Whisper Announcement

Capabilities

Whisper Announcement plays a brief, prerecorded message to an agent just before the agent connects with each caller. The announcement plays only to the agent; the caller hears ringing (based on existing ring tone patterns) while the announcement plays.

The content of the announcement can contain information about the caller that helps prepare the agent to handle the call. The information can include caller language preference, choices the caller made from a menu (Sales, Service), customer status (Platinum, Gold, Regular), and so on.

After Whisper Announcement is enabled, the played announcements are specified in the call routing scripts. The determination of which announcement to play is controlled in the script and is based on various inputs, such as the dialed number, a customer ID look up in your customer database, or selections you made from a VRU menu.

Functional Limitations

Whisper Announcement is subject to these limitations:

- Announcements do not play for outbound calls made by an agent. The announcement plays for inbound calls only.

- For Whisper Announcement to work with agent-to-agent calls, use the SendToVRU or TranslationRouteToVRU node before you transfer the call to the agent. Transfer the call to Unified CVP before you transfer the call to another agent. Then, Unified CVP can control the call and play the announcement, regardless of which node transfers the call to Unified CVP.

- Announcements do not play when the router selects the agent through a label node.

- CVP Refer Transfers do not support Whisper Announcement.

- Whisper Announcement supports Silent Monitoring with this exception: For Unified Communications Manager-based Silent Monitoring, supervisors cannot hear the announcements themselves. The supervisor desktop dims the Silent Monitor button while an announcement plays.

- Only one announcement can play for each call. While an announcement plays, you cannot put the call on hold, transfer, or conference; release the call; or request supervisor assistance. These features become available again after the announcement completes.

- The codec settings for Whisper Announcement recording and the agent's phone must match. For example, if Whisper Announcement is recorded in G.711 ALAW, the phone must also be at G.711 ALAW. If Whisper Announcement is recorded in G.729, the phone must support or connect using G.729.

- Forking happens in Gateway in NBR only when a caller is connected to the agent (with two-way audio). Whisper announcement is played only with one way audio with agent (before connecting to the caller).

- In an IPv6-enabled environment, Whisper Announcement might require extra Media Termination Points (MTPs).

Deployment Tasks

The following list shows the high-level tasks that are required to deploy Whisper Announcement. Individual steps are covered in more detail in later sections.

1. Ensure your deployment meets the baseline requirements for software, hardware, and configuration described in the System Requirements and Limitations section. See the *Solution Design Guide for Cisco Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html.

2. Create Whisper Announcement Audio Files, on page 2.

3. Deploy Whisper Announcement Audio Files to Media Server, on page 3.

4. Configure Whisper Service Dialed Numbers, on page 3.

5. Add Whisper Announcement to Routing Scripts, on page 5.

6. Fail-Safe Timeout for Whisper Announcement in Unified CCE, on page 7.

Example scripts that enable Whisper Announcement are installed with your system. For information about these scripts and how to access them, see Whisper Announcement Sample Scripts, on page 8.

Create Whisper Announcement Audio Files

You must create audio files for each different Whisper Announcement you want to use on your system; for example, "Sales, English" or "Soporte Técnico en Español." Create the files using the recording tool of your choice.

When recording your files, follow these rules:

- The media files must be in wave (.wav) format. Your wave files must match Unified CVP encoding and format requirements (G729, CCITT G.711 A-Law and U-law 8 kHz, 8 bit, mono).

- To avoid cutting off files when they are played, make sure they do not exceed the Whisper Announcement play limit (15 seconds).

- Test your audio files. Ensure that they are not cut off and that they are consistent in volume and tone.

- To reduce the likelihood of scripting errors, decide ahead of time on a file-naming convention that is easy for you and others to remember. For example, en_sales.wav, sp_support.wav.

Deploy Whisper Announcement Audio Files to Media Server

Deploy your whisper audio files to your Unified CVP media server using whatever file-transfer method you prefer. The most important consideration is where on the server to place the files. HTTP requests for media server audio files are constructed as

`http://<media_server>/<locale_directory>/<application_directory>/<file_name>.`

The CVP defaults for the locale and application directories are `en-us/app`. Unified CCE automatically adds `en-us/app` to the server name when making HTTP requests for media files.

For example, if:

- The script node that defines the media server has a value of `http://myserver.mydomain.com` and

- The script node that defines the audio file to play has a value of `en_sales.wav`

Then the HTTP request for the file is automatically constructed as

`http://myserver.mydomain.com/en-us/app/en_sales.wav`

If you store your files in a different locale and application directory, your routing scripts must include variable nodes that define those alternate locations. Make note of the directories in which you place your files and communicate the locations to your script authors.

Make sure that the directories in which you deploy your files have the appropriate permissions to allow Read access.

CVP with the Streaming Audio (Helix) and Whisper Announcement

You must set the **user.microapp.media_server** variable, to point to the whisper announcement .wav file, for the CVP Whisper Announcement feature to work while Streaming Audio feature (using Helix) is also on. This is achieved by setting the **Call.WhisperAnnouncement** variable to the complete URL of the whisper announcement wav file. The **Call.WhisperAnnouncement** variable should be put in using the `http://<VXMLserverip>:7000/CVP/audio/XXX.wav` URL format.

Using a Default Media Server

Optionally, CVP lets you define a default media server. (You do this in the CVP Operations Console; see your CVP documentation for more information.) If a default media server is defined in CVP, script authors need not identify the media server in their call routing scripts provided the files that they request are available from that server.

Configure Whisper Service Dialed Numbers

For Whisper Announcement, Unified CVP uses two different dialed numbers when transferring a call to an agent:

- The first number calls the ringtone service that the caller hears while the whisper plays to the agent. The CVP default for this number is 91919191.

- The second number calls the whisper itself. The Unified CVP default for this number is 9191919100.

Note   Whisper Announcement dialed number is always an extension of the Ringtone dialed number with an extra two zeros at the end.

For Whisper Announcement to work, your dial plan must include both of these numbers. The easiest way to ensure coverage is through the use of wild cards such as 9191*.

Configure Dialed Numbers

You configure the dialed numbers for Whisper Announcement in the Unified CVP Operations Console at **System** > **Dialed Number Pattern** > **Add new**. For the Dialed Number Pattern Types, select **Enable Local Static Route**. Once **Enable Local Static Route** is checked, select either **Route to Device** or **Route to SIP Server Group** for VXML gateways. Then save and deploy the dialed number.

It may be necessary to override the dialed number plan for the default Whisper DN, if the default DN conflicts with the overall dial number plan.

Change the Whisper Announcement Default Dialed Number

To override the DN pattern from the SIP subsystem level in CVP OAMP:

Procedure

Step 1	Select **Device Management > Unified CVP Server**.
Step 2	Select the Call Server on which to override the default whisper DN.
Step 3	Select the SIP tab.
Step 4	Override the default value of 91919191 configured under the **DN on the Gateway to play the ringtone** field.
Step 5	Click **Save & Deploy**.

Configure Ringtone Dialed Number

To configure the Ringtone dialed number in the CVP Operations Console:

1. Select **Device Management** > **Unified CVP Server**.

2. Select the Call Server on which you want to configure the settings.

3. Select the SIP tab.

4. In the **DN on the Gateway to play the ringtone** field, configure the default Ringtone dialed number Pattern.

Dialed Number in the Dial-Peer

In addition to configuring the dial plan in Unified CVP, examine your IOS dial-peer. Make sure that the dialed number setting in your dial-peer configuration accommodates both of the whisper service dialed numbers.

Add Whisper Announcement to Routing Scripts

To enable Whisper Announcements, use the Script Editor to modify your routing scripts as follows:

- Specify the WhisperAnnouncement call variable

- Specify the Unified CVP media server and location of whisper audio files

- Specify other required variables

Specify WhisperAnnouncement Call Variable

To include Whisper Announcement in a script, insert a Set Variable node that references the WhisperAnnouncement call variable. The WhisperAnnouncement variable causes a whisper to play and specifies the audio file it should use. Typically, you use a single whisper prompt for a single call type. As a result, you use only one WhisperAnnouncement set node for each script. However, as needed, you can set the variable at multiple places in your scripts to allow different announcements to play for different endpoints. For example, for skills-based routing, you can specify the variable at each decision point used to select a particular skill group or Precision Queue.

Note   Only one Whisper Announcement can play for each call. If a script references and sets the WhisperAnnouncement variable more than once in a single path through a script, the last value to be set is the one that plays.

Use these settings in the Set Variable node for Whisper Announcement:

- Object Type: Call.

- Variable: Must use the WhisperAnnouncement variable.

- Value: Specify the filename of the whisper file. For example: "my_whisper.wav" or "my_whisper".

  - Specify the filename only, not its path.

  - You must enclose the filename in quotation marks.

  - The filename is not case sensitive.

  - The filename cannot include spaces or characters that require URL encoding.

  - The .wav extension is optional. If you omit it, Unified CVP adds it automatically in the HTTP request.

Specify Unified CVP Media Server Information

If you define a default media server in your CVP Operations Console and it is the server from which you serve your whisper files, then you need not specify the media server in your routing scripts. However, if you do not define a default media server, or if you store your whisper file on a server other than the default, then your scripts must include a Set Variable node that identifies that server.

To specify your media server, use the following settings in the Set Variable node:

- Object Type: Call.

- Variable: Must use the user.microapp.media_server ECC variable.

- Value: Specify the HTTP path to the server. For example: "http://myserver.mydomain.net." You must enclose the path in quotes.

- Alternately you can specify an IP address in place of a DNS. Include the listening port number if the media server web server listens on a port other than 80 (for HTTP) or 443 (for HTTPS).

Specify Whisper File Locale and Application Directories

CVP uses a default storage directory for media files: <web_server_root>/en-us/app. To take advantage of this, Unified CCE call routing scripts automatically add "en-us/app," to the server name when constructing HTTP requests for media files. For example:

- If the script node that defines the media server has a value of "http://myserver.mydomain.com" and...

- The script node that defines which audio file to play has a value of "en_sales.wav," then...

- The HTTP request for the file is automatically constructed as

http://myserver.mydomain.com/en-us/app/en_sales.wav

If your whisper audio files are stored in a different locale directory, you must add a Set Variable node to your script that identifies the locale directory. Similarly, if your whisper files are stored in a different application directory, you must add a Set Variable node that identifies that directory.

Specify Locale Directory

Use these settings in the Set Variable node to specify your locale directory:

- Object Type: Call.

- Variable: Must use the user.microapp.locale ECC variable.

- Value: Specify the directory name. For example: "pt-br," You must enclose the path in quotes.

Specify Application Directory

Use these settings in the Set Variable node to specify your application directory:

- Object Type: Call.

- Variable: Must use the user.microapp.app_media_lib ECC variable.

- Value: Specify the directory name. For example: to use a directory "wav_files" in place of the default directory "app," enter "wav_files." To use a sub-directory "wav_files" "app," enter "app/wav_files." You must enclose the path in quotes.

Variable Length for Media Server Locale and Application Directory Variables

If you do include Set Variable nodes for the media server, locale, or application directories, ensure that the values you set for them do not exceed the Maximum Length settings for their corresponding ECC variables.

For example, if you include a Set Variable node for the media server with a value of "http://mysubdomain.mydomain.co.uk," the string is 33 characters long. Therefore, the Maximum Length setting for the user.microapp.media_server ECC variable must be 33 or greater. If it is not, you must increase

the Maximum Length setting. Otherwise, the server name is truncated in the HTTP request for the file and the file is not found. You configure ECC variables in the Unified CCE Configuration Manager at List Tools > Expanded Call Variables List.

Test Whisper Announcement File Path

To test the path to the whisper file that you defined in you script variables, enter the complete URL into a browser. The .wav file should play. For example:

- If your script includes: default media server + default locale + default application directory + whisper.wav, then the path is "http://<default_media_server>/en-us/app/whisper.wav"

- If your script includes: http://my_server.my_domain.com + default locale + "app/wav_files" + whisper.wav, then the path is "http://my_server.my_domain.com/en-us/app/wav_files/whisper.wav"

Other Script Settings That Are Required for Whisper Announcement

These additional settings are required for Whisper Announcement to work:

- Enable Target Requery on all script nodes that follow the WhisperAnnouncement variable and target an agent. These include Queue (to Skill Group or Precision Queue), Queue Agent, Route Select, and Select. If Target Requery is not enabled, the Whisper Announcement does not play.

- When you run an agent transfer or a conference script, use a SendToVRU, a TranslationToVRU, or a Run Script Request node before you target an agent.

Fail-Safe Timeout for Whisper Announcement in Unified CCE

Unified CVP sends one message to Unified CCE each time a Whisper Announcement begins and a second message when the announcement ends. The time stamps from these messages are used to calculate Whisper Announcement data in Unified CCE reports.

If Unified CVP fails to send a Whisper Announcement end message toUnified CCE, the following occurs:

- Unified CCE cannot accurately calculate the whisper length, thus skewing report data.
- The agent cannot control the call (for example, put it on hold or transfer it) because these controls are disabled while a Whisper Announcement is playing.

To prevent this, Unified CCE has a Whisper Announcement timeout setting. The value for this setting represents the maximum Whisper Announcement play time that Unified CCE uses to calculate its report data.

The default is 20 seconds. This default is based on the default Whisper Announcement play time (specified in Unified CVP) of 15 seconds. The extra 5 seconds in the Unified CCE fail-safe timeout is a buffer against latency. If you modify the maximum Whisper Announcement play time in Unified CVP, modify the Unified CCE Whisper Announcement fail-safe timeout accordingly.

The Unified CCE Whisper Announcement fail-safe timeout value should be equal to or greater than the maximum Whisper Announcement play time setting in Unified CVP. Otherwise, Whisper Announcement play time in Unified CCE reports are under-reported.

To change the fail-safe timeout value, complete the following steps for theUnified CCE peripheral by using the PG explorer tool:

Procedure

Step 1 In Unified CCE Configuration, select **Tools** > **Explorer Tools** > **PG Explorer**.

Step 2 Click **Retrieve** to return a list of PGs (Peripheral Gateways).

Step 3 Double-click the agent PG to expand it, and select the peripheral with client type **CUCM** or **UCCE system**.

Step 4 On the **Peripheral** tab, enter the following text in the **Configuration Parameters** field:

```
/WHSTMOUT <value in seconds>
```

Step 5 Once you are finished, click **Save**.

Whisper Announcement Sample Scripts

Unified CCE includes sample routing scripts that demonstrate Whisper Announcement. You can use them as learning tools and as models for your own Whisper Announcement scripts. They are the following:

- **WA.ICMS**—This script plays a Whisper Announcement.

- **WA_AG.ICMS—**This script plays both a Whisper Announcement and an Agent Greeting to play on the same call flow.

The script files are located in the `c:\icm\bin` directory. In Unified CCE Script Editor, they are installed to the application root directory.

Note To use these scripts you must have a default media server configured in Unified CVP, and have the Whisper file stored in the default location on the media server. For that reason, they do not include variables that specify the media server, locale, or application directories.

WA.ICMS Script

This script sets up a Whisper Announcement by setting the Whisper Announcement variable to the desired wave file and then queuing the call to a skill group or Precision Queue. After an agent is selected from the skill group or Precision Queue and the call routed to the agent, the whisper plays to the agent.
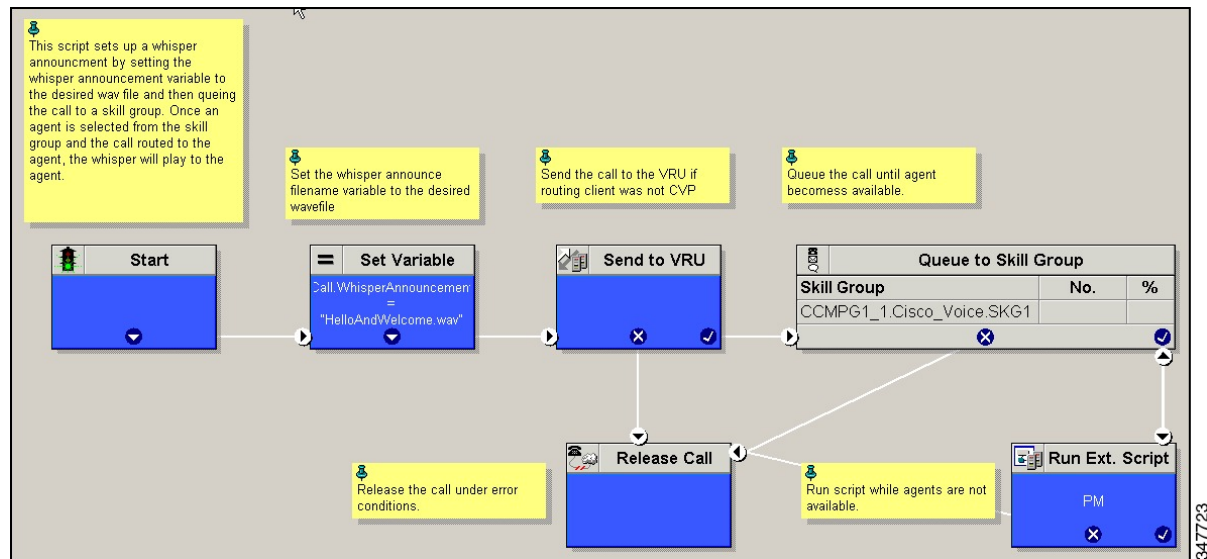
WA_AG.ICMS Script

This script causes both a Whisper Announcement and an Agent Greeting to play.
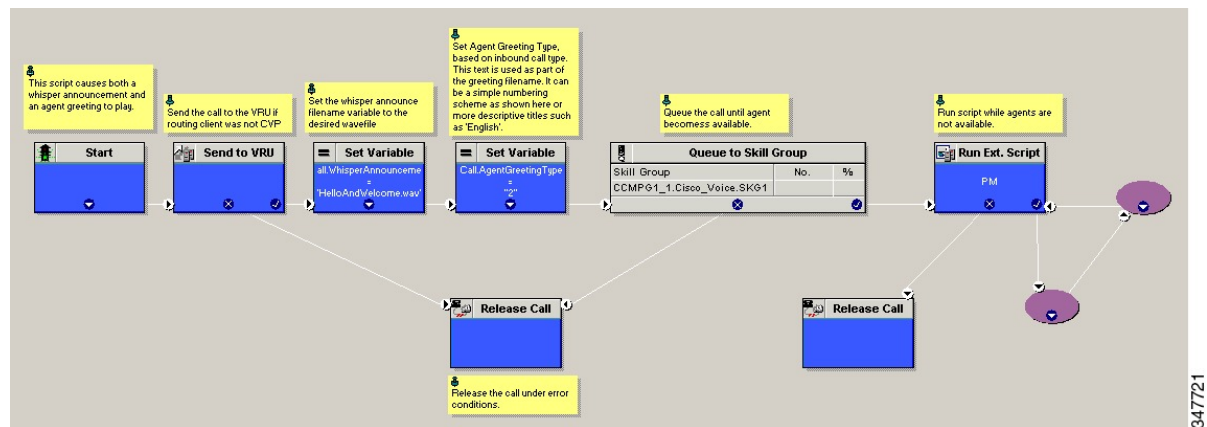
Import Sample Whisper Announcement Scripts

To view or use the sample Whisper Announcement scripts, you must first import them into Unified CCE Script Editor. Follow this procedure to import the scripts:

Procedure

Step 1   Open Script Editor.

Step 2   Select **File > Import Script** and select the first of the two scripts to import.

In addition to importing the script, Script Editor tries to map imported objects. Some objects that are referenced in the sample scripts, such as the external Network VRU scripts or the skill groups or Precision Queues, do not map successfully. You must create these maps manually or change these references to point to existing Network VRU scripts, skill groups, and Precision Queues in your system.

Step 3 Repeat steps 2 and 3 for the remaining script.

How Whisper Announcement Works

Whisper Announcement Audio File

You store and serve your Whisper Announcement audio files from the Cisco Unified Contact Center Enterprise (Unified CCE) media server. This feature supports only the wave (`.wav`) file type. The maximum play time for a Whisper Announcement is subject to a timeout. Playback terminates at the timeout regardless of the actual length of the audio file. The default timeout is 15 seconds. In practice, you may want your messages to be much shorter than that, 5 seconds or less, to shorten your call-handling time.

## While a Whisper Announcement Is Playing

Only one Whisper Announcement can play for each call. While a Whisper Announcement is playing, you cannot put the call on hold, transfer, conference, or release the call, or request supervisor assistance. These features become available again after the whisper is complete.

Whisper Announcement with Transfers and Conference Calls

When an agent transfers or initiates a conference call to another agent, the second agent hears an announcement if the second agent's number supports Whisper Announcement. In the case of consultative transfers or conferences, while the whisper plays, the caller hears whatever generally plays during hold. The first agent hears ringing. In the case of blind transfers, the caller hears ringing while the whisper announcement plays.

Whisper Announcement Call Flow

Following is a Whisper Announcement call flow diagram accompanied by a description of the steps.
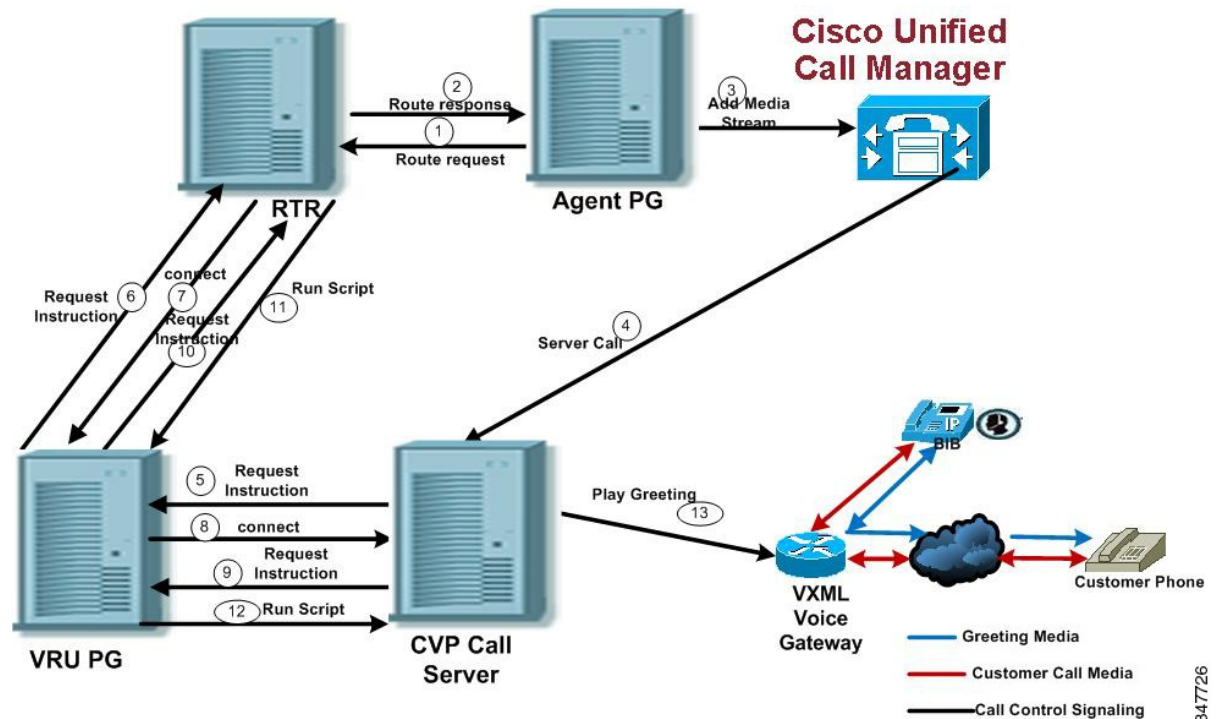
1. CVP receives a new call from the PSTN.

2 - 3. CVP sends the new call to the VRU PIM and the VRU PIM sends the new call to the Unified CCE router.

4. If an agent is available, the router reserves the agent.

5 - 6. The router sends a label with a whisper prompt to CVP.

7. CVP sends the call to Unified CM.

8 - 9. The agent receives and answers the call.

10. Unified CM sends the established event to the agent PIM. The agent PIM holds the event until the Whisper Announcement is done playing.

11. CVP tells the VXML gateway to play ringback to the caller and the Whisper Announcement to the agent. After the Whisper Announcement plays, CVP connects the agent to the customer and notifies Unified CCE.

12. The agent PIM gets notification that Whisper Announcement is complete and sends the established event to the agent desktop.

Reporting and Serviceability

Whisper time is not specifically broken out in Unified CCE reports. In agent, skill group, and Precision Queue reports, the period during which the announcement plays is reported as Reserved agent state time. In the Termination Call Detail records, it is treated as Ring Time.

Serviceability for Whisper Announcement includes system events to indicate reasons for Whisper Announcement failures and counters to track the number of failed whisper events.

Component Failure and Whisper Announcement

Failure to Access CVP Media Server

If the connection to the CVP media server fails, or if a requested whisper audio file cannot be found, the call proceeds without Whisper Announcement.

Whisper Announcement in Agent Desktop Software

No configuration is needed to integrate Whisper Announcement with agent desktop software. While a whisper is playing, software on the agent desktop shows the call in the Ring state. Desk phones show the call in the Talking state.

Using Agent Greeting with Whisper Announcement

You can use Agent Greeting along with the Whisper Announcement feature. Consider the following when you use them together:

- On the call, the Whisper Announcement always plays first before the greeting.

- To shorten your call-handling time, you may want to use shorter whispers and greetings than you might if you were using either feature by itself. A long whisper followed by a long greeting means a long wait before an agent handles a call.

- Usually, agents that use Whisper Announcement handle different types of calls: for example, "English, Gold Member, Activate Card, Spanish, Gold Member, Report Lost Card, English, Platinum Member, Account Inquiry." Ensure the greetings your agents record are generic enough to cover the range of customer calls they handle.