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## Change History

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<tr>
<th>Date</th>
<th>Change Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 05, 2018</td>
<td>Launch link information in example invitation template updated.</td>
</tr>
<tr>
<td>September 21, 2018</td>
<td>New version of guide for 2.4, branding license no longer required.</td>
</tr>
</tbody>
</table>
1 Introduction

The Cisco Meeting Server software can be hosted on specific servers based on Cisco Unified Computing Server (UCS) technology as well as on the Acano X-Series hardware, or on a specification-based VM server. Cisco Meeting Server is referred to as the Meeting Server throughout this document.

This document covers the features for customizing release 2.4 of the Meeting Server software. These features allow modification of the voice prompts, background images and logos, and the text shown in invitations.

It follows on from the appropriate Deployment Guide (see Figure 1).

Figure 1: Overview of guides covering the Meeting Server
1.1 What’s new or changed in Cisco Meeting Server 2.4 that affects customization

A license key is no longer required to apply single or multiple brandings, see Section 1.2.

1.2 What can be branded?

Some aspects of the participant experience of meetings hosted on Meeting Servers can be branded, they include:

- the WebRTC app sign in background image, sign in logo, text below sign in logo and the text on the browser tab,
- IVR messages,
- SIP/Lync call messages,
- some text on the meeting invitation.

From version 2.4, no license is required to apply single or multiple brands to these customizable features. If you apply a single brand with only a single set of resources specified (one WebRTC app sign in page, one set of voice prompts, one invitation text), then these resources are used for all spaces, IVRs and Web Bridges in the deployment. Multiple brandings allow different resources to be used for different spaces, IVRs and Web Bridges, the resources can be assigned at the system, tenant, space or IVR level.

Either use the API to apply a single branding or multiple brandings, or use the Web Admin interface if you only wish to apply a single brand to the IVR messages, SIP/Lync call messages or meeting invites.

**Note:** The WebRTC app sign in page cannot be rebranded using the Web Admin interface, nor can multiple brandings be applied via the Web Admin Interface.

1.3 Web Server Requirements

All the customizations described in this document require a directory on a web server on which .wav, jpg, png or archive (e.g. zip) files can be stored. The web server must be reachable by the Call Bridge, and must not require the Call Bridge to perform any form of HTTP authentication.

For more information on setting up the web server, see Section 5.1.

The import occurs when the Call Bridge first needs to use the customized files.

**Note:** If you require multiple brandings, for example one per tenant, then you need to deploy a separate Web Bridge for each branding. Each can be a standalone Web Bridge on a VM server.
1.4 Using this guide

Chapter 2 covers branding the WebRTC app. It details the elements that can be branded on the WebRTC app and explains how to customize the app with your branding.

Chapter 3 covers branding the images and messages that participants see and hear when dialing into an IVR or dialing directly into a space using a SIP endpoint or Lync.

Chapter 4 describes customizing the text shown in invitations which is sent to participants inviting them to join a call or space.

Chapter 5 provides a step by step procedure on customizing calls using the Chrome Postman application.

As an alternative to Chrome Postman, Appendix A details the steps on customizing calls using Firefox Poster and Chrome Advanced Rest Client.
2 WebRTC App Customization

Note: In version 2.3, the WebRTC app was redesigned to look similar to the new Cisco Meeting App 1.10. As a result, there have been changes to which elements can be rebranded.

From version 2.3, customizing the WebRTC app via the Web Admin interface is no longer permitted, it can only be rebranded via the API.

Use the API to customize these elements of the WebRTC app:
- sign in background image,
- sign in dialog box – icon displayed,
- sign in dialog box – text below icon (new in version 2.3)
- text on browser tab (new in version 2.3)

Note: From version 2.3, the colors of the sign in dialog box can no longer be rebranded.

Figure 2: WebRTC app assets

The branding files are held within an archive (zip) file stored on the web server. The location of this resourceArchive is set via the API (a POST method to the "/webBridges" node or a PUT to a "/webBridges/<web bridge id>").

The Call Bridge retrieves the archive file from the web server and pushes it to the Web Bridge to be served. In the event of a failure (for example, if the configured URI can't be reached) an alarm
is displayed in the Web Admin Interface and on the API "/system/alarms" node, but users can still log in using the WebRTC app.

2.1 File Properties and Names

The branding files must be placed together in an archive file such as a zip file. The total file size of the zipped file must be less than 1 MB, and the maximum decompressed size of anyone file is 512 KB. The zip file is retrieved by the Call Bridge and then used by the Web Bridge to brand the WebRTC app.

When you zip the files, do not zip the folder containing the branded files. If this is done, this will create an extra layer of folder (zipped file -> folder -> branded files). Instead, highlight the branded files and right-click to zip them (or open a zip application and zip the files together). This will create a zipped file with the branded files without creating an extra layer of folder (e.g. zipped file -> branded files).

For example, in Figure 3, WebRTC_client.zip folder contains the branded files so when configuring for Web Bridge customization (either via the Web Admin or API), you can use the path http://<webserver address>/Branding/webRTC_client.zip.

Figure 3: Creating zip file for WebRTC app assets

<table>
<thead>
<tr>
<th>Use</th>
<th>Filename to use (filenames are case sensitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign in page background image</td>
<td>sign_in_background.jpg</td>
</tr>
<tr>
<td>Sign in page logo</td>
<td>sign_in_logo.png</td>
</tr>
<tr>
<td>Text below sign in logo and text on browser tab</td>
<td>sign_in_settings.json</td>
</tr>
</tbody>
</table>
2.1.1 Sign-in page background image and logo

The background image must be in .jpg format and the logo file must be in .png format. Transparency in .png files is supported, and recommended, for the logo.

Maximum size for the background image is 1920 pixels wide and 1200 pixels high, and less than 500 kB in size. It will be scaled isotropically and then cropped at either the right or bottom to fit the browser window.

The recommended resolution for the logo image is 254 pixels wide by 64 pixels high; these dimensions fill the space to the edges of the Sign in box horizontally. This file must be less than 250 kB in size.

2.1.2 sign_in_settings.json parameters

**Note:** From version 2.3, the colors used for the Join call pane cannot be changed, specifying the parameters will have no effect.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>browserTabLabel</td>
<td>Text on browser tab (new in version 2.3). Recommend 20 characters or less.</td>
</tr>
<tr>
<td>panelLabel</td>
<td>Text below icon on sign in dialog box (new in version 2.3). Recommend 20 characters or less.</td>
</tr>
<tr>
<td>allowClient</td>
<td>Controls whether the option to &quot;Launch desktop application&quot; is displayed on the screen that displays different ways to join a meeting. Default is True.</td>
</tr>
<tr>
<td>allowWebRTC</td>
<td>Controls whether the option to &quot;Use this computer&quot; is displayed on the same screen. Default is True.</td>
</tr>
</tbody>
</table>

**Figure 4: Example contents of sign_in_settings.json**

```json
{
    "browserTabLabel" : "Cisco Meeting App",
    "panelLabel" : "Signing on",
    "allowClient" : "true",
    "allowWebRTC" : "true"
}
```

**Note:** The sign_in_settings.json file must use straight quotes. If your system uses smart quotes by default, you must change the setting.
2.2 Overview of Customization Procedure

The following steps provide an overview of the customization procedure, for a detailed procedure refer to Chapter 5.

1. Create a zip archive file containing these files:
   - sign_in_background.jpg
   - sign_in_logo.png
   - sign_in_settings.json

2. On the web server create a directory for the customization files and place the zip file in it.

3. Using the API, create a webBridge node specifying the resourceArchive field and URL on the web server where the zip file is held. (See the Section 5.2.2 for details). The Meeting Server uses these details to retrieve the zip file from the web server.

Note: you can only apply one archive file per Web Bridge.

Note: If you specify a port value in the path, this will be used in place of the default port values of :80 for http and :443 for https. If you do not specify a port value then the default value will be used. If you specify a port value make sure that the web server used in step 2 is listening on this port.
3 Call Customization

There are two types of call customization:

- Messages heard and image seen when dialing into an IVR
- Messages heard and images seen when dialing directly as a SIP (including Lync) call into a space on a Meeting Server

3.1 IVR Message Customization

The messages heard when calling an IVR can be customized via the API by using the ivrBrandingProfile. This profile replaces the Custom In-call Resources Location field in the Web Admin Interface Configuration > General page. This profile can be applied at the system level, on a per-tenant basis or for individual IVRs.

3.1.1 IVR Messages to be customized

The following table lists all the IVR messages required for and the associated filenames to use for the recordings.

Table 3: IVR messages for customization

<table>
<thead>
<tr>
<th>Text of message</th>
<th>Filename to use (filenames are case sensitive)</th>
<th>Played when ……</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please enter the call ID, followed by the ‘#’(pound) key.</td>
<td>ivr_id_entry.wav</td>
<td>dialling via IVR to enter a specific space</td>
</tr>
<tr>
<td>Unable to recognize that call ID. Please try again.</td>
<td>ivr_id_incorrect_try_again.wav</td>
<td>the incorrect call ID is entered to join the space</td>
</tr>
<tr>
<td>Please try again: this is your last attempt.</td>
<td>ivr_id_incorrect_final_attempt.wav</td>
<td>two incorrect pins/call ID’s have been entered to join the space</td>
</tr>
<tr>
<td>Unable to recognize that call ID. Goodbye.</td>
<td>ivr_id_incorrect_goodbye.wav</td>
<td>entering three incorrect call ID’s to join the space</td>
</tr>
<tr>
<td>Welcome to a Cisco meeting.</td>
<td>ivr_welcome.wav</td>
<td>joining a space</td>
</tr>
<tr>
<td>Unable to connect you. Goodbye.</td>
<td>ivr_timeout.wav</td>
<td>after dialling via IVR and not entering the call ID, the call times out</td>
</tr>
</tbody>
</table>

3.1.2 Recording format for IVR messages

Use audio files created with Audacity and saved as a single track PCM16, at 8, 16, 22.05, 32, 44.1 or 48 kHz sample rate, 16 bits per sample and mono. The file size for each recording must
be less than 400kB.

**Note:** We have not tested other audio tools and, if used, they may cause problems.

**Note:** It is not necessary to include any additional periods of silence at the start or end of these prompts.

### 3.1.3 IVR background image properties

The background image file must be .jpg format, less than 500kB in size and a maximum of 1920 pixels wide by 1200 pixels. Images will be centered, scaled and padded with black to preserve their aspect ratio. Progressive JPEG is not supported.

<table>
<thead>
<tr>
<th>Image use</th>
<th>Filename to use (filenames are case sensitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVR background image</td>
<td>ivr_background.jpg</td>
</tr>
</tbody>
</table>

### Table 4: IVR background image for customization

### 3.1.4 Overview of customization procedure

The following steps provide an overview of the customization procedure, for a detailed procedure refer to Chapter 5.

**Note:** Please ensure that your web server is configured correctly with the proper MIME type for the WAV and JPEG file extensions (e.g. audio/wav and image/jpeg MIME type).

1. On the web server create a directory for the IVR customization files and place in it all the files listed in Section 3.1.1 and Section 3.1.3. Do not zip these files
   
   Cisco have created an archive with their audio and video files, the zip files are downloadable from the Customization subsection on this web page. The files can be individually used when a mix of custom and default files are required. The necessary files must be copied into the directory. If any files are missing then no alternative or default file will be used in their place.

2. Using the API, create an ivrBrandingProfile specifying the resourceLocation field and URL on the web server where the customized ivr files are held. (See Section 5.2.4 for details). The Meeting Server uses these details to retrieve the files from the web server.

3. Use this ivrBrandingProfile to customize your calls on:
   
   a. a system level (that is, as part of the global systems profile)
   b. a per-tenant basis (as part of the tenant definition)
   c. a per-IVR basis (as part of an IVR definition)
Note: When IVR branding is applied at more than one level, then the lowest level ivrBrandingProfile defined is the one that it used in a call leg. Only the ivrBrandingProfile applied at the system level is used for single branding. See the Using Profiles section in the API Reference.

3.2 SIP/Lync Call Message Customization

This section describes how to customize the in-call experience when dialing into a Meeting Server space from a SIP or Lync endpoint.

To save wasteful re-fetching of customization files, the files are retained on the Call Bridge while they are in continuous use for one or more calls. Once the files have not been used by any call for 60 seconds, the files are discarded, and will be fetched again next time they are needed. If you change the background image or the audio messages, then the new images and audio files will not be utilized until any calls utilizing call branding have completed, and the files have been re-fetched.

3.2.1 Audio messages to be customized

The following list is all the audio messages required for and the associated filenames to use for the recordings.
Table 5: SIP call messages for customization

<table>
<thead>
<tr>
<th>Text of message</th>
<th>Filename to use (filenames are case sensitive)</th>
<th>Repeats for audio calls</th>
<th>Played when ……</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome to a Cisco meeting</td>
<td>welcome.wav</td>
<td>No</td>
<td>joining a call</td>
</tr>
<tr>
<td>I haven’t been able to connect you. Goodbye.</td>
<td>timeout.wav</td>
<td>No</td>
<td>after dialing via an IVR and not entering the call id, the call times out</td>
</tr>
<tr>
<td>Press ‘1’ to join the call.</td>
<td>call_join_confirmation.wav</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>You are joining the call now.</td>
<td>call_join.wav</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Hello. You are invited to a Cisco call.</td>
<td>call_outgoing_welcome.wav</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Press ‘1’ to enter the meeting.</td>
<td>cospace_join_confirmation.wav</td>
<td>No</td>
<td>calling a phone number from a space</td>
</tr>
<tr>
<td>You are entering the meeting now.</td>
<td>cospace_join.wav</td>
<td>No</td>
<td>after dialing the URI of a space from a SIP endpoint, or after dialing the IVR and entering the call ID of the space (plays after PIN if space has a PIN)</td>
</tr>
<tr>
<td>Hello. You are invited to a Cisco meeting.</td>
<td>cospace_outgoing_welcome.wav</td>
<td>No</td>
<td>calling a mobile from a space</td>
</tr>
<tr>
<td>You have been disconnected from the meeting</td>
<td>disconnected.wav</td>
<td>No</td>
<td>the participant has been disconnected from the meeting.</td>
</tr>
<tr>
<td>This meeting is being recorded</td>
<td>meeting_recorded.wav</td>
<td>No</td>
<td>recording starts or when joining a call that is being recorded</td>
</tr>
<tr>
<td>This meeting is no longer being recorded</td>
<td>meeting_recording_ended.wav</td>
<td>No</td>
<td>recording ends</td>
</tr>
<tr>
<td>This meeting is being streamed</td>
<td>meeting_streamed.wav</td>
<td>No</td>
<td>streaming starts (from version 2.1)</td>
</tr>
<tr>
<td>This meeting is no longer being streamed</td>
<td>meeting_streaming_ended.wav</td>
<td>No</td>
<td>streaming stops (from version 2.1)</td>
</tr>
<tr>
<td>Text of message</td>
<td>Filename to use (filenames are case sensitive)</td>
<td>Repeats for audio calls</td>
<td>Played when ......</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------------------------------</td>
<td>-------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Your meeting has ended</td>
<td>meetingEnded.wav</td>
<td>No</td>
<td>the meeting has ended.</td>
</tr>
<tr>
<td>You are the only participant</td>
<td>onlyParticipant.wav</td>
<td>Yes</td>
<td>there is only one participant in the meeting.</td>
</tr>
<tr>
<td>Please enter the PIN, followed by the '#'(pound) key.</td>
<td>passcodeEntry.wav</td>
<td>No</td>
<td>a PIN is required to enter the space</td>
</tr>
<tr>
<td>Please enter the PIN, followed by the '#'(pound) key.</td>
<td>passcodeOrBlankRequiredEntry.wav</td>
<td>No</td>
<td>a PIN is required for the host to enter the space as host, but guests only need to use the # (pound) key (from version 2.1)</td>
</tr>
<tr>
<td>Please enter the PIN, followed by the '#'(pound) key.</td>
<td>passcodeOrBlankTimeoutEntry.wav</td>
<td>No</td>
<td>a PIN is required for the host to enter the space as host, but guests join after a short timeout (from version 2.1)</td>
</tr>
<tr>
<td>That PIN isn’t correct. Please try again.</td>
<td>passcodeIncorrectTryAgain.wav</td>
<td>No</td>
<td>the incorrect PIN is entered to join the space</td>
</tr>
<tr>
<td>Please try again: this is your last attempt.</td>
<td>passcodeIncorrectFinalAttempt.wav</td>
<td>No</td>
<td>two incorrect PINs/call ID’s have been entered to join the space</td>
</tr>
<tr>
<td>That PIN isn’t correct. Goodbye.</td>
<td>passcodeIncorrectGoodbye.wav</td>
<td>No</td>
<td>after entering three incorrect PINs to join the space</td>
</tr>
<tr>
<td>Waiting for your host to join</td>
<td>waitingForHost.wav</td>
<td>Yes</td>
<td>while waiting for the meeting host to join</td>
</tr>
</tbody>
</table>

**Note:** The voice prompts labeled as repeating are played repeatedly for audio callers. They are played a single time for video callers. To prevent voice prompts that are repeated from sounding repetitive, record a quiet period (2 to 3 seconds, or longer if you want them to repeat less frequently) after the voice.

**Note:** participant_join.wav and participant_leave.wav are joining and leaving tones respectively, to indicate that a participant has joined or left the space; neither tone can be customized.

**Note:** If the format of a replacement audio file is invalid, then nothing will be played.

### 3.2.2 Recording format for audio messages

If you plan to record your own audio messages, then save each prompt as type “WAV (Microsoft) signed 16 bit PCM”. Audio files can be converted into the correct format using Audacity. The project rate should be one of 8000, 16000, 22050, 32000, 44100, 48000 Hz.

If creating files using another application, the output must be:
3.2.3 Background image properties

The background file must be in .jpg format, less than 500kB in size and a maximum of 1920 pixels wide and 1200 pixels high. Images will be centered, scaled and padded to preserve their aspect ratio. Progressive JPEG is not supported.

To enhance the pre-meeting experience for participants on SIP calls (including Lync), the Meeting Server supports two additional background images for the callBrandingProfiles API method, see Table 6.

Table 6: SIP call background image for customization

<table>
<thead>
<tr>
<th>Image use</th>
<th>Filename to use (filenames are case sensitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call logo</td>
<td>background.jpg</td>
</tr>
<tr>
<td>Screen can be shown when a PIN needs to be entered.</td>
<td>passcode_background.jpg</td>
</tr>
<tr>
<td>Screen can be shown when a PIN is required for the host to enter the space as host, but guests only need to use the # (pound) key (from version 2.1)</td>
<td>passcode_or_blank_required_background.jpg</td>
</tr>
<tr>
<td>Screen can be shown when a PIN is required to enter the coSpace as host, but guests join after a short timeout (from version 2.1)</td>
<td>passcode_or_blank_timeout_background.jpg</td>
</tr>
<tr>
<td>Screen can be shown when awaiting activation, (waiting for host to join, meeting needs to be unlocked etc).</td>
<td>deactivated_background.jpg</td>
</tr>
</tbody>
</table>

Note: The behaviour and choice of background image for /callBrandingProfiles does not affect the /ivrBrandingProfiles
3.2.4 Overview of customization procedure

The following steps provide an overview of the customization procedure, for a detailed procedure refer to Chapter 5.

**Note:** Please ensure that your web server is configured correctly with the proper MIME type for the WAV and JPEG file extensions (e.g. audio/wav and image/jpeg MIME type).

1. On the web server create a directory for the customization files and place in it all the files listed in Section 3.2.1 and Section 3.2.3. Do not zip these files.

   Cisco have created an archive with their audio and video files, the zip files are downloadable from the Customization subsection on this web page. The files can be individually used when a mix of custom and default files are required. The necessary files must be copied into the directory. If any files are missing then no alternative or default file will be used in their place.

2. Using the API, create a callBrandingProfile specifying the resourceLocation field and URL on the webserver where the customized files are held. (See Section 5.2.3 for details). The Meeting Server uses these details to retrieve the files from the web server.

   **Note:** If no resourceLocation is specified, then by default the Cisco logo will be used.

3. Use this callBrandingProfile to customize your SIP/Lync calls on:
   a. a system level (that is, as part of the global systems profile)
   b. a per-tenant basis (as part of the tenant definition)
   c. a per-space basis (as part of the space definition)

   **Note:** When call branding is applied at more than one level, then the lowest level callBrandingProfile defined is the one that it used in a call leg. Only the callBrandingProfile applied at the system level is used for single branding. See the Using Profiles section in the API Reference.

3.2.5 Missing and invalid files

Files missing from the web server and those with an invalid format are ignored unless the alternative or default file is available.

**Table 7: Alternative and default files**

<table>
<thead>
<tr>
<th>Missing or invalid file</th>
<th>Alternative or default file</th>
</tr>
</thead>
<tbody>
<tr>
<td>background.jpg</td>
<td>No alternative file, screen remains black.</td>
</tr>
<tr>
<td>passcode_background.jpg</td>
<td>background.jpg *</td>
</tr>
<tr>
<td>Missing or invalid file</td>
<td>Alternative or default file</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>passcode_or_blank_required_background.jpg</td>
<td>background.jpg *</td>
</tr>
<tr>
<td>passcode_or_blank_timeout_background.jpg</td>
<td>background.jpg *</td>
</tr>
<tr>
<td>deactivated_background.jpg</td>
<td>background.jpg *</td>
</tr>
<tr>
<td>welcome.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>timeout.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>call_join_confirmation.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>call_join.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>call_outgoing_welcome.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>cospace_join_confirmation.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>cospace_join.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>cospace_outgoing_welcome.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>disconnected.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>meeting_recorded.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>meeting_recording_ended.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>meeting_streamed.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>meeting_streaming_ended.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>meeting_ended.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>only_participant.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>participant_join.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>participant_leave.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_entry.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_or_blank_required_entry.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_or_blank_timeout_entry.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_incorrect_try_again.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_incorrect_final_attempt.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>passcode_incorrect_goodbye.wav</td>
<td>No alternative or default file **</td>
</tr>
<tr>
<td>waiting_for_host.wav</td>
<td>No alternative or default file **</td>
</tr>
</tbody>
</table>

**Note:** * You do not need to load multiple copies of background.jpg, the single file will be used automatically to replace the missing images.

**Note:** ** If this audio file is missing or format is invalid, then nothing will be played.
4 Customizing the text shown in invitations

Customization of the invitation text is done via the use of a template which the Cisco Meeting App requests from the Web Bridge. The templates are cached by the app so any changes to a template will not immediately appear in the app.

4.1 Creating the invitation_template.txt

Create an invitation_template.txt file in UTF-8 using the information in Section 4.1.1. An example that you can copy and customize is shown in Section 4.1.2.

4.1.1 Permitted conditional statements and placeholders

The template can contain both conditional statements and placeholders. This allows a single template to be used for multiple spaces and gives a consistent feel to the invitations.

The placeholders that are currently defined (each starts and ends with a % character) are listed in the table below:

Table 8: Placeholders in invitation template

<table>
<thead>
<tr>
<th>Placeholder</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>%name%</td>
<td>Conference name</td>
</tr>
<tr>
<td>%uri%</td>
<td>Dial-in URI of the conference</td>
</tr>
<tr>
<td>%numeric_id%</td>
<td>Numeric ID of the conference</td>
</tr>
<tr>
<td>%hyperlink%</td>
<td>Direct hyperlink to the conference on the web bridge</td>
</tr>
<tr>
<td>%passcode%</td>
<td>Numeric PIN for the conference</td>
</tr>
<tr>
<td>%%</td>
<td>Always replaced with %</td>
</tr>
</tbody>
</table>

**Note:** that any % within the text will be interpreted as the start of a placeholder. To insert a single ‘%’ in the text use the placeholder %%

<table>
<thead>
<tr>
<th>%launch_link%</th>
<th>Direct hyperlink to launch the conference in desktop or iOS Cisco Meeting App.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Note:</strong></td>
<td>If you are using Microsoft Outlook, add a &quot;url:&quot; prefix to the link so it can be recognised as hyperlink in Microsoft Outlook/email clients.</td>
</tr>
</tbody>
</table>

The following conditional statements are supported, see table below. They can be nested if required.
Table 9: Conditional statements in invitation template

<table>
<thead>
<tr>
<th>Conditional statement</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>#if condition</td>
<td>If the condition is true then include the lines until an else or endif statement. The condition section of this if statement takes the form of one of the placeholders. For example, “#if name”</td>
</tr>
<tr>
<td>#else</td>
<td>If the condition in the previous if statement was false then include the lines until an endif statement</td>
</tr>
<tr>
<td>#endif</td>
<td></td>
</tr>
</tbody>
</table>

4.1.2 Example invitation template

Note:

- There is a 10000 byte limit on the size of the invitation_template.txt file.
- All invitation templates must be provided in UTF-8 format.
- Extended ASCII characters are not supported.
- Terminate the invitation_template.txt file with a carriage return.
- Omitting the carriage return at the end of the file will result in the file not working.

Use the example below and customize with your specific values in the placeholders. Save it as invitation_template.txt.

```plaintext
#if name
You're invited to %name%
#else
You're invited to my Cisco space
#endif
#endif
#endif
```

```plaintext
#if hyperlink
  Click to join: %hyperlink%
#else
#if numeric_id
  Click to join: https://join.example.com
  Call ID: %numeric_id%
#else
Launch link not available
```
4 Customizing the text shown in invitations

#endif

#if uri
    Or call in:
    - Video system, Jabber or Lync: %uri%
#endif

#if numeric_id
    Phone Access: Call the regional access number, then enter %numeric_id%
    US Toll Free: (800)-555-1234
    UK Toll Free: 0800-800-8000
#endif

#if passcode
    Passcode: %passcode%
#endif

Note: %launch_link% placeholder should be included in the #if_hyperlink condition so it is included in the template if hyperlinks are enabled, and excluded if hyperlinks are disabled.

4.2 Overview of customization procedure

The following steps provide an overview of the customization procedure, for a detailed procedure refer to Chapter 5.

Note: All invitation templates must be provided in UTF-8 format. Extended ASCII characters are not supported

1. Create your invitation_template.txt file
2. On the web server create a directory for the customized invitation file and place the file invitation_template.txt into it.
3. Using the API, create a callBrandingProfile specifying the invitationTemplate field and URL on the web server where the template is held, you need to specify the full filename including the path to the file, for example: http://192.0.2.0/branding/invitation_template.txt. (See Section 5 for details). The Meeting Server uses these details to retrieve the template from the webserver.
4. Use this callBrandingProfile to customize invitations at:
   - a system level (that is, as part of the global systems profile)
   - a per-tenant basis (as part of the tenant definition)
   - a per-space basis (as part of the space definition)
**Note**: When the multi brands feature key is present and call branding is applied at more than one level, then the lowest level callBrandingProfile defined is the one that is used in a call leg. If the single brand feature key is present then only the system level callBrandingProfile is used. See the Using Profiles section in the API Reference.
5 Detailed Customization Procedure Using Postman

This section provides a step by step example of call branding using Microsoft Windows. It assumes that Microsoft Internet Information Services (IIS) Manager is installed with the latest patches on the web server that will host your call branding files.

5.1 Setting up the web server

1. On the web server create a directory structure under the default IIS Manager location c:\inetpub\wwwroot to hold the branding/custom files. The example below shows a Branding folder with four subfolders: Call_customization, Invitation_template, ivr_customization, webRTC_client.

   ![Folder Structure]

   - **Call_customization**
   - **Invitation_template**
   - **ivr_customization**
   - **webRTC_client**

2. Open IIS Manager and expand the Default Web Site. The newly created folders should show within the list.

   ![IIS Manager]

   - **Default Web Site**
     - **Branding**
       - **Call_customization**
       - **Invitation_template**
       - **ivr_customization**
       - **webRTC_client**
Note: If the newly created folders do not show within the list or your folders are outside of the standard IIS Manager location, you will need to create a new Virtual Directory. Within IIS, navigate to Default Web Site, right click and select Virtual Directory. Provide an Alias for this folder and browse for the physical path where the files will reside.

3. Place all the files into the folders, for the appropriate to the level of branding you intend to do.
   a. For WebRTC app customization these will be the zip files from Section .

   ![Folder Screenshot]

   Note: in the above screenshot the WebRTC_client customization files are zipped together by location.

   b. For ivr customization these will be the files from Section 3.1

   ![Folder Screenshot]

   ![File List]

   ![File List]
Note: the files for ivr customization are not zipped together.

c. For call customization these will be the files from Section 3.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>background</td>
<td>11/08/2015 15:01</td>
<td>JPEG image</td>
</tr>
<tr>
<td>call_join.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>call_join_confirmation.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>call_outgoing_welcome.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>cospace_join.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>cospace_join_confirmation.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>cospace_outgoing_welcome.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>disconnected.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>meeting_ended.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>only_participant.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>passcode_entry.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>passcode_incorrect_final_attempt.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>passcode_incorrect_goodbye.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>passcode_incorrect_try_again.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>timeout.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>waiting_for_host.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
<tr>
<td>welcome.wav</td>
<td>11/08/2015 15:01</td>
<td>WAV File</td>
</tr>
</tbody>
</table>

Note: the files for call customization are not zipped together.

d. For the invitation template, this will be the file you created from Chapter 4.
4. Verify the web service is working. Open a browser and enter the full URL for the background image file used to customize the WebRTC app, including the file name background.jpg to see if the file opens. For example:

![Background Image](background.jpg)

5.2 Using the API for branding

The remainder of this chapter covers using the Chrome tool Postman, to brand the WebRTC app, IVR, SIP calls and apply custom invitations. Appendix A details the steps to applying call customization to SIP calls using Firefox Poster, and the Chrome Advanced Rest Client.

5.2.1 Installing Chrome Postman

5. Install Postman into Chrome (if not already installed) by opening the Apps button in the upper left corner. If Postman is already installed go to step 10.

6. Click on Web Store to open the Chrome App Store
7. Enter Postman in the Search field and press Enter.

8. Install Postman – REST Client by clicking on the + FREE button to the right

9. Click Add to continue with the installation

Once installed, Postman – REST Client will appear on the Apps page
10. Open Postman by clicking on the Icon from within the Apps page of Chrome

![Postman Icon](image)

11. Select the Basic Auth tab and enter the Username and Password for the API of the Meeting Server. Click Refresh headers. Enter the URL of the Meeting Server and press SEND

![Postman Basic Auth](image)

A 200 OK Response should be returned.

![Response Status](image)

**Note:** if you have difficulty logging in, then try to log into the Web Admin interface, accept any certificate warnings and add them as a permanent exception. (If you do not do this and there is a certificate warning, Poster will not work.)

12. To verify API connectivity is working, perform a GET operation on the /system/status node of your server.
If it fails, verify that the login is correct and that you can access the Web URL from this PC.

Once connectivity is verified, in addition to WebRTC app branding, you can apply the branded/customized files to SIP calls (see Section 5.2.3), invitations (see Section 5.2.3) and IVRs (see Section 5.2.4) at a system level, per tenant level or per space or ivr level.

5.2.2 Applying branding to WebRTC apps

Branding files for WebRTC apps are applied to a webBridge node. You can only configure one Web Bridge on an Meeting Server. If you need different WebRTC app branding for different tenants, then you need to set up a Web Bridge for each branded WebRTC app.

13. **POST** to the webBridges node the url parameter and the address for the Call Bridge to use to reach this Web Bridge. Press **Send** to submit the data.

**Note:** Select the x-www-form-urlencoded format.

A 200 OK Response should be returned.

14. Change the request type back to **GET**, and press **Send**. The response should look like this:
15. PUT to the webBridges node the resourceArchive parameter and the url where the WebRTC app branding files are held on your web server.

A 200OK Response should be returned.

16. To verify the data has been set correctly, simply change the request type to GET using the same URL as the previous PUT. Press Send. The response should look like this:

Your WebRTC app branded files should now be used for WebRTC app calls to the Web Bridge, make a test call to check that the branded files are applied.

5.2.3 Applying branding to SIP calls and/or customized invitations

Branding files for SIP calls and customized invitation templates are applied to the callBrandingProfiles node.

17. POST to the callBrandingProfiles node the parameter appropriate to the type of branding (resourceLocation/invitationTemplate) and the urls where the branding files are held on your
web server. Be sure to specify the full filename including the path to the file for the invitationTemplate URL only, for example: http://192.0.2.0/branding/invitation_template.txt. You can also use https. Set the request type to POST and press Send to submit the data.

**Note:** If you have created subfolders under /Branding then you need to POST the url of each subfolder to callBrandingProfiles.

A 200OK Response should be returned.

18. Change the request type back to GET, and press Send. The response should look like this:

19. Make a note of the ID number listed next to “callBrandingProfile id=”, in this example it is: 5cf83076-ee90-4e08-9d50-22d634d93c65

20. Assign this callBrandingProfile ID to the branding level required:
   - the system level (that is, as part of the global systems profile),
   - a per-tenant basis (as part of the tenant definition),
   - a per-space basis (as part of the space definition).
The example below applies the branding to a previously created tenant:

a. change the request type to PUT
b. enter the /tenant/<tenant id> in this example e46eb768-2d87-41f1-ba9b-742bb471ca61
c. enter the callBrandingProfile parameter and the id from step “Make a note of the ID number listed next to “callBrandingProfile id=” in this example it is: 5cf83076-ee90-4e08-9d50-22d634d93c65“ on the previous page
d. press Send, and you should get another 200OK Response

21. To verify the data has been set correctly, simply change the request type to GET using the same URL as the previous PUT. Press Send.

22. Your Call Branding files should now be used for calls for that tenant. Place a call from a SIP endpoint to a space setup for the tenant. Make sure the call displays the background picture, and that the voice prompt is audible.

5.2.4 Applying branding to an IVR

Branding files for IVR are applied to the ivrBrandingProfiles node.
23. POST to ivrBrandingProfiles node the resourceLocation parameter and the url where the ivr branding files are held on your web server. Be sure that you set the request type to POST. Press Send to submit the data.

**Note:** If you have created subfolders under /Branding then you need to POST the url of the ivr subfolder to ivrBrandingProfiles.

A 200OK Response should be returned.

24. Change the request type back to GET, and press Send. The response should look like this:

25. Make a note of the ID number listed next to “ivrBrandingProfile id=”, in this example it is: 9d4fb901-28e8-43c3-95e5-58d1ccce781e

26. Assign this ivrBrandingProfile ID to the branding level required:

   - the system level (that is, as part of the global systems profile),
   - a per-ivr basis (as part of the ivr definition).
   - enter the ivrBrandingProfile field and from step 25

The example below applies the ivr branding to a previously created ivr (using POST to /ivrs followed by a GET to /ivrs to retrieve the ivr id):
a. change the request type to PUT
b. enter /ivrs/<ivr id> in this example the ivr id = 0e045363-1275-46ad-b131-f546541fdd11
c. enter the ivrBrandingProfile field and <ivrBrandingProfile id> from step 25

27. Press Send, and you should get another 200OK Response.

28. To verify the data has been set correctly, simply change the request type to GET using the same URL as the previous PUT. Press Send.

29. Your IVR Branding files should now be used for calls to the specified ivr, make test calls to the ivr to check that the branded ivr files are applied.
Appendix A  Using Other Popular API Tools

This appendix covers using Firefox Poster and the Chrome Advanced Rest Client, to create and apply a callBrandingProfile.

A.1 Using Firefox Poster

Follow steps 1 to 4 in Chapter 5 before proceeding with these steps.

Install Poster into Firefox (if not already installed) by opening the Menu button in the upper right corner and choosing Add-ons. If Poster is already installed go to step “Once enabled, access Poster through Tools > Poster” on the next page.

5. Enter Poster in the Search field and press Enter.
6. Click Install and follow directions to restart Firefox once complete.

7. Enable the Menu Bar by right clicking just to the right of the + sign that opens a new tab and selecting Menu Bar.

8. Once enabled, access Poster through Tools > Poster

9. To verify that API connectivity is working, enter the URL of the Meeting Server, and the Username and Password for the API. Press GET.

A 200OK Response should be returned with the Status Data, for example:
If the GET fails, verify that:

- the login is correct,
- you can access the Web URL from this PC
- Firefox trusts the certificate assigned to Web Admin, or make a Permanent exception by adding this Trust to the browser’s Trust store. Do this by opening a standard browser session to Web Admin using Firefox, and accept the warnings and add the exception.

A.1.1 Applying branding to SIP calls using Firefox Poster

This example only covers branding SIP calls at a system level using Firefox Poster. To configure the other types of branding, review Chapter 5 and adapt the steps to be suitable with Firefox Poster.

11. Once connectivity is verified, define the Call Branding Profile as below defining the URL where the Branding files are located.

For example: resourceLocation=https<url of branding files>
12. Press POST to submit the data, you should get a 200OK Response like this:

13. Make a note of the Location field in this response and record the ID number shown, it is the long number after the /callBrandingProfiles/ text. In the example above, the ID is eea60a42-4435-4c1f-99b7-6999e884abf4.

14. Assign this ID to the Call Branding Profile to be used:
a. enter the /system/profiles URL
b. enter the id from step 13 into the callBrandingProfile. For example:
callBrandingProfile= eea60a42-4435-4c1f-99b7-6999e884abf4
c. change the request type to PUT

You should receive another 200OK Response like this:

15. To verify the data has been set correctly, simply press GET using the same URL as the previous PUT and it should return the settings as such:
16. Your Branding files should now be used for calls. Place a call from a SIP endpoint to a space. Make sure the call displays the background picture, and that the voice prompt is audible.

A.2 Using Chrome Advanced Rest Client

Follow steps 1 to in Chapter 5 before proceeding with these steps.

5. Install the Advanced REST Client into Chrome (if not already installed) by opening the Apps button in the upper left corner. If Advanced REST Client is already installed go to step

6. Click on Web Store to open the Chrome App Store
7. Enter Advanced REST Client in the Search field and press Enter. Install Advanced REST Client by clicking on the + FREE button to the right.

8. Click Add to continue with the installation

9. Once installed, the Advanced REST Client will appear on the Apps page
10. Open the Advanced REST Client by clicking on the icon from within the Apps page of Chrome. To verify API connectivity is working, enter the URL of the Meeting Server and press SEND.

11. Enter the API login when prompted and press Log In.

A 200OK Response should be returned with the Status Data, for example:
If it fails, verify that the login is correct and that you can access the Web URL from this PC.

A.2.1 Applying branding to SIP calls using Chrome Advanced Rest Client

This example only covers branding SIP call

12. Once connectivity is verified, define the Call Branding Profile by specifying the URL where the Branding files are located. Make sure that you set the request type to POST. Press Send to submit the data.

A 200OK Response should be returned, for example:
13. Change the request type back to GET, and press Send. The response should look like this:

14. Make a note of the ID number listed next to “callBrandingProfile id=”, in this example it is 59ba0728-8650-4936-9cb4-2c818dfba821.
15. Assign this ID to the Call Branding Profile to be used (see note below)
   a. enter the /system/profiles URL
   b. enter the id from step "Make a note of the ID number listed next to “callBrandingProfile id=”, in this example it is it is 59ba0728-8650-4936-9cb4-2c818dfba821" on the previous page into the callBrandingProfile field
   c. change the request type to PUT

![Advanced Rest Client](image)

You should receive another 200OK Response like this:

16. To verify it has been set correctly, simply change the request type to GET using the same URL as the previous PUT. Press Send.

![Advanced Rest Client](image)

17. That is it, your Branding files should now be used for calls. Place a call from a SIP endpoint to a space. Make sure the call displays the background picture, and that the voice prompt is audible.
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