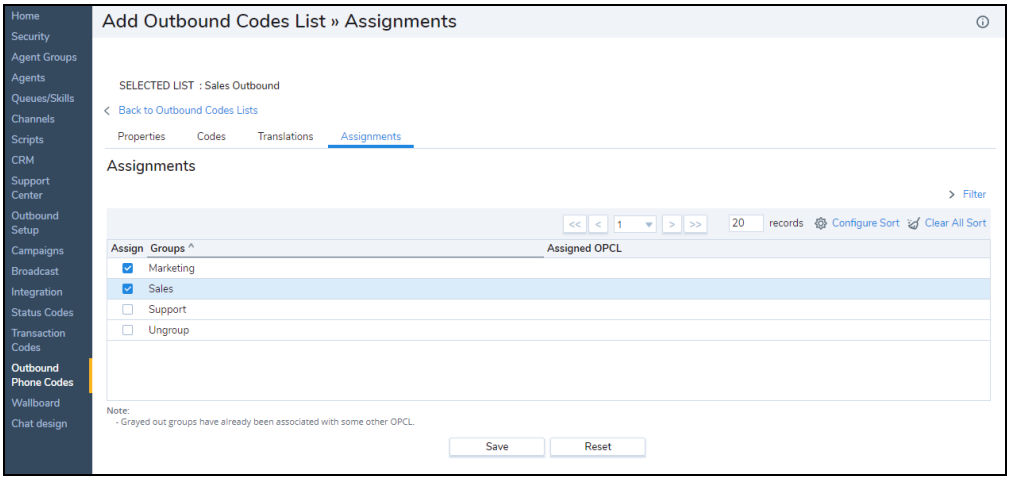
6. Select **Save** to save the translated codes.

Assign to Agents or Groups

After creating the codes, choose the agent groups and specify individual agents within each group to assign the code list to. Use the Assignments tab for this purpose.

1. From the Configuration Menu, open **Outbound Phone Codes**.
2. Click to **Edit** a status code.

3. Go to the **Assignments** tab.



4. Select an agent group from the list. The list is assigned to your choice of agent groups.
5. Click **Save** to complete the code list definition.

Note: An Outbound Phone Code list is not functional until activated and assigned.

Edit and Delete Outbound Phone Codes

You can edit or delete existing code lists at any time.

To edit an outbound phone codes list:

1. From the Configuration Menu, open **Outbound Phone Codes**.
   A list of existing codes appears.
2. Select the code list you want to edit, and click .
3. Navigate through the tabs to make the desired changes.
4. **Save** your changes.

To delete an existing status code list:

1. From the Configuration Menu, open **Outbound Phone Codes**.
   A list of existing codes appears.

2. Select a code list from the list, and click .

   You are prompted to confirm your action.

3. Click **OK** to delete the list.

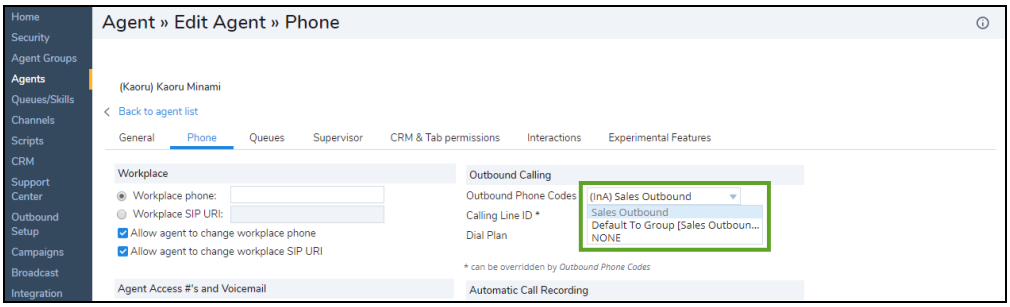
> **Note:** You cannot recover a deleted list.

Assign Outbound Phone Codes at the Agent Level

While defining an Outbound Phone Code List, the Assignment tab allows you to assign the code list to existing agent groups, thereby assigning the code list to members of the group. However, you have the flexibility to assign a different code list to individual agents.

To assign an Outbound Phone Code list at the agent level:

1. From the Configuration Menu, open **Agents**.
2. Select the specific agent from the list.
3. Go to the **Phone** tab.



4. In **Outbound Phone Codes**, select the desired code list.

> **Notes:**
> -The **Default to Group [GroupName]** shows the agent's group assigned to a code list. The agent is assigned to the list automatically.

-**NONE** removes the agent from the default code list assignment.
-Outbound Phone Code Lists assigned at the agent level override group level settings.

5. Click **Save**.

Wallboards Overview

The 8x8 Wallboard for Virtual Contact Center presents real-time metrics of your contact center operations on a desktop, display TV, or monitor on a contact center floor. You can get key statistics to answer questions, such as:

- How productive are my agents?
- What is the number of interactions waiting in a queue?
- What is the current longest waiting interaction in a queue?
- What is the current SLA activity?
- What is the total number of accepted transactions since the beginning of the day?

The metrics provide an insight into queue traffic, longest-waiting interactions in a queue, agent productivity status, and more. Access to these metrics allows agents and supervisors to respond to increased call volume quickly and maintain the service levels of your business.

You can choose from readily-available stats, or generate custom stats to suit your business requirements. Whether as a supervisor or an agent, you can look at the metrics and make instant adjustments to serve your customers better.

Features

The 8x8 Wallboard offers the following benefits:

- Get a bird's-eye view of call center performance, and track agent availability
- Get real-time metrics on contact center operations
- Apply business intelligence to the decision-making process
- Manage customer demand proactively, and reduce waiting time for customers
- Access dozens of pre-calculated stats built out of predefined queries
- Customize stats to suit business needs by building custom queries

- Display data on web browsers, such as Internet Explorer, Chrome, or Firefox
- Configure thresholds against key performance indicators to show alerts for potential or actual slips in performance
- Set up audio and visual alerts on breached thresholds
- Filter data to suit individual needs
- Get metrics in tabular format for easier navigation
- Make use of separate login access to the wallboard

Requirements

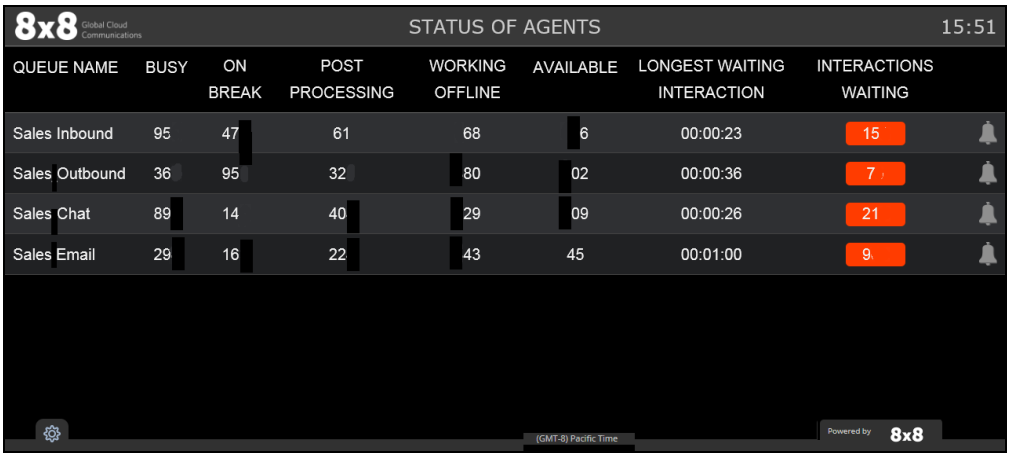
- **Wallboard Configuration**: Login access to Configuration Manager, with permissions to configure Wallboards.
- **Wallboard Access**: Access to login credentials for Configuration Manager.

Configure a Wallboard

Configuring an 8x8 Wallboard involves:

- Defining wallboard general properties.
- Specifying desired metrics.
- Defining thresholds for better supervision (optional).
- Selecting skills/queues for which you need metrics.

Once configured, you can run a wallboard with a simple click. Typically, a contact center monitors critical data on agent status.



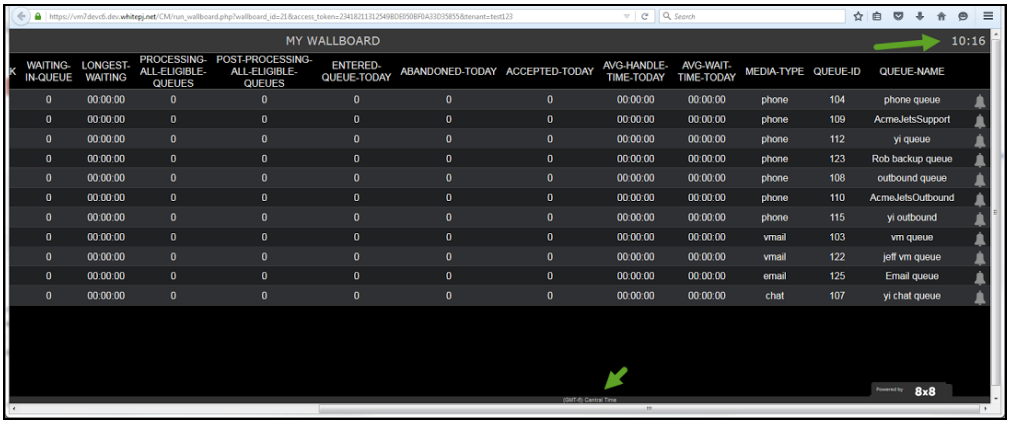
Setting up an 8x8 Wallboard is simple and quick. Determine the key metrics for your business, select the data from the

readily-available stats or define custom stats, and run the wallboard. With just a few clicks, you are on your way to monitor your contact center performance in real time.

Set up a Wallboard

To set up a wallboard:

1. From the Configuration Menu, open **Wallboard**.
2. Click ⊕ or **Wallboard**.
3. Go to the **General** tab.
4. Enter a **Name** and **Description** for the wallboard.
5. Select the desired time zone from the **Time Zone** drop-down list.
6. Click **Save** to open the Fields tab.
   The current time of the selected time zone appears on the top-right corner of the wallboard.



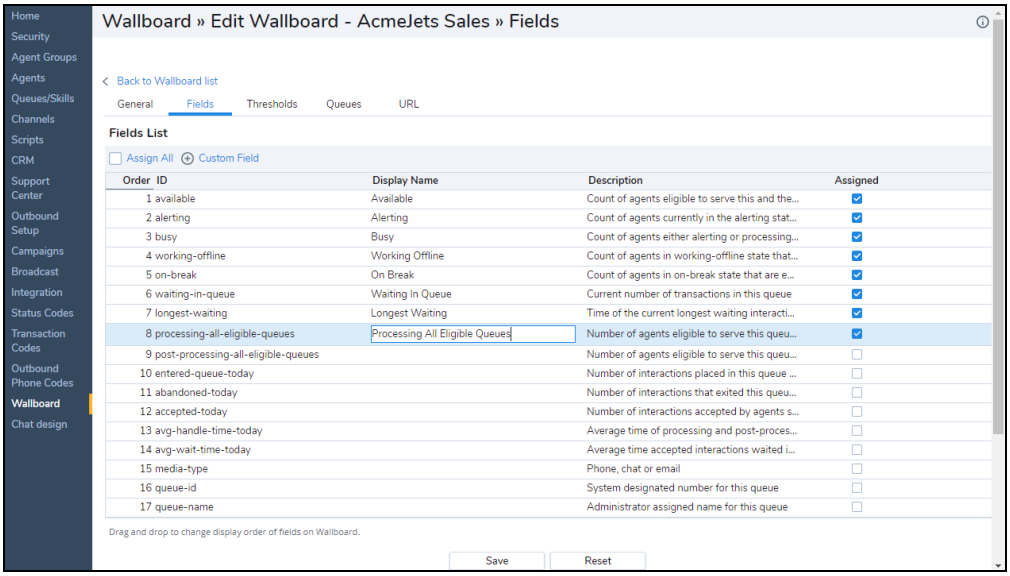
The GMT-6 Central visible at the bottom indicates the selected time zone.

Specify Desired Metrics

Virtual Contact Center provides out-of-the-box metrics generated from predefined queries. Additionally, you have the flexibility to generate custom metrics using the available stats. The Fields tab in the wallboard definition lists all the available real-time stats with brief descriptions. For example, you can track the number of agents waiting for interactions in a queue, or the number of agents processing interactions in a queue (in available or processing statuses).

To specify the desired metrics for a wallboard:

1. From the Configuration Menu, open **Wallboard**.
2. Click to edit an existing wallboard.
3. Go to the **Fields** tab.



4. Select the desired stats from a list of available fields.

> **Note:** You can also generate custom metrics by defining custom fields. See Customize a Wallboard.

5. Enter a **Display Name** that replaces the standard field name on the wallboard.
6. Drag and drop the fields to change the display order of the fields on the wallboard.
7. **Save** the settings.

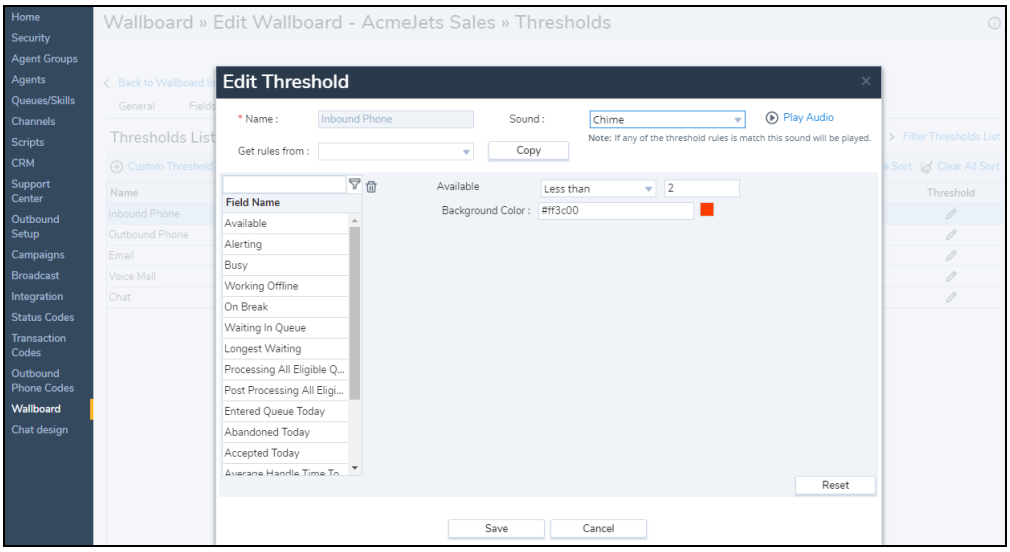
Define Thresholds

The next step in configuring a wallboard is to set up thresholds which alert you in the event of potential or actual slips in performance. You can set up audio and visual alerts, and vary the alert type based on the severity of the situation. For example, you can set up a threshold alert to monitor the service levels of your contact center. If the performance of a skill or queue falls below the set Service Level Agreement (SLA), you set up an alert so you can look at the activity level

of agents belonging to the queue, identify areas for improvement, and act quickly to recover. You can also set up a threshold to monitor the waiting time for interactions. If the waiting time in a queue exceeds a certain time, the threshold alert can trigger. You can define thresholds for each media type and configure custom thresholds for each skill.

To define threshold for inbound phone media:

1. From the Configuration Menu, open **Wallboard**.
2. Click to edit an existing wallboard.
3. Go to the **Threshold** tab.
4. Select a media type, such as Inbound Phone.
5. Select a **Field Name**.
6. To specify a threshold value, enter the required parameters and arguments.
7. Select a color from the color chart to highlight a breached threshold.
8. Specify an alert sound pattern.



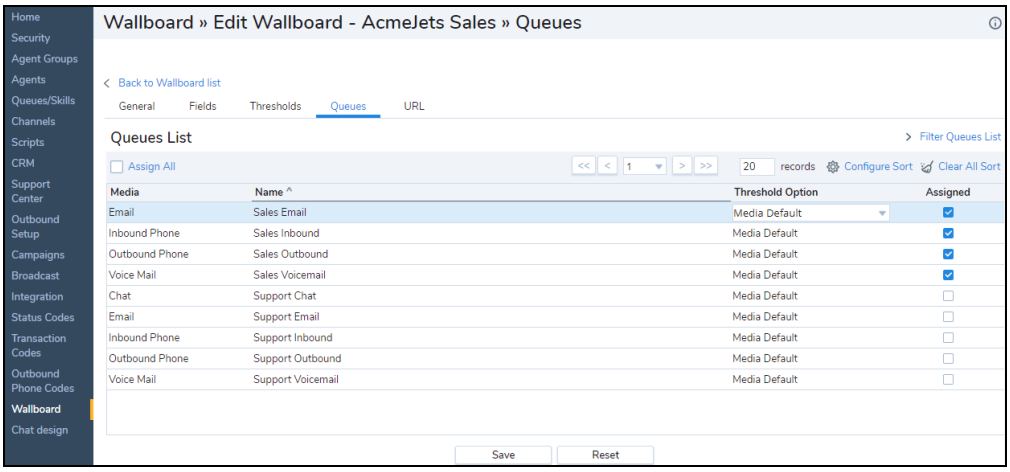
9. Click **Save** to save the threshold settings.

Select Queues

In the final step, you must select which queues require metrics. Optionally, you can select predefined thresholds for each queue.

To select queues:

1. From the Configuration Menu, open **Wallboard**.
2. Click to edit an existing wallboard.
3. Go to the **Queues** tab.



4. Select the queues individually, or click **Assign All** to pull their stats.
5. Specify a desired threshold from the drop-down list of choices.

> **Note:** You must have specified the threshold settings previously.

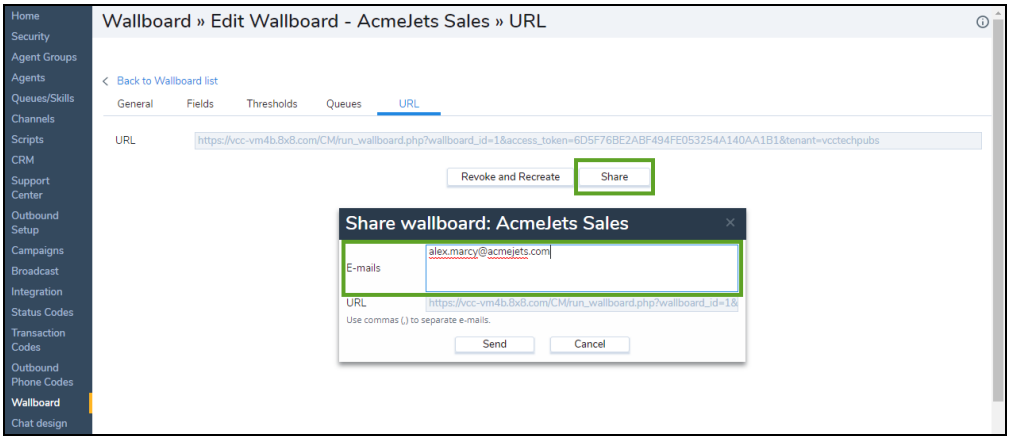
6. **Save** the queue selections.
   The wallboard configuration is now complete. You are ready to run a wallboard.

Share Wallboard Authentication

Wallboard administrators can bypass the need for login credentials to run a wallboard. Instead, they can click a URL shared by contact center administrator to launch a wallboard. The URL provides direct access to the wallboard. For details on using login credentials, refer to Run a Wallboard.

To share direct wallboard access:

1. From the Configuration Menu, open **Wallboard**.
2. Click to edit a wallboard.
3. Go to the **URL** tab.



4. Click **Share**.
5. Enter the email addresses of wallboard administrators that you like to share the wallboard with.
   You can see a wallboard URL.
6. Click **Send**.
   A message notifies the wallboard URL is shared successfully via email. Wallboard administrators receive an email notification with a link to launch the wallboard.
7. Click **Revoke and Recreate** to retire the URL and create a new one.
   If an email recipient uses the revoked link, a message indicates the URL is invalid.

Note: Alternatively, you can click from the list of wallboards to open the Share Wallboard dialog box.

Customize a Wallboard

You can customize a wallboard based on your business requirements:

- Set up custom queries and generate custom stats.
- Set up custom thresholds.
- Brand your contact center's wallboard by adding your company's logo.
- Use a custom font and sound for your wallboard display.

Customize Metrics

If you need more stats than what is readily available, you can build custom fields by defining custom queries. For example, if you wish to track agents unable to answer interactions at a given time, you can define a custom field as follows:

Number of agents Busy = Offered + Processing + Post-processing

To define a custom field:

1. From the Configuration Menu, open **Wallboard**.
2. Click to add a new wallboard, or to edit an existing one.
3. Go to the **Fields** tab.
4. Click or **Custom Field**.
5. Enter the custom field details:

Field Name	Description
Display Name	The custom field name that is displayed on the wallboard.
Description	A brief description of the metrics.
Field Type	Select a data type from a choice of Number, Seconds, and Percent.

Field Name	Description
	Note: The data type of the custom field must match the data type of deriving fields.
Field Definition	Based on the requirements: 1. Select from the available fields drop-down or enter a number value. 2. Select an operator (-,+, -, *, or /). 3. Select another field or enter a number value. **Note:** You can add any number of arguments.

Customize Threshold

Within each media type, you can set up a custom threshold for each queue to suit your requirements. If the waiting time for an interaction in a queue exceeds two minutes, set up a first level threshold alert. If the time exceeds 3 minutes, set up an emergency alert. On breaching thresholds, the wallboard gives corresponding alerts.

Customizing threshold is a two-step process:

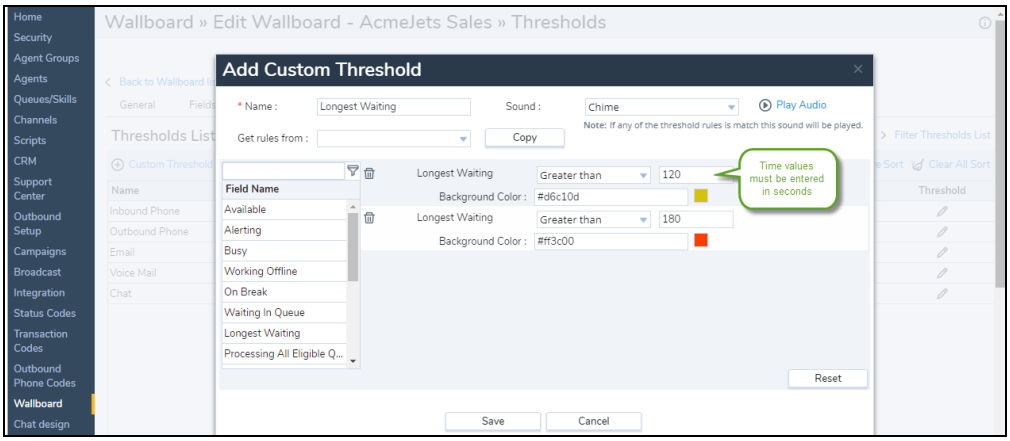
1. Set up a custom threshold with desired values and alerts. Time values are entered in seconds.
2. Apply this threshold to desired queues.

On running a wallboard with custom threshold, the alerts trigger on breaching the threshold for the selected queues.

To set up a custom threshold:

1. From the Configuration Menu, open **Wallboard**.
2. Click to edit the desired wallboard.
3. Go to the **Threshold** tab.

4. Click ⊕ or **Custom Threshold**.



5. Enter a **Name** for your custom threshold.
6. Click a **Field Name**, then specify a value in the parameters.
7. Select a color from the color chart for **Background Color**.
8. Select a **Sound** alert from the drop-down list.
9. Add more fields as desired.
10. Click **Save**.

To apply the threshold to a queue:

1. Go to **Wallboard > Queues**.
2. Select the desired queue.
3. Select the custom threshold from the **Threshold Option** drop-down.

Brand Your Contact Center Wallboard

Brand your contact center wallboard by adding your company logo.

To brand your wallboard with your company logo:

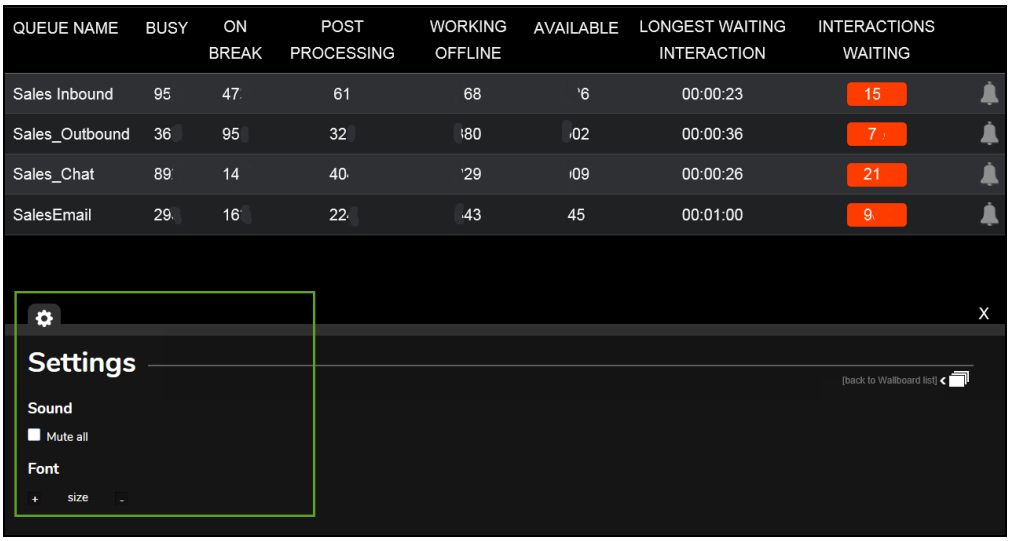
1. From the Configuration Menu, open **Home**.
2. Go to the **Profile** tab.
3. In the **Tenant – Logo** area, upload your company logo.
4. **Save** the changes.

Customize Wallboard Display

You can control the font size of the wallboard display, or mute the audio alerts on your wallboard.

To change the control settings:

1. Run your wallboard.



2. Click the tools at the corner of the wallboard screen.
3. Use **+** and **–** to increase or decrease the display font size.
4. Select **Mute all** to mute the sound.

Run a Wallboard

You can run a wallboard while logged in to Configuration Manager and from the Wallboard tab, or log in to the wallboard directly and select to run a wallboard from there. The login credentials for Configuration Manager also allow direct access to the wallboard.

What do you need?

- **Login credentials**: You must have Configuration Manager's login credentials to access wallboards.
- **Browser requirements**: Google Chrome, by default, blocks pop-ups and limits you to run a single wallboard at a time. To run multiple wallboards simultaneously, in your Chrome settings, select Allow all sites to show pop-ups.

To access a wallboard via the Configuration Menu:

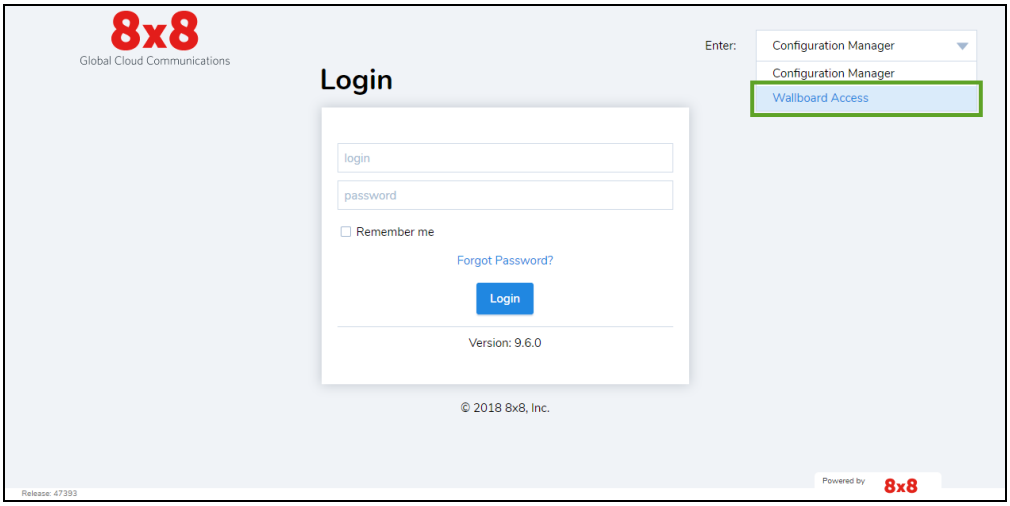
1. From the Configuration Menu, open **Wallboard**.

2. Select a wallboard, and click .

   The wallboard runs in a new browser tab.

To access a wallboard via direct wallboard access:

1. In the Configuration Manager login screen, select **Wallboard Access**.



2. Enter your Configuration Manager login credentials, and click **Login**.

   The Wallboard launches and displays the list of configured wallboards.

   Note: The number of wallboards you can run simultaneously depends on your subscription.

3. Select a wallboard, and click **Run**.

   As a wallboard administrator, you can bypass the need for login credentials to run a wallboard. For details, refer to Share Wallboard Authentication.

   Note: A Chrome limitation prevents Virtual Contact Center Wallboards from playing the alert sound notification when the threshold is met. To work around it:

   1. Open a new Chrome browser and enter **chrome://flags/#autoplay-policy**.
   3. Press enter. The **Autoplay policy** option appears.

2. Select **No user gesture is required** from the drop-down list.
4. Press **RELAUNCH NOW**. The sound is audible the next time you relaunch Google Chrome.

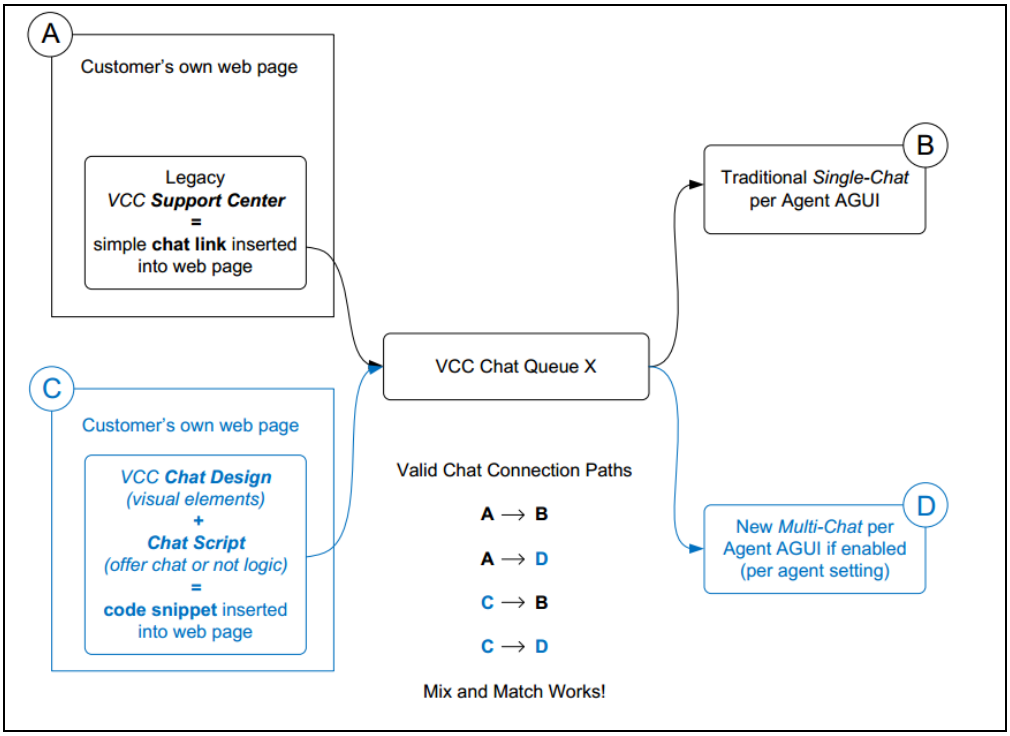
See Chrome Autoplay Policy Changes for more information.

Chat Overview

With 8x8 Virtual Contact Center, you can improve customer engagement by proactively offering web chat with live agents. You decide when and where to offer a chat based on web page hover time or your organization's chat capacity. Customer information from the web interaction can be used to drive screen pops to the agent to make the interaction as efficient as possible.

In Agent Console, chat interactions provide a means of responding in real time to customer inquiries. Depending on the configuration of your contact center, the contact center's chat access page can be configured to either allow or require a customer to supply an account number or other information to identify themselves before beginning the chat interaction. Virtual Contact Center uses this information to look up our Local CRM for a matching customer record. When you accept the new chat session, Agent Console opens the matching customer details record. If the customer has not supplied any identifying information before beginning the chat, you can use the chat window to ask the

customer for the information you need to create a new customer or case record.



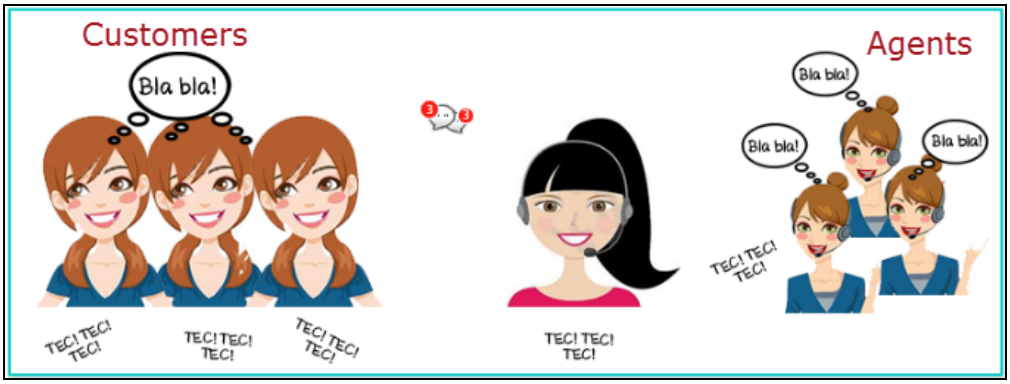
- **A (Legacy Implementation)**: The chat channel was implemented using Support Center functionality. The Support Center contained a link to the chat channel, which in turn could be hosted on your web page.
- **C (New Implementation)**: Host your contact center's chat channel on your web page, independent of Support Center. You can design a proactive web chat interface according to your company's requirements, build a chat script to define a logical workflow for your chat channel, and finally, generate a code snippet to be placed in your website.

The chat interactions directed from A or C implementation flow through the specified Virtual Contact Center chat queue, and then to the available contact center agents.

- **B (Legacy Implementation)**: Agents can process a single chat at a time, the traditional way, on Agent Console.
- **D (New Implementation)**: Agents can process multiple chats concurrently. Agents can process up to six customer chats concurrently, if configured by the administrator.

For details on Support Center and Single Chat, refer to Support Center Services.

Multi Chat is a new feature that allows customer-to-agent or agent-to-agent chat.

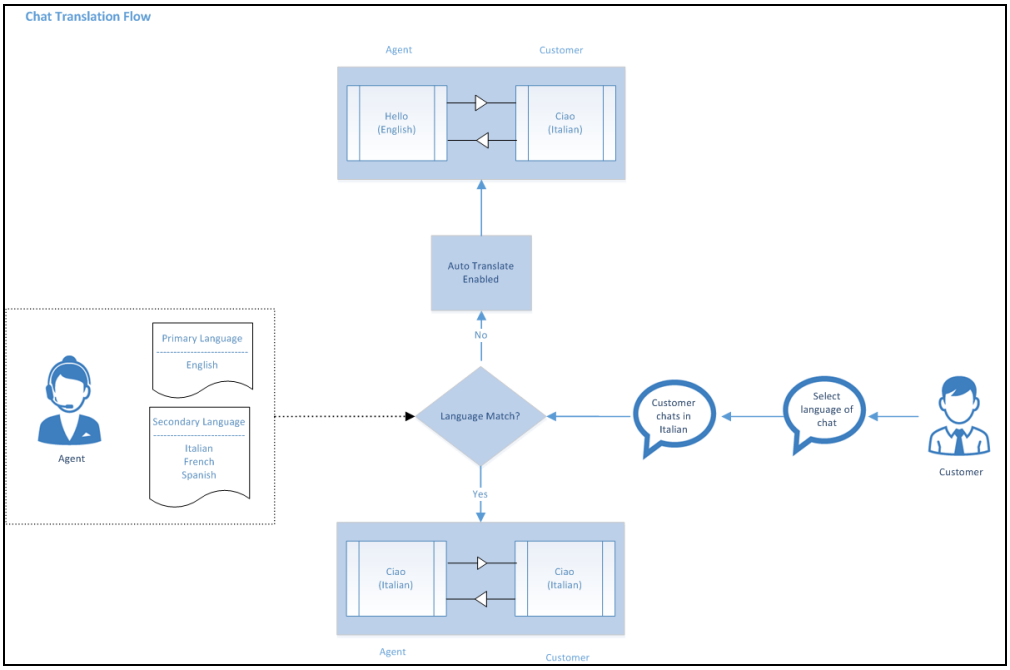


Features

- Customers can enter a web chat with live agents.
- Decide when and where to offer a chat based on your company's need and the resources.
- Interact with customers efficiently by pulling out their information on a screen pop.
- Respond in real time to customer inquiries.
- Allow customers to supply account information to identify themselves before beginning the chat interaction.
- Look up the Local CRM and open a matching customer record using the customer's account information.
- Use the chat window to ask customers information for a new customer or case record.
- Handle customer chats in any of the supported languages of agents, or use the automatic translation tool.
- Associate each Virtual Contact Center agent with one primary and one or more secondary languages of fluency.

Multilingual Support for Chat

In multilingual support for chat, customers can choose to chat in any of the supported languages. Agents can handle customer chats in any of the supported languages they speak, or use the automatic translation tool. Each Virtual Contact Center agent is associated with one primary and one or more secondary languages of fluency. The multilingual chat flow can be represented as follows:



This chapter involves:

- Understanding a case study
- Designing and configuring a chat
- Creating a chat script
- Enabling co-browsing via chat
- Handling multilingual chats

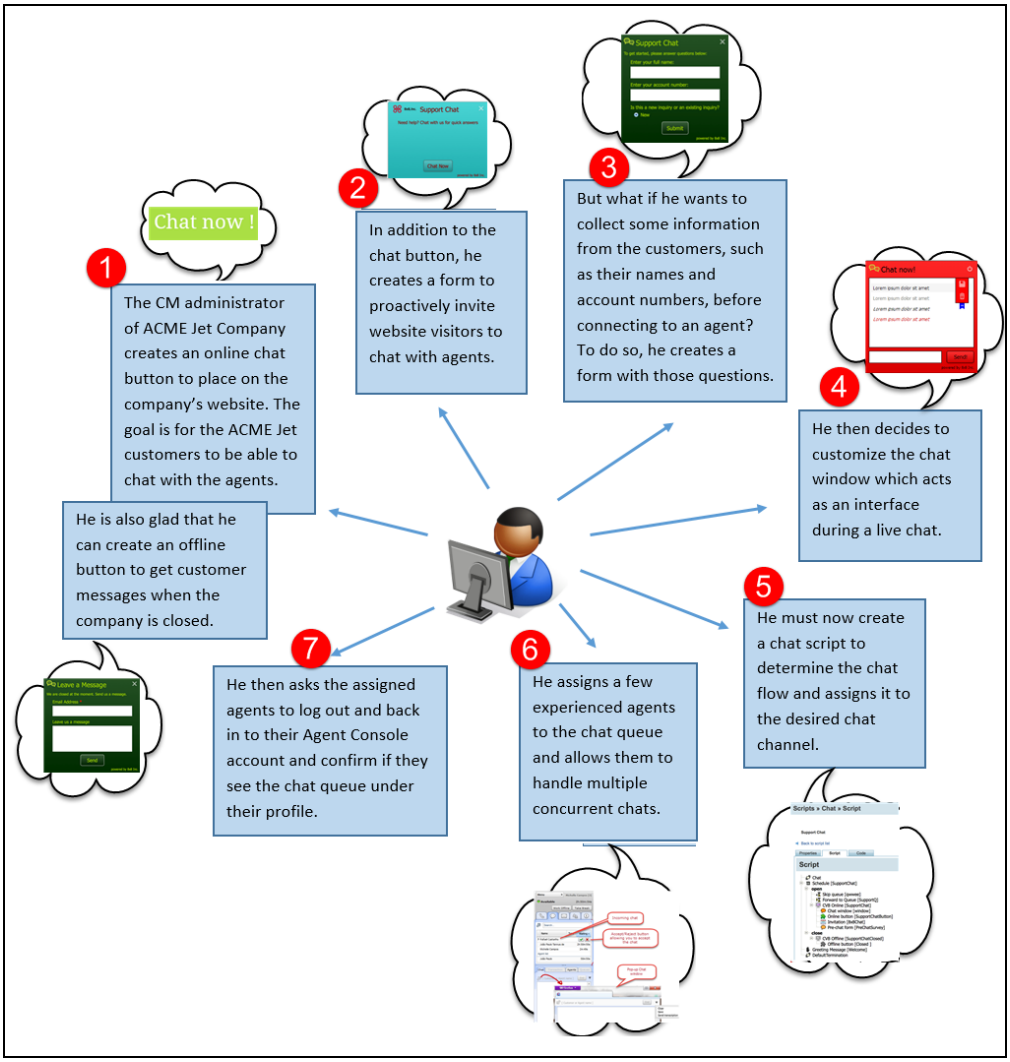
Case Study

Bob is the Configuration Manager administrator at the AcmeJets contact center. He wants to create an online chat channel to support website visitors. He anticipates the website traffic to be heavy during peak hours, and therefore, the agents should be able to handle multiple chats to meet the demand. He plans to collect some identity information, such as customer names and account numbers, to identify existing customers so that agents can process interactions efficiently. This information can be collected from the customers even before they are connected to the agents, allowing agents to serve them faster and better.

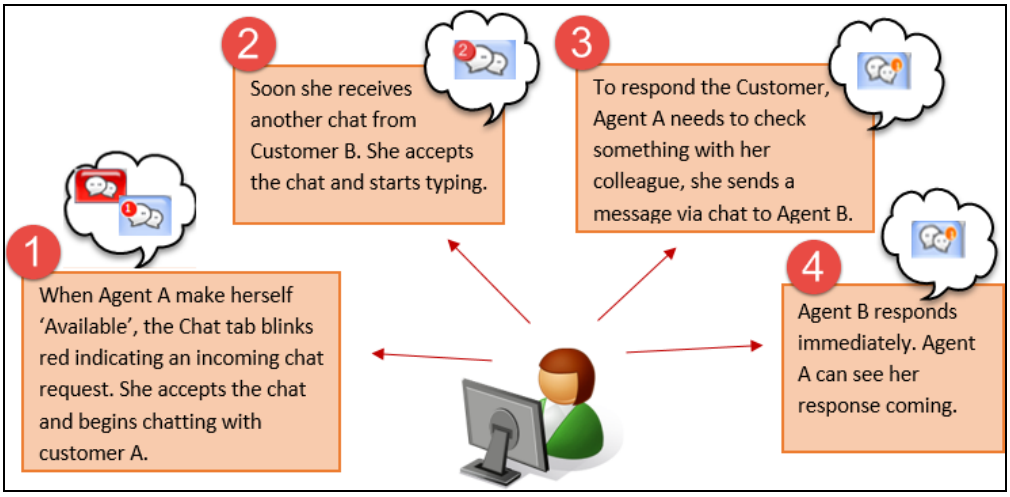
To complete this plan, Bob needs to:

- Create a Chat Form to place on the company's website in order to invite the customers to chat.
- Create a chat script to define the chat workflow.
- Enable AcmeJets agents to process multiple chats with customers and other agents on the same tenant. He knows that, by default, agents can handle only one chat at a time.
- Train his agents how to use Multi-Chat.

The following diagram represents configuration tasks Bob must do to get started with this project:



Here is what Bob has in mind for the agents:



To plan his work better, Bob has prepared the following checklist:

Task	Description	How to Complete	Completed
1	Create an online chat button to use during the business operational hours.	Create an online chat button	N/A
2	Create an offline chat button to direct visitors during offline hours.	Create an offline chat button	N/A
3	Create a chat invitation to proactively invite website visitors to a chat.	Design a chat invitation	N/A
4	Create a chat form to gather information from a customer before initiating a chat.	Design a chat form	✔
5	Create an Offline form to send an email message during chat offline hours.	Design a chat form	✔
6	Create a chat window to serve as the interface between the customer and the agent during the chat.	Design a chat window	N/A
7	Design the chat flow.	Create a chat script	✔

Task	Description	How to Complete	Completed
8	Enable agents to have more than one chat.	Configure Multi-Chat or number of concurrent chats	✔
9	Train agents to use Multi-Chat.	Handle multiple chats in Agent Console	✔

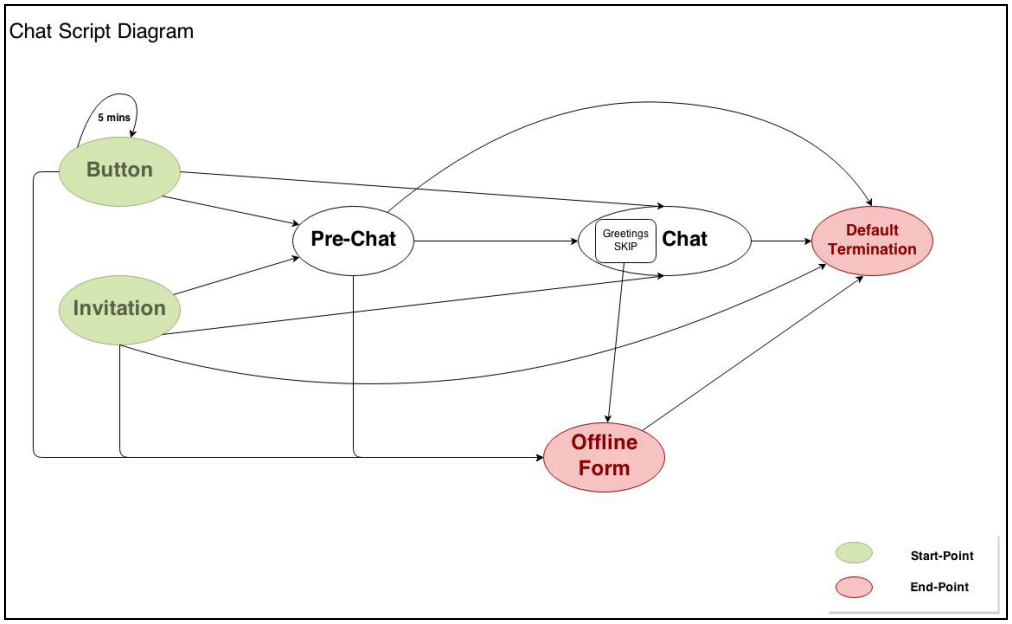
Configure Embedded Chat Design

The chat functionality in Virtual Contact Center is now enhanced with better chat workflow and design. With the new enhancement, you can design a custom chat to match your corporate requirements and create a custom chat script to control the chat flow.

A chat workflow can be represented as follows:

1. A customer visits a website.
2. A chat invitation pops up, proactively inviting the visitor to chat.
   OR
   The visitor clicks a chat button on the website to initiate a chat.
3. The visitor is then presented with a pre-chat survey form to collect some preliminary information.
4. The visitor fills and submits the information. Based on the information submitted, the system checks if it belongs to an existing customer.
5. An agent accepts the chat interaction, and begins a live chat session.
6. When the chat channel is offline, the visitor is presented with an option to send an email message using an offline form.
7. If the visitor drops out of a chat process, then the chat interaction enters a default termination.

The following image shows the chat script diagram:



8x8 Embedded Chat offers chat visual block elements used on your website for a chat interaction:

- **Button**: A chat button that initiates a chat interaction
- **Invitation**: A chat invitation that pops proactively, inviting website visitors for a chat
- **Form**: A pre-chat survey form that gathers customer information
- **Window**: A chat window used by the end user to chat with an agent

Configuring Embedded Chat Design involves:

- Designing a chat button
- Designing a chat invitation
- Designing a pre-chat survey form
- Designing a chat window

To configure Embedded Chat Design, log in to Configuration Manager and go to the Chat Design tab. You are ready to design visual elements for chat on your website.

Design a Chat Button

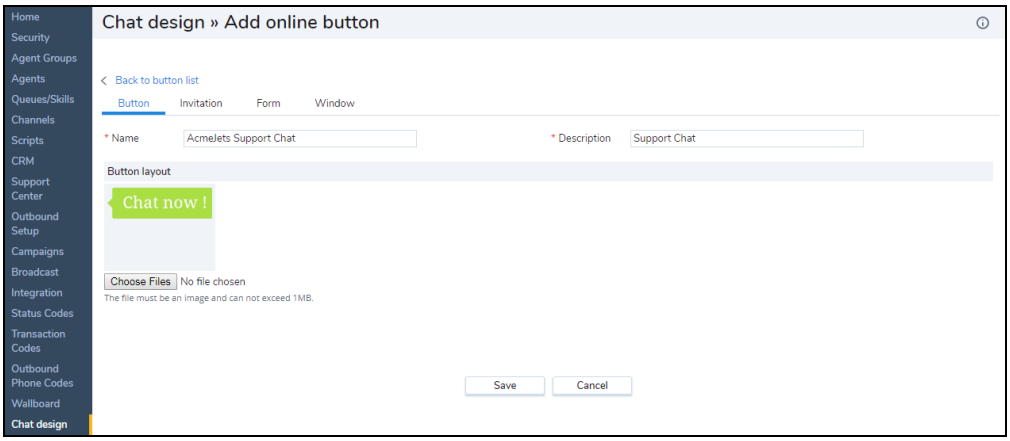
A chat button is an interface for a customer to initiate a chat. You can design a chat button to be offline or online. An online chat button can be used during the business operational hours for chat, while an offline button can be used to

direct visitors during offline hours. Chat design offers default offline and online chat buttons for use. To customize a chat button, you can create a new button from scratch, or copy a default button and make the desired changes.

To create an online chat button:

1. From the Configuration Menu, open **Chat Design**.
2. While in the **Button** tab, click ⊕ or **Online**.
3. Enter a **Name** and **Description** for the new chat button.
4. **Browse** and upload an image for the button.

> **Note:** The file size must not exceed 1 MB.



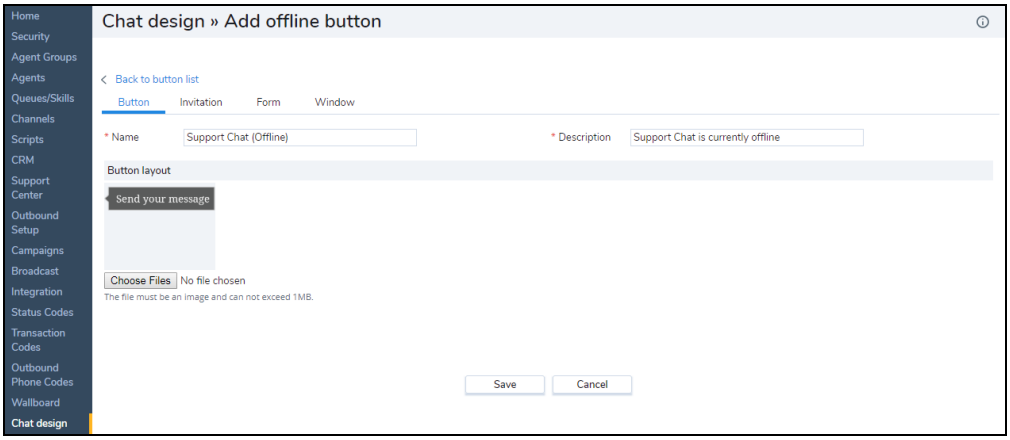
5. Click **Save** to create a new chat button.

To create an offline chat button:

1. From the Configuration Menu, open **Chat Design**.
2. While in the **Button** tab, click ⊕ or **Offline**.
3. Enter a **Name** and **Description** for the new offline chat button.

4. **Browse** and upload an image for the button.

> **Note:** The file size must not exceed 1 MB.



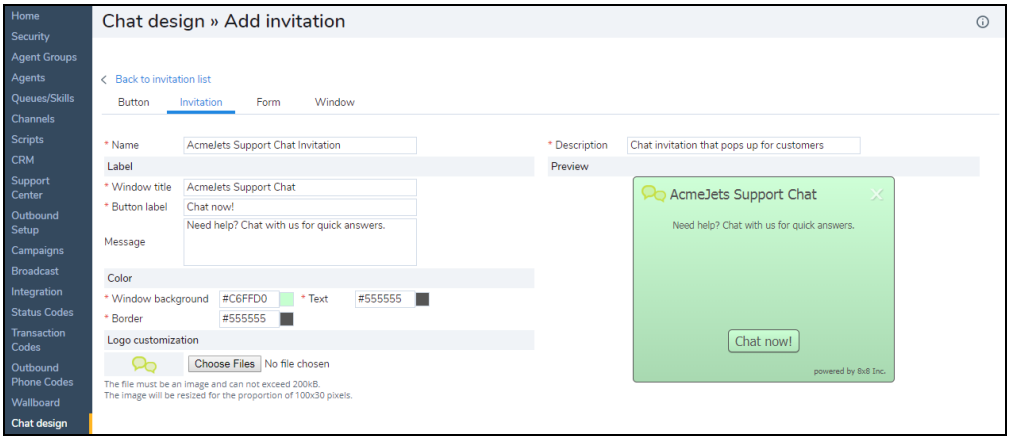
5. Click **Save** to create a new chat offline button.

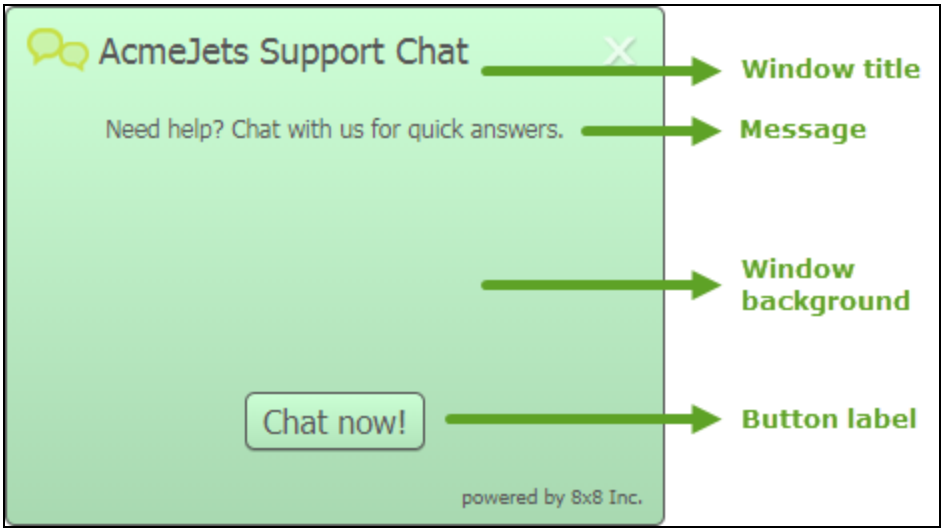
Design a Chat Invitation

A chat invitation serves to proactively invite website visitors to a chat. You can program and present the chat invitation to your website visitors after they have spent some time on the website. 8x8's chat design offers a default chat invitation. To create a custom chat invitation, you can build a new invitation from scratch, or copy a default invitation and make the desired changes.

To create a custom chat invitation:

1. From the Configuration Menu, open **Chat Design**.
2. Go to the **Invitation** tab.
3. Click ⊕ or **Add new invitation**.
4. Enter a **Name** and **Description** for the new chat button.
5. Add or change the user interface elements of the invitation by selecting the desired details.
   The chat invitation preview is shown.





6. Click **Save** when you are satisfied with look and feel of the invitation form.

Design a Chat Form

There are two types of chat forms: pre-chat survey forms and offline forms.

- A pre-chat survey form serves to gather information from a chat user before initiating a chat. Using the form, you can collect credentials, such as account number or case number, from an existing user. This information can be used to search for existing customer records in the Local CRM and present it when an agent accepts the chat.
- An offline form presents the option to send an email message during the chat's offline hours.

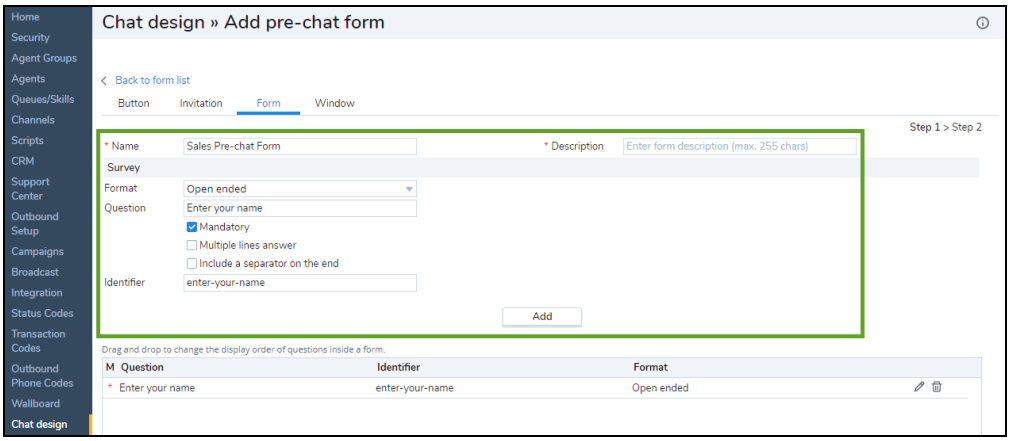
You can use the default form or create a custom form. To create a custom form, you can create a new form from scratch, or copy the default form and make the desired changes.

Pre-Chat Survey Form

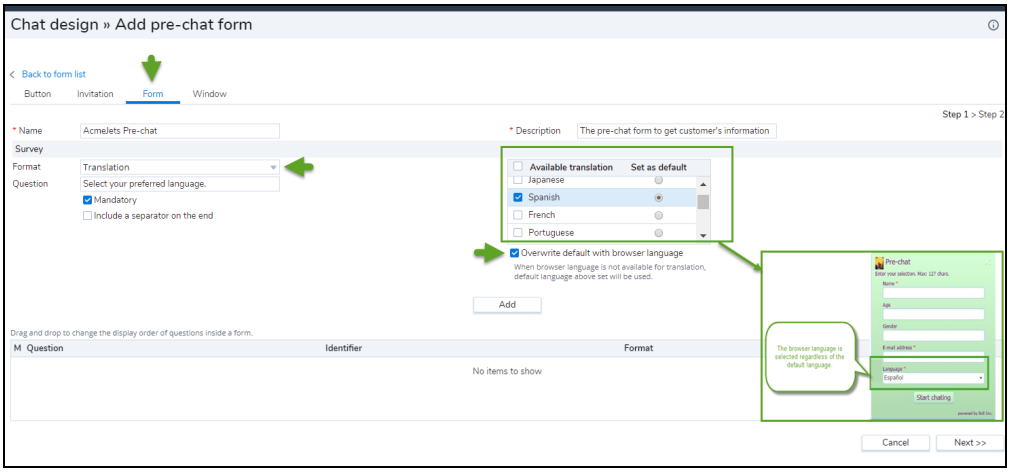
A pre-chat survey form can include questions with open-ended or preset answers. To design a pre-chat form, you must both add survey questions and design the visual details of the form.

To create a custom pre-chat form:

1. From the Configuration Menu, open **Chat Design**.
2. Go to the **Form** tab.
3. Click ⊕ or **Pre-Chat**.



4. Enter **Name** and **Description**.
5. Select a **Format** from the following choices:
   - **Translation**: Indicates a language choice question. It offers customers the languages that are supported in the chat, such as English, Russian, and German. You can select multiple language(s) for the customer to choose from, but only one of them can be **set as default**. When you select a language as default, that language is pre-selected in the pre-chat form offered to the customer. To make the browser language the priority language in the pre-chat form, you must **Overwrite default with browser language**.



When the browser language is not available for translation, the default language is used. If there is no default language and no browser overwrite, the customer has to select a language from the drop-down list.

For example, if the pre-chat default language is Spanish, and the customer's browser is also in Spanish, there is no need for the customer to select the language. However, if the pe-chat default language is set as Spanish, but the browser is in French, French becomes the new default language. If French language is not available for translation, Spanish will remain the default language.

- **CRM field**: Select from the available default or custom Local CRM fields.

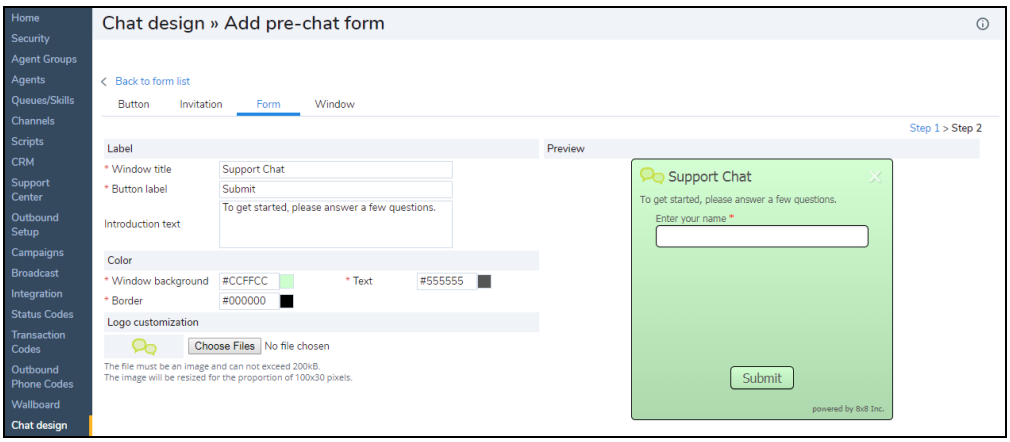
> **Note:** You are allowed to add only one CRM field and one translation question in a pre-chat survey form. Once you add the questions, the option is disabled in the Formats list. You can change or edit the questions at any time.

- **Open ended**: Add an open-ended question, such as <Enter your nickname>.
- **Single answer**: This is a multiple-choice question. You must provide choices and allow the chat user to select a single answer.

6. Enter the **Question**.
7. Select if the question is **Mandatory**.
8. Enter an **Identifier**. An identifier helps connect or map user-collected data from pre-chat forms across multiple languages. Identifiers do not apply to the **Translation** Format.

> **Note:** When editing an existing question, select the question and then enter an identifier.

9. Click **Add** to add the question to the survey form.
10. Repeat the above steps to add more questions.
11. Click **Next**.
    The second part of the **Form** page configuration requires you to specify the visual details of the form.



12. Add the desired visual requirements, such as window title, background color, and font color.

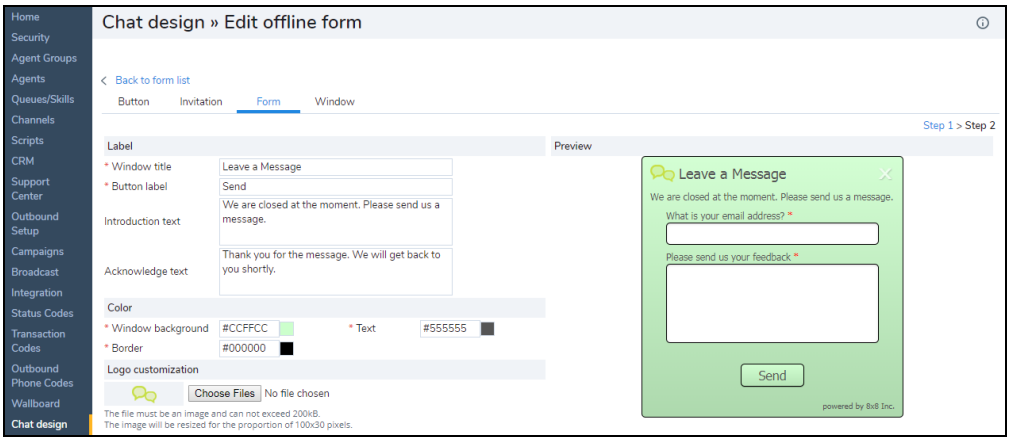
13. Click **Save**. Your custom pre-chat survey form is now ready.

Offline Form

The offline form is meant to interface with visitors who wish to send a message when the chat channel is offline.

To create a custom offline form:

1. From the Configuration Menu, open **Chat Design**.
2. Go to the **Form** tab.
3. Click ⊕ or **Offline**.
4. Enter **Name** and **Description**.
5. Select a **Format** from the following choices:
   - **CRM field**: Select from the available default or custom Local CRM fields.
   - **Open ended**: Add an open-ended question, such as <Enter your nickname>.
   - **Single answer**: This is a multiple-choice question. You must provide choices and allow the chat user to select a single answer.
6. Select if the question is **Mandatory**.
7. Click **Add** to add the question to the survey form.
8. Repeat the above steps to add more questions.
9. Click **Next**.
   The second part of the **Form** page configuration requires you to specify the visual details of the form.



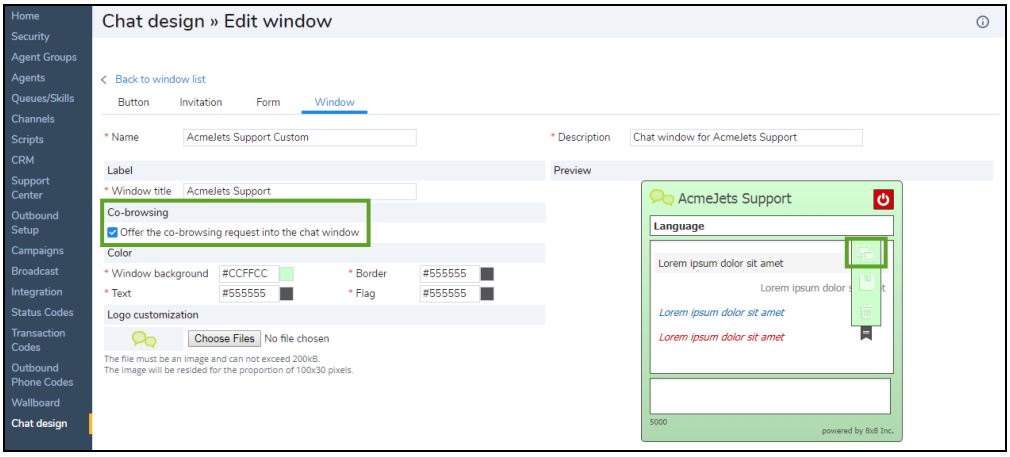
10. Add the desired visual requirements, such as window title, background color, and font color.
11. Click **Save**.

Design a Chat Window

The chat window is the interface between a customer and the agent during the chat. You can use the default chat window or create a custom window. To create a custom window, you can create a new form from scratch, or copy the default form and make the desired changes.

To create a custom chat window:

1. From the Configuration Menu, open **Chat Design**.
2. Go to the **Window** tab.
3. Click ⊕ or **Add New Window**.



4. Enter **Name** and **Description**.
5. Select **Offer the Co-browsing request into the Chat window**.
   Notice that **Start Co-browsing session** appears in the **Chat** window. For details regarding Co-browsing, see our content on Co-browsing via Chat.
6. Change the visual elements of the chat window as desired.
7. Click **Save**.
   You have defined all the Chat Visual Block (CVB) elements. The next step is to add them in a chat script to complete the workflow.

Create a Chat Script

A chat script defines the path of a chat interaction from its initiation until it is accepted by an agent. Using chat scripts, you can define how to present a chat, when to present it, what information you need to collect before initiating the chat, and which queue to direct the chat interaction to. You can create a new script and assign it to any number of channels. Chat scripts are grouped under Scripts > Chat in Configuration Manager. The enhanced chat script allows you to design and control the chat flow in a contact center. To see the chat workflow diagram, refer to Chat Overview.

In the use case discussed, Bob, a contact center administrator at AcmeJets, wants to define a chat workflow that allows website visitors to initiate a chat with friendly representatives from his company. To enable a smooth chat flow, Bob must create a chat script that enables the following workflow:

1. Allow web page visitors during business hours to click the chat button and initiate a chat.
   OR
   Invite visitors to chat once they have spent some time on the page.
2. When they click the chat button, present a short pre-chat form that helps identify the customer's interests.
3. Once the customer submits the pre-chat form, direct the chat interaction to an appropriate chat queue.
4. If the wait is too long, allow the customer to skip waiting in the queue and send an offline message.
5. Present the customer with a chat window they can use to interact with a representative.
6. Allow the visitor to send an email message, if reached during closed hours.

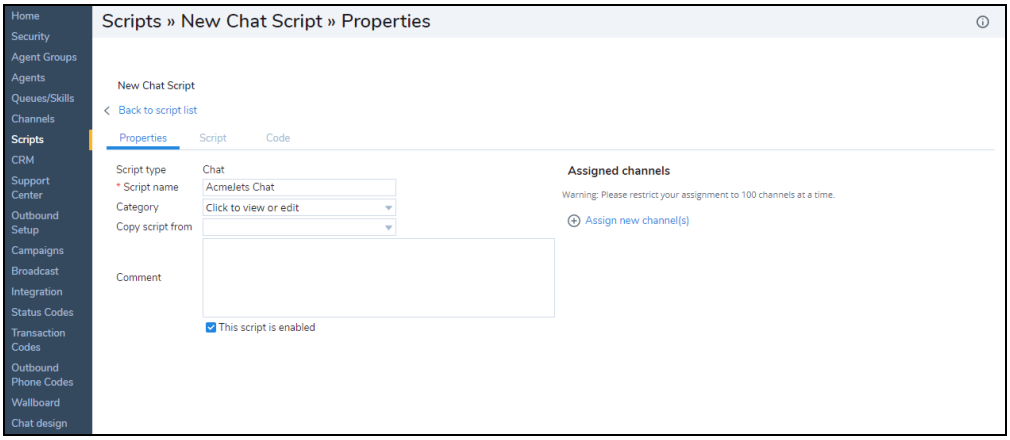
To achieve the above goals, Bob must create a chat script like the one below. The objects can be entered in any order, as Virtual Contact Center arranges them in the correct order.

To create a chat script:

1. From the Configuration Menu, open **Scripts**.
2. Go to the **Chat** tab.
3. Click ⊕ or **Add new chat script**.
4. Follow the steps below:

Configure Chat Script Properties

1. Go to the **Properties** tab.



2. Enter the properties for the script.

   The following table summarizes the options under **Scripts > Chat > Properties**:

Phone/ Chat/Email Script Property	Description
Script Type	■ **Phone:** Select a script type: Inbound phone, Post call survey, or Outbound phone. ■ **Chat and Email:** A read-only reminder of the script type. It displays if it is a phone, chat, or email script.
Script Name	Enter a unique name for the script.
Category	A category helps you organize your scripts better. For example, if you have multiple scripts serving Support and Sales needs, you can group scripts under separate categories. You can select an existing category or create a new one. **To create a new category:** 1. Select **Edit Categories** from the drop-down menu. 2. In the **Category** dialog box, add a new category by clicking ⊕.
Copy script from	Choose this option to place a copy of the default or an existing IVR script into this channel. This option appears when you are creating a new script.

Phone/ Chat/Email Script Property	Description
Comment	Add comments or additional notes, if desired.
This script is enabled	Select to place this script definition into service.
Assigned Channels /Assigned Queues	■ When you select **Script Type > Outbound Phone**, you must assign one or more new outbound phone queues. ■ When you select **Script Type > Post Call Survey** or **Script Type > Inbound phone**, you must assign one or more channels to the script. **Note:** It is not mandatory to assign a channel while creating a script. **To assign new channels:** 1. Click on the link to bring up the list of channels. 2. Select the desired channels from the list. 3. Click **Assign**. **Note:** All channels in the list are associated with a script whether default or user-defined. If you assign and save a new script, the old script is permanently replaced by the new selected script. **Note:** It is recommended to restrict your assignment to 100 channels at a time.

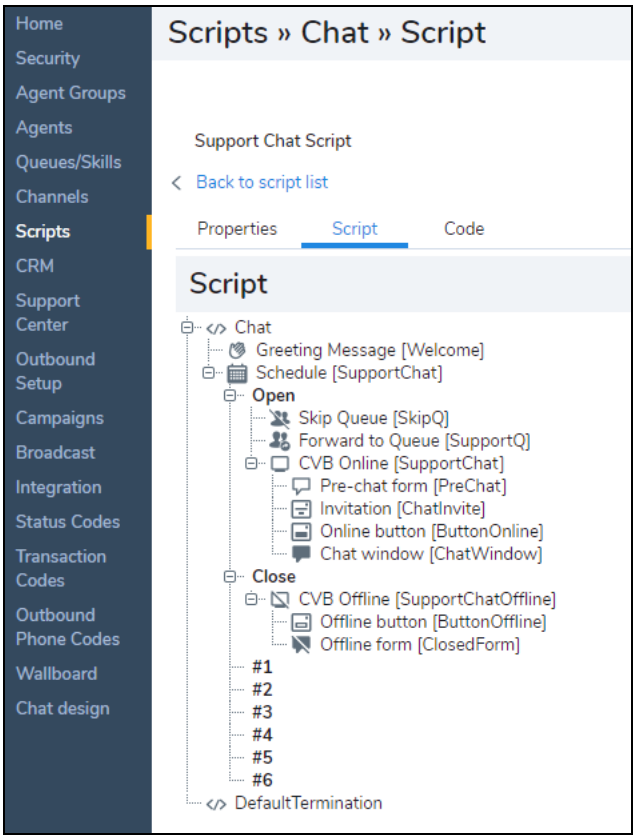
3. Click **Save**.

Create the Chat Script

1. Go to the **Script** tab.

2. Click **Chat**. The [add] option appears. For a complete list of objects and their descriptions, refer to Summary of Chat Script Objects.
3. Click **[add]**.
4. Select **Schedule** from the chat objects.
   This object performs a particular sequence of script operations when the contact center is open or closed.
   a. Enter a name for the **Object Tag**.
   b. Select an existing schedule from the list of **Select Schedule**.
   c. Click **OK**.
5. Click **[add]** next to **Open** and then:
   a. Select **Forward to Queue**, enter a name for the object tag, select a queue, and click **OK**.
      This object forwards a chat interaction to a specific chat queue, such as the sales or main queue.
   b. Select **CVB Online**, enter a name for the object tag, and click **OK**.
      CVB Online refers to a chat design element, such as a chat button, chat invitation, chat form, or chat window, which can be used on your website during the business hours.
   c. Select **Greeting Message** and click **OK**.
      This object displays the greeting message to invite customers to the chat session. Append <@skipQueue@> to your message to offer the option to skip queue in the chat window.
   d. Select **Skip queue**, enter the relevant parameters, and click **OK**.
      This object gives customers the option to opt out of waiting in the chat queue and send an email offline. It can only be triggered in the greeting message object.
6. For the **CVB Online**, click **[add]**:
   a. Select **Online button**, enter a name for the object tag, and click **OK**.
   b. Select **Invitation**, enter a name for the object tag, and click **OK**.
   c. Select **Pre-chat form**, enter a name for the object tag, and click **OK**.
   d. Select **Chat Window**, enter a name for the object tag, and click **OK**.
7. Click **Close**, then click **[add]**.
   a. Click **CVB Offline**, enter a name for the object tag, and click **OK**.
      This object refers to a chat design element, such as a chat button or chat form, that activates on your website during closed hours.
   b. Click **add offline button** next to **CVB Offline**, enter a name for the object tag, select a button, and click **OK**.
8. Click **Save** to save your chat script.

9. To edit the details, click any object and select **edit**. An edit window opens up. To view the details, double-click any object. The View details window appears. You can also click **edit** from inside the View details window.
10. To undo the changes click **Revert**.
11. Click the on the script page to generate a PDF image and save it locally. The PDF printout is generated containing the script name, date, and time of print. Supervisors and administrators can review and modify the script as needed.

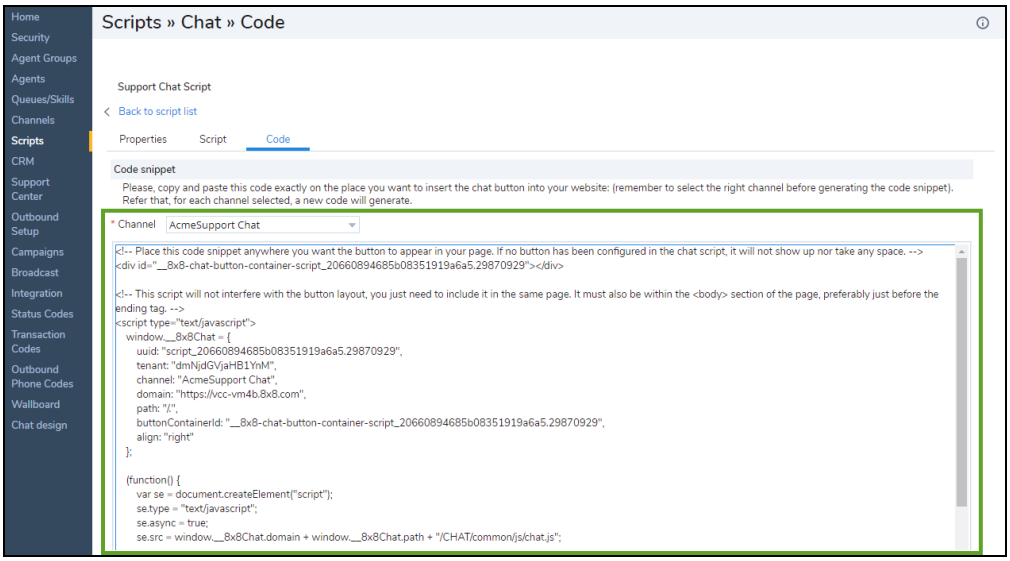


For details, refer to Summary of Chat Script Objects.

Note: As long as you have all the objects in the script, the sequence does not matter. Virtual Contact Center arranges the script in the correct order.

Run and Use the Script

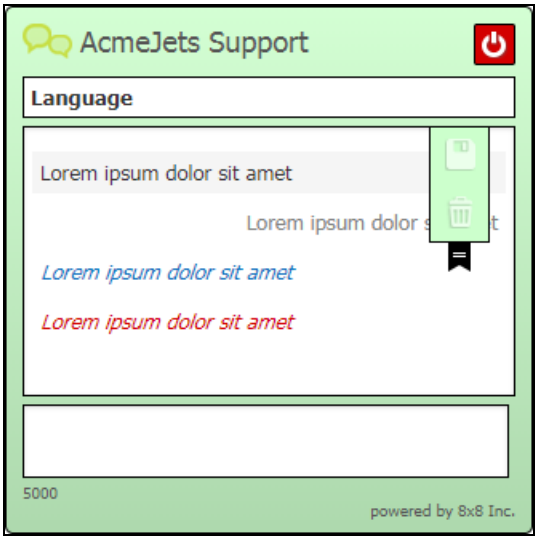
1. Go to the **Code** tab.
2. Select the **chat channel** from the list.



3. Click **Generate Code**. The code appears in the window.
4. Copy and paste the code to a page where you want to insert a chat button on your website.

Note: This script does not interfere with the button layout. It must be included in the same page and within the body section of the web page, preferably just before the ending tag.

5. Click the Chat button you just created. The **Chat** window opens.



See Chat Overview to learn about Embedded Chat Design.

Summary of Chat Script Objects

The following table summarizes the objects available in the Chat scripts configuration:

Chat Script Object	Description
Schedule	Use the **Schedule** object to perform a particular sequence of script operations when the contact center is either open or closed. Parameters: ■ In the **Label** text entry area, type the alphanumeric label used to uniquely identify the element in the IVR script. ■ Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Select schedule** list, choose a schedule definition. Exit points: The Schedule object uses the Select schedule value to transfer control to the script sequence specified within the following exit points: ■ **open** equals true if the phone interaction has been received within the selected schedule's open hours.

Chat Script Object	Description
	■ **close** equals true if the phone interaction has been received outside the selected schedule's open hours. ■ **#1** through **#6** equal true if the schedule specified in Select Schedule includes an exception condition, numbered 1 through 6, and today's date is within the exceptions from and to dates. For details on creating schedules, refer to Define Business Hours and Schedules.
Skip Queue	Use this object to give the customers the option to opt out of waiting in the chat queue and send an email offline. This option can only be triggered in the greeting message object. ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ **Email Prompt Msg**: The prompt message offered to a customer waiting in the chat queue. It can appear as a link in the chat window (for example, "All our agents are busy helping other customers. Would you like to send us an email?"). ■ **Select form**: Select an offline form from the list. An offline form presents an option to send an email message during the chat's offline hours. ■ **Send info by**: Shows whether you want to send the information you collected in the form using an email channel or a dedicated email. ○ **Email channel**: Select this option to choose an email channel. The email channel directs the customer's email to the right agent. ○ **Plain email**: Select a dedicated email to send the customer's email to. ■ **Email Channel**: If you choose to use a Channel, you must select an email channel from the list. ■ **Forced email header message**: Specifies the Subject line in the email message sent by a customer skipping the chat queue. Exit Point: None
Forward to Queue	Use the **Forward to queue** object to forward a chat interaction to a specific chat queue, such as the sales or main queue. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Queue name** list, choose the target chat queue to receive the chat.

Chat Script Object	Description
	Exit points: None
CVB Online	Chat Visual Block Online refers to a chat design element, such as a chat button or chat form which can be used on your website during business hours. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
CVB Off-line	Chat Visual Block Offline refers to a chat design element, such as a chat button or chat form that activates on your website during closed hours. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
CVB Default	Chat Visual Block Default refers to a chat design element, such as a chat button or chat form available by default from Virtual Contact Center. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None
Greeting Message	Use this object to type a greeting message to invite the customers to the chat session. Use @skipQueue@ to present the message that is previously set in the skip queue. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Greeting Message**, type the message you like to appear in the chat window. For example: <We will be with you shortly. click here to send an email.> ■ **Use auto-translation**: This option is selected by default and is used to automatically translate the greeting messages using Google Translate. If this option is disabled, you can bypass the automatic translation, and let the user provide a customized translation instead. Exit points: None

Chat Script Object	Description
Test Condition of Queue	Use the Test Queue object to check the condition of a queue before entering a queue. Test queue provides a set of conditions which, when met, trigger specified actions. The test queue object gives the IVR designer much more routing and announcement flexibility by allowing them to repeatedly test queue status. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. Labels can contain a maximum of 21 characters, and must be unique within a script. ■ In the **Queue name** list, choose the phone queue to test the condition. ■ Use the **Condition Matched** check boxes to determine routing choices based on agent availability or queue performance. ◦ To route the chat differently, or to provide the customer with choices when there is no qualified agent available to immediately accept the interaction, select **there are no enabled agents waiting**. ◦ To route the chat differently, or to provide the customer with choices when there is no qualified agent logged in to immediately accept the interaction, select **there are no assigned agents logged in**. Qualified agents refer to the agent setup to receive interactions from the queue specified in the **Queue name** list. ◦ To evaluate the condition of a selected queue, and route the chat based on the test results of that performance, select **Enable queue overload tests below**. Perform one or all of the following tests: ■ **Number of chats in queue ahead of this chat**: Enter the maximum number of chats that can be ahead of the current chat. ■ **there is a chat in this queue that has been waiting longer than (seconds)**: Enter the maximum time that a chat is waiting in the queue. ■ **the instantaneous expected wait-time calculation exceeds**: Enter a time duration in seconds. Exit points: Test Queue has two exit points: ■ **Condition Matched** ■ **Condition not Matched**

Chat Script Object	Description
	The Test Queue object transfers control to the script sequence specified under the exit points based on the following test results: ■ There are no enabled agents waiting in the queue. ■ There are no assigned agents logged in. ■ There are <n> number of chats in the queue ahead of this chat, where <n> is the number specified in the test. ■ There is a chat waiting longer than the specified time in the queue. ■ The instantaneous expected wait time calculation for a chat exceeds the specified time. The expected wait-time calculation is useful only when there are more than 20 qualified agents assigned to the queue and active. Mathematical uncertainty with fewer than 20 active similarly-skilled agents may produce unexpected results. Some of the many ways the exit points can be used are to trigger another test, provide the customer with a choice of waiting in a queue when no agent is available, leave a voicemail, or inform the customer of an approximate waiting time, and then forward to queue. For example, if there is a chat in the queue that has waited longer than 120 seconds, you can insert the Play object under the Condition matched exit point to play a message informing the customer of an expected waiting time for the chat to be answered. You can then use the Forward to Queue object to route the call to a queue.
Chat as a Pop-up	Allows the pop-up chat window to appear. The pop-up chat applies to the Pre-Chat Survey and the Chat Window options. Parameters: ■ In the **Object tag**, type the alphanumeric label used to uniquely identify the element in the script. The object tag can contain a maximum of 21 characters, and must be unique within a script. Exit points: None

Enable Co-Browsing via Chat

8x8 Co-browsing allows customer support agents to assist customers remotely via a shared browser. With Co-browsing, you can empower a website or any browser-based application, and offer live, hands-on assistance to customers. A customer in need of assistance must initiate the remote session, generate a unique session code, communicate it to an agent via phone or chat. The agent then uses the code to establish a remote session. Co-browsing session co-exists

with a call or a chat for communicating the session code. Agents and customers can request and or allow co-browsing sessions via chat.

To enable co-browsing for a chat session, administrator must enable this feature in Configuration Manager. To enable the co-browsing feature, go to **Chat Design > Window** and then select **Offer the Co-browsing request into the Chat window**. Notice that **Start Co-browsing session** appears in the **Chat** window. See How to design a chat window.

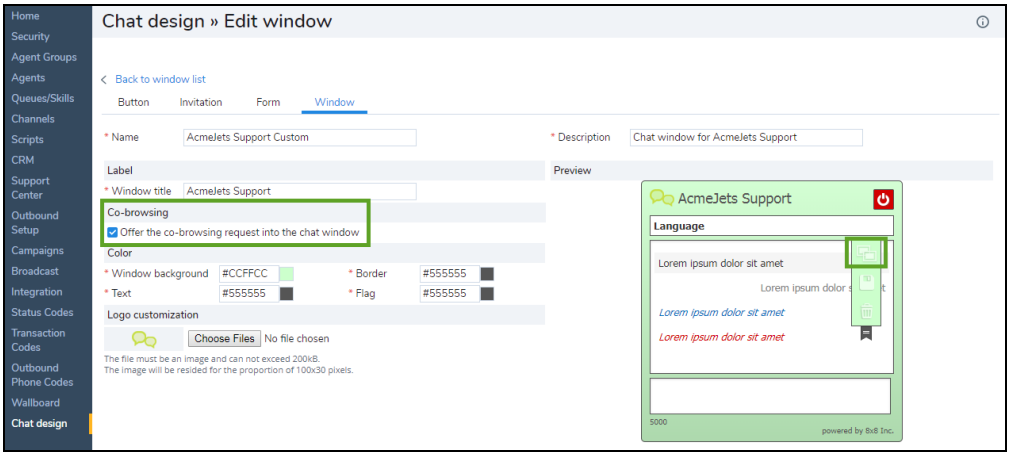
Enable Co-Browsing in Configuration Manager

To enable Co-browsing for a chat session, administrator must enable this feature in Configuration Manager.

To enable Co-browsing during a chat:

1. Log in to Configuration Manager.
2. Navigate to **Chat Design**.
3. Open **Window** tab.
4. Open an existing Chat window.
5. Select **Offer the Co-browsing request into the Chat window**.

   Notice that the Start Co-browsing session icon appears in the chat window.



6. Click **Save**.

   When this feature is enabled, both customers and agents can invite the other party to Co-browsing during a chat session. Once the administrator enables Co-browsing for chat, agents can invite customers for Co-browsing during a chat session in Agent Console. For details, see our content on Co-browsing in Agent guide.

Handle Multilingual Chats

An insurance customer in Rome, Italy initiates a chat with a support representative in New York. Using the automatic translation tool, the agent is able to handle the chat request in English while the customer uses their native Italian. The tool translates chat conversations between customers and agents, giving them the flexibility to communicate in their respective native languages. If this chat is handled by an agent who happens to speak Italian, they can choose to handle the conversation without the aid of the translation tool.

Virtual Contact Center introduces multilingual support for chat. With this enhancement, customers can choose to chat in any of the supported languages. Agents can handle customer chats in any of the supported languages they know or use automatic translation tool. Each Virtual Contact Center agent is associated with one primary and one or more secondary languages of fluency.

- If the chat request is in one of these languages, agents can chat in the requested language.
- If the chat request is not in their primary or secondary language, agents can use the automatic translation tool.

With Multilingual support for chat:

- Administrators can provide language choice in embedded chat.
- Customers can choose to chat in a language of their choice.
- Agents can handle customer chats in any of the supported languages.

Supported Languages

Virtual Contact Center offers chat translation support for:

English, Russian, German, Japanese, Spanish, French, Chinese, Portuguese, Italian, and Polish.

Configure Multilingual Support for Chat

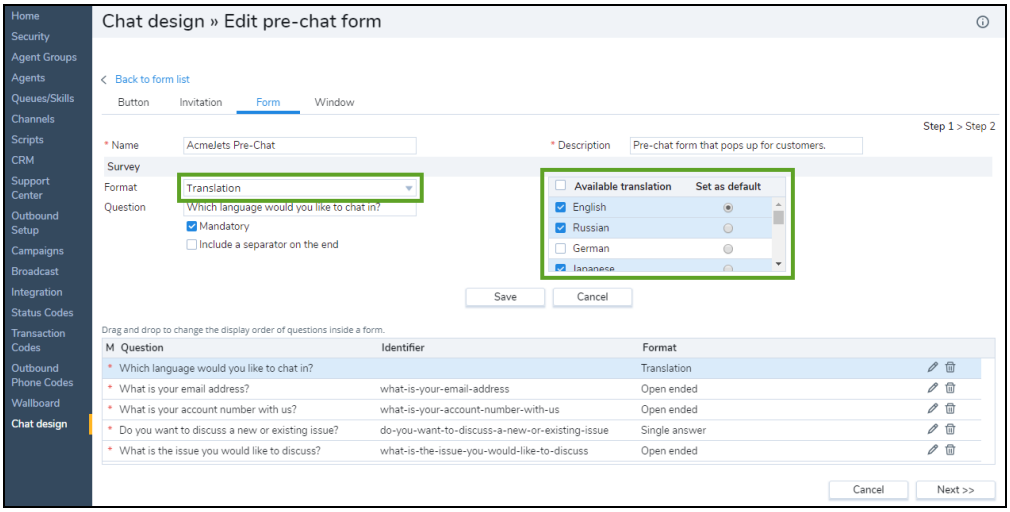
To configure multilingual support for chat, administrators must:

- Configure a pre-chat form in the embedded chat flow.
- Offer language choice for customers in the pre-chat form.
- Include the pre-chat form in the chat script that controls the chat flow.
- Indicate the primary and secondary languages of agents.

Step 1: Configure a pre-chat form to offer language choice.

In your embedded chat flow, you must add a pre-chat form which offers language choice for customers. Using this form, customers select a language to chat in. Follow the steps described here to design a pre-chat form.

1. From the Configuration Menu, open **Chat Design**.
2. Click the **Form** tab.
3. Select to edit an existing pre-chat form or create a new one. For details, refer to Design a Chat Form.
4. Select **Translation** under **Format**. This offers customers a language choice question. A list of languages supported for chat translation shows up.
5. Enter a **Question**, such as <Select a language you wish to chat in>.
6. Select the language choices that you want to offer your customers to chat in.
   You can choose the language for translation to be **Set as default**.



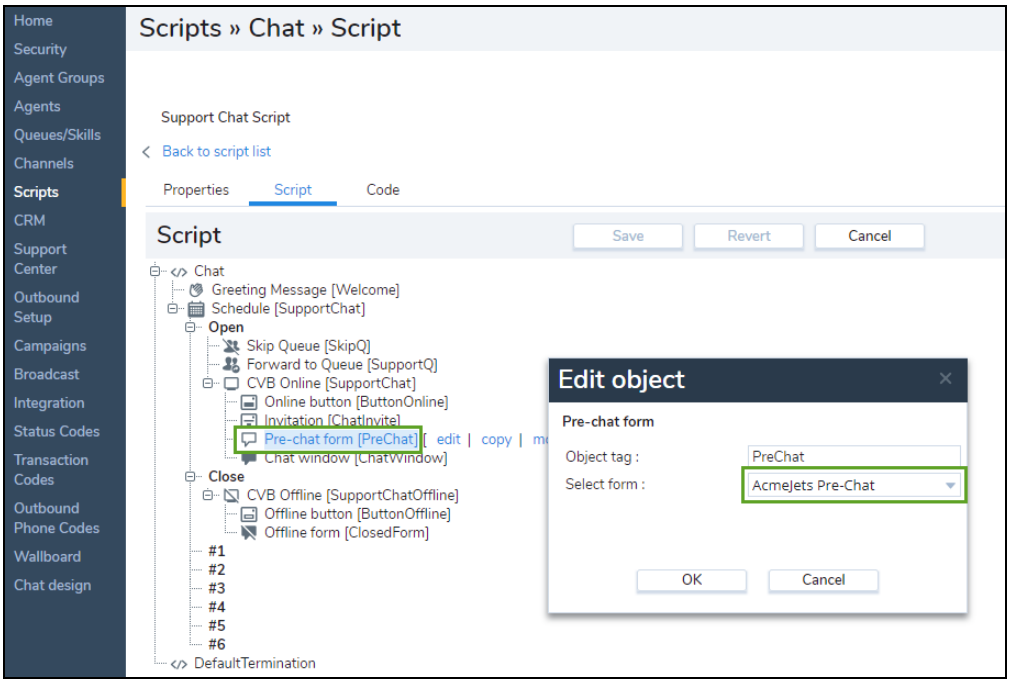
7. Click **Add**. The question is added to the form.
8. Add more questions as desired.
9. Click **Next** to define the visual details of the form.
10. Add the desired visual requirements, such as window title, background color, or font color.
11. Click **Save**. Your custom pre-chat form is now ready with the chat translation choice.

Step 2: Add or edit the chat script to include pre-chat form.

In this step, make sure the pre-chat form is included in the chat flow, which is controlled by a chat script. You must include a pre-chat form with the language choice in the chat script.

1. From the Configuration Menu, open **Scripts**.
2. Go to the **Chat** tab.
3. Edit or add a chat script. For details, refer to Create a Chat Script.

4. Under the **CVB Online** object, click **[add]**.
5. From the menu, select the pre-chat form you just created with the chat translation option.



6. **Save** the script.

> **Note:** Your chat script must contain a chat button to initiate chats, a pre-chat form to indicate language choice, a chat window for typing chat messages, and a chat queue to forward the chat requests.

7. Assign this script to the desired chat channel.

Step 3: Define primary and secondary language for agents.

Selecting a primary and one or more secondary languages for agents indicates their ability to chat in these languages. Automatic translation is available to agents based on their primary and secondary languages:

- If the language of the chat request matches the agent's primary language, automatic translation is disabled.
- If the language of the chat request matches the agent's secondary language, automatic translation is available but turned off. The agent can turn it on.

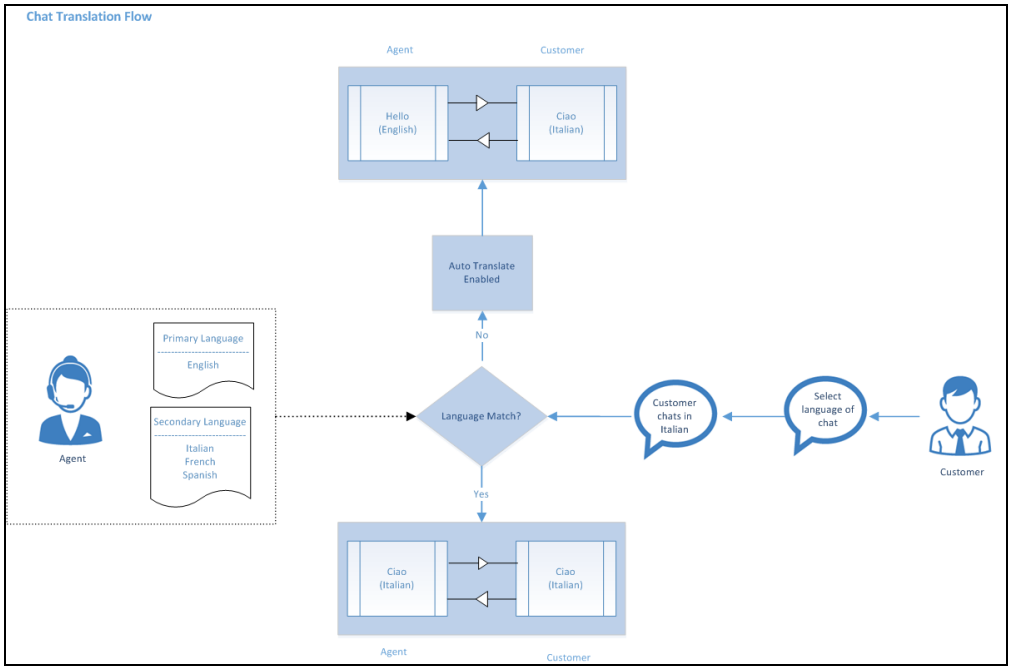
- If the language of the chat request doesn't match the agent's languages, automatic translation is turned on by default.

To indicate languages of fluency for users:

1. From the Configuration Menu, open **Agents**.
2. Select to edit an agent.
3. In the General tab, notice two fields:
   - **Primary Language**: Select a language of primary fluency. This is the default language of chat for users.
   - **Secondary Language**: Select one or more languages of secondary fluency. If a chat request is in any of the secondary languages, they can chat in this language or use the automatic translation tool.
4. **Save** the language settings.

Multilingual Chat Flow

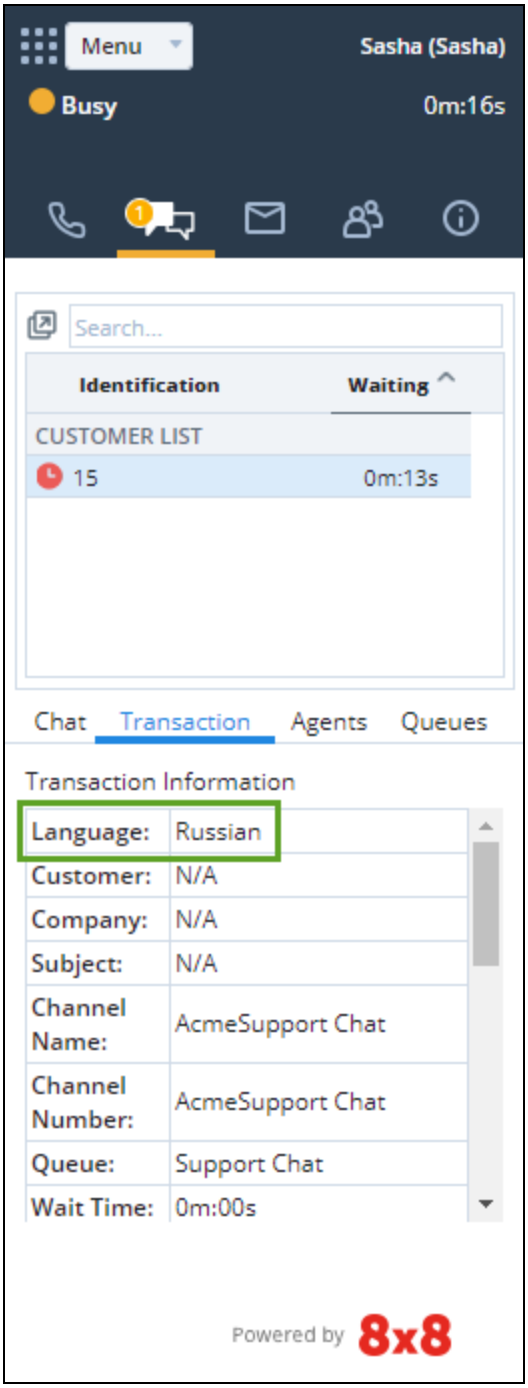
The multilingual chat flow can be represented as follows:



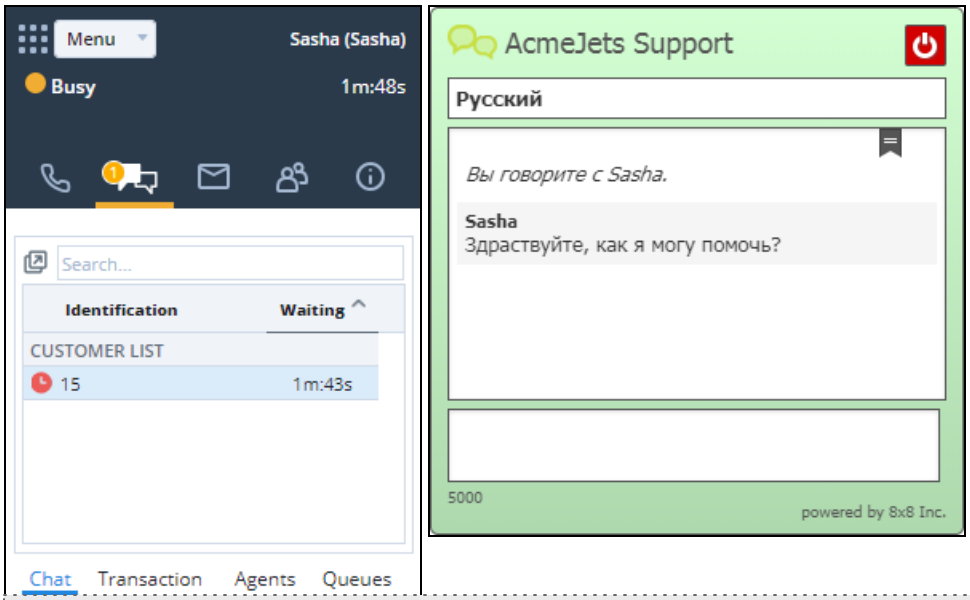
1. A customer visiting a website initiates a chat by clicking the chat button.
2. A pre-chat form is presented to the customer to indicate language choice.

3. The customer fills in the form, selects a language to chat in, and submits the chat request.
4. The request enters the chat queue in Virtual Contact Center and is offered to an agent.

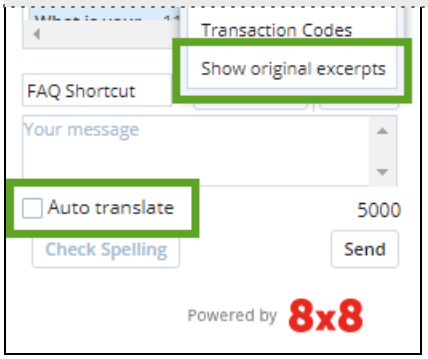
5. On receiving a chat, the control panel indicates the language of choice for the chat.



6. On accepting the chat, agents can process the chat using their language of fluency, or use the automatic translation tool.



Note: Automatic translation is available only in the absence of language match or a secondary language match. In case of primary language match, automatic translation is disabled.



7. By using the translation tool, messages from the customer are translated to agent's primary language, and vice versa.

GLOSSARY

A

Administrator

The person who uses the Configuration Manager to configure the contact center's resources and behaviors. An Administrator can be the Primary Administrator with unrestricted access to all the configuration objects or a Role Based Administrator with full or partical configuration rights.

Agent

Agents use the Agent Console to view and manage customer interactions. Virtual Contact Center supports Regular agents and Supervisor agents.

Agent Console

Virtual Contact Center's browser-based graphical user interface (GUI) used by Agents to manage customer interactions.

Application Programming Interface (API)

An application programming interface (API) defines the way an external program can request services from another program. See also, Virtual Contact Center Integrations.

Automatic Call Distribution (ACD)

ACD uses the number called and programmable call distribution logic to route incoming telephone calls to agents with the skills necessary to efficiently process the interaction.

Automatic Number Identification (ANI)

ANI identifies the origination number of a call offered to an Agent.

B

Billing Telephone Number (BTN)

For customers with multiple separate telephone numbers, the BTN consolidates those multiple numbers under a single phone number for billing purposes.

C

Call Treatment Choice

Refers to choices within a schedule which allows a time based selection of treatment choices when interactions enter a Virtual Contact Center tenant.

Caller Name (CNAM)

An enhanced Caller ID feature that displays both the number and name

for an incoming voice call. To provide the value-added CNAM service, the carrier uses the originating caller's phone number to locate the caller's name in the carriers' names database, then transmits both the number and name to the CNAM-enabled customer.

Calling Line Identifier (CLI)

The intended display number of the calling party. In some network configurations, the CLI contains the calling party's Billing Telephone Number (BTN) or Charged Party Number (CPN) to be displayed instead.

Channel

Phone, email, or Web chat interactions arrive at a tenant on a channel. Virtual Contact Center uses skills based routing rules to place interaction requests into the appropriate Queue.

Collaborate

See Desktop Sharing.

Computer Telephony Integration (CTI)

CTI allows data associated with an incoming call or chat request to be presented to the responding agent in real-time. Virtual Contact Center CTI typically presents this data as a "screen pop".

Configuration Manager (CM)

The portion of the Virtual Contact Center application used by the contact center's administrator to define and configure the resources and operational behaviors of the center's tenant.

CRM API

The CRM API component of the Virtual Contact Center Integrations enables third-party processes to access the internal CRM data.

Custom Role

An administrator defined role with custom privileges is called a custom role. Any role other than the system defined Super User role is referred to as the custom role.

Customer Relationship Management (CRM)

The Virtual Contact Center CRM stores the contact center's customer, case, and follow-up data. Numerous third-party CRM products also exist. Two examples of third-party CRM

applications are Salesforce and NetSuite.

D

Desktop Sharing

If authorized, an agent can use the Collaborate Desktop Sharing feature to view and control a customer's remote computer for purposes of providing assistance.

Direct Agent Access

In an IVR script, direct agent access permits a caller to reach an agent directly rather than through skills-based routing logic.

E

Email Script

A set of instructions that determine and direct the treatment and routing of an incoming email interaction.

G

Group

A group is a collection of agents created for management or reporting purposes. Groups can be functional (for example, Technical Support) or organizational (for example Supervisor Mary's Team). Each agent can be assigned to only one group, and cannot view or access information about other groups or group members.

I

Interactive Chat Response (ICR)

Interactive Chat Response specifies the message sent in response to a new chat interaction.

Interactive Voice Response (IVR)

IVR enables touch tones to guide customer interaction with the contact center. For example, an IVR script could direct a caller to Press 1 to be connected to Sales or Press 2 to be contacted to Support.

Intra Day Scheduler

Refers to the functionality of the tenant that allows creating multiple recurring choices within a day.

IVR Script

A set of instructions that prompts callers to choose options, then uses those choices to determine the optimal routing of an incoming phone interaction. See also, Interactive Voice Response.

O

Outbound Phone Codes

Outbound Phone codes offer a means to set a specific calling line identifier (caller ID) and optional outbound queue for outbound calls from your tenant. Outbound Phone Codes also may be used to track the purpose of an outbound call.

P

Primary Administrator

An adminstrator with unrestricted access to all the configuration objects in the Configuration Manager.

Q

Queue

A queue is an ordered collection of interactions waiting to be served by agents qualified to respond to these interactions. In addition to enabling the call center administrator to customize how incoming interactions are prioritized and routed, queues also ensure that interactions are never lost or discarded.

R

Reporting API

The Reporting API component of the Virtual Contact Center Integrations enables third-party processes to access statistical reporting data, and status information.

Responsible Organization (RespOrg)

The entity that controls and maintains a phone number. Telephone carriers are the most common type of RespOrg. 8x8's provisioning department processes the RespOrg orders required to direct your contact center's phone numbers to your Virtual Contact Center client

Role

A role defines a set of privileges to configure a Virtual Contact Center tenant. A role can be system defined or administrator defined.

Role Based Administrator

An administrator who assumes a role with full or partial configuration rights to the Virtual Contact Center.

Role Based Management

Role Based Management is the functionality of Virtual Contact Center that allows a tenant to distribute the configuration management functionality among multiple roles.

S

Screen Pop

The Screen Pop component of the Virtual Contact Center Integrations enables third-party CRMs to display information in the Agent Desktop. See also, Computer Telephony Integration.

Service Level Agreement (SLA)

A commitment to process some number of interactions within a specific period of time. Service Levels are generally defined as X percent of interactions answered within Y seconds measured over Z minutes. In the Configuration Manager, use a queue's SLA tab to generate an alert whenever interaction processing levels fall below a specified commitment level.

Skill

A qualification that associates a particular queue to an agent.

Skill Levels

For each agent, Virtual Contact Center uses high, medium, and low skill level identifiers to prioritize the distribution of interactions across the pool of available agents.

Status Codes

The Status Codes feature enables agents to supply supplemental information about why they changed their state. Status Codes provide enhanced workforce planning and management. For example, status codes could be created for different categories of breaks such as Break for Lunch, Break for Meeting, and so on.

Super User

The system defined role with unrestricted access to configure all administrative areas of the Configuration Manager. Primary Administrator inherits the Super User role automatically. Multiple administrators can be assigned to the Super User role. Privileges to the Super User role cannot be edited or revoked.

Supervisor

An agent with the supplementary privileges required to create FAQ categories and answers, monitor agent interactions in progress, listen to recordings of previous interactions, and create reports for the agents groups they supervise.

Support Center

In Configuration Manager, use the Support Center page to create customer-facing support Web page for your contact center, and specify the contact -- FAQs, desktop sharing, chat, email -- available from that page.

T

Tenant

Your unique and secure contact center instance running on a 8x8 platform. You use the Configuration Manager to create and configure all aspects of your contact center's resources and operational behaviors, including groups, incoming channels, queues, agents, routing scripts, skills, monitoring, recording, and reporting.

Transaction Code

The Transaction Codes feature enables agents to supply supplemental information about the reason for or outcome of an interaction. Transaction codes provide enhanced metrics or enable the calling line ID on an outbound call to be modified. For example, transaction codes could be created for different categories of sales activities such as Initial Contact, Prospect, Customer Satisfied, and so on.

Triggers

The Triggers component of the Virtual Contact Center Integrations invokes a remote third-party process whenever an agent creates, deletes, or edits internal CRM record.

V

Virtual Contact Center

A contact center that enables agents to be located in different geographical locations yet managed as if they were located in the same physical location.

Virtual Contact Center Integrations Suite

An optional package containing the CRM API, Screen Pop, Triggers, and Reporting API components.

Voice over IP (VoIP)

The use of the Internet Protocol (IP) to carry telephone calls.

W

Wallboard

The 8x8 Wallboard for Virtual Contact Center presents real time metrics of your contact center operations allowing supervisors to manage customer demand proactively.

Web Application Programming Interface (WAPI)

Deprecated term for the optional 8x8 Integrations package.

Weekly Schedule

Defines recurring day-of-week/time-of-day treatment choices. These are typically normal business hours. Schedules follow the defined weekly pattern unless superseded by date-specific Special Events.