Cisco VCS and Cisco Unity Connection voicemail integration
Deployment Guide

Cisco VCS X7.1
CUC version 8
Cisco TMS 13.2 or later

D14809.03
March 2012
Document revision history

The following table summarizes the changes that have been applied to this document.

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>February 2011</td>
<td>Initial release.</td>
</tr>
<tr>
<td>2</td>
<td>September 2011</td>
<td>Added a note to clarify how to add a VCS user to an existing mailbox.</td>
</tr>
<tr>
<td>3</td>
<td>March 2012</td>
<td>Updated for VCS X7.1 and Cisco TMS Provisioning Extension mode.</td>
</tr>
</tbody>
</table>
Introduction

Objectives and intended audience

This deployment guide provides guidelines on how to configure the Cisco TelePresence Video Communication Server (Cisco VCS) and Cisco Unity Connection (CUC) to interwork via a SIP trunk. When these products are interworked, the CUC can be used to provide voicemail services for Cisco VCS users.

Deployment scenario

A company already has CUC running their telephone network. They want to integrate this with a Cisco VCS Control, which connects their video conferencing systems, so that voice and video terminals can leave voicemail for video users across one unified network.

Summary of configuration process

This document specifies how to configure the CUC (version 8), the VCS Control (version X7.1 or later) and the Cisco TelePresence Management Suite (Cisco TMS) (version 13.2 or later, if Provisioning Extension mode is required) so that:

- video endpoints connected to the VCS can leave voicemail for other video endpoints connected to the same VCS
- external callers can leave voicemail for video endpoints connected to the VCS
- video endpoints can dial the CUC pilot number (the directory number used to access voice message mailboxes)
- E20 endpoints display a Message Waiting Indicator (MWI) – the envelope button on the E20 flashes when a message is waiting
- the MWI button on the E20 can be used to dial back in to the CUC voicemail system

The configuration process describes the configuration of each system (VCS, TMS and CUC) separately.
Cisco VCS setup for CUC integration

Configuration of the VCS Control to enable calls to be made to the CUC Voicemail Server can be broken down into the following steps:

- create a neighbor zone to link to the CUC server
- add a search rule so that calls can be routed to voicemail

Create a neighbor zone to the CUC server:
1. Go to VCS configuration > Zones.
2. Click New.
3. Configure the fields as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Enter the name you want to give this zone, for example “CUC”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Select Neighbor</td>
</tr>
<tr>
<td>Hop count</td>
<td>Leave as default setting</td>
</tr>
<tr>
<td>H.323 mode</td>
<td>Select Off</td>
</tr>
<tr>
<td>SIP mode</td>
<td>Select On</td>
</tr>
<tr>
<td>SIP port</td>
<td>Enter 5060</td>
</tr>
<tr>
<td>Transport</td>
<td>Select TCP</td>
</tr>
<tr>
<td>Accept proxied</td>
<td>Select Allow</td>
</tr>
<tr>
<td>registrations</td>
<td></td>
</tr>
<tr>
<td>Authentication policy</td>
<td>Leave as default setting</td>
</tr>
<tr>
<td>SIP authentication</td>
<td>Leave as default setting</td>
</tr>
<tr>
<td>trust mode</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Enter the IP address or FQDN of the CUC server</td>
</tr>
<tr>
<td>Zone profile</td>
<td>Select Cisco Unified Communication Manager</td>
</tr>
</tbody>
</table>

4. Click Create zone.
Add a search rule to route calls to the CUC server:
1. Go to VCS configuration > Dial plan > Search rules.
2. Click New.
3. Configure the fields as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule name</td>
<td>Enter a name for the rule, for example “CUC Voicemail”</td>
</tr>
<tr>
<td>Description</td>
<td>Enter a description, for example “Cisco Unity Connection Voicemail”</td>
</tr>
<tr>
<td>Priority</td>
<td>Set the priority to 10, or a number such that the call routing goes via the target zone specified in this procedure, rather than routing to the voicemail server via another PBX such as CUCM</td>
</tr>
<tr>
<td>Source</td>
<td>Select Any</td>
</tr>
<tr>
<td>Request must be</td>
<td>Select No</td>
</tr>
<tr>
<td>authenticated</td>
<td>Select Alias Pattern Match</td>
</tr>
<tr>
<td>Pattern type</td>
<td>Select Prefix</td>
</tr>
<tr>
<td>Pattern string</td>
<td>Enter a pattern string to match the pilot number being used by the voicemail system, in this example we are using 83333</td>
</tr>
<tr>
<td>Pattern behavior</td>
<td>Select Leave</td>
</tr>
<tr>
<td>On successful match</td>
<td>Select Stop</td>
</tr>
<tr>
<td>Target zone</td>
<td>Select the zone you created in the previous step</td>
</tr>
<tr>
<td>State</td>
<td>Leave as Enabled</td>
</tr>
</tbody>
</table>

4. Click Save.
Cisco TMS setup for CUC integration

Configuration of the Cisco TMS to enable integration of the CUC Voicemail Server can be broken down into the following steps:

- add a mailbox number to the provisioning data so that the E20 envelope (MWI) button will call back the correct pilot number of the voicemail system
- add a voicemail device to the FindMe template, so that Busy or No Answer calls are forwarded to the voicemail system

TMS Agent Legacy provisioning mode

Add a mailbox number to the provisioning data:

2. In the Configurations section, click Add configurations.
3. Type “Mailbox” and click Configuration SIP Profile Mailbox.
4. Enter the CUC pilot number.
5. Click Add.

Add a voicemail device to the FindMe Template:

2. Select the FindMe template to be edited, in this example “Default”.
3. Click Edit and then click Add a new FindMe Device Template.
4. Enter the Display Name, Device URI Pattern and Type as required.
5. Click Save.
6. Select the Busy and No Answer check boxes next to the voicemail device that was just created.
7. Check that the Ring Duration is sensible for your deployment.
8. Click Save, then click Close.
TMS Provisioning Extension provisioning mode

Add a mailbox number to the provisioning data:
1. Go to Systems > Provisioning > Users.
2. Select Configuration Templates.
3. Select the appropriate e20 template.
4. Click Edit Configurations.
5. Go to SIP Profile Mailbox and select the check box next to it.
6. Enter the CUC Pilot Number.
7. Click Save.

Add a voicemail device to the FindMe Template:
1. Go to Systems > Provisioning > FindMe.
2. Select Device Templates.
3. Click Add Device Template.
4. Enter the **Display Name** and **Device Address Pattern** as required, set **Device Type** to **Voice Mail**.

5. Click **Save**.

6. Select **Location Templates**, and select the required location.

7. Click **Assign Templates**.

8. Select the **Busy Device** and **No Answer Device** check boxes next to the voicemail device that was just created.

9. Click **Save**.
CUC setup

Configuration of the CUC to enable integration back to the video network can be broken down into the following steps:

- create the telephony integration to add the VCS as a Phone System on the CUC
- create the Port Group for the new Phone System
- create the Ports for the new Port Group
- create the VCS users’ mailboxes on the CUC

Create the telephony integration to add the VCS as a Phone System:

1. Go to Telephony Integrations > Phone System.
2. Click Add New.
3. Enter a Phone System Name, in this example we are using “VCSSystem”.
4. Click Save.

Create the Port Group for the new Phone System:

1. Go to Telephony Integrations > Port Group.
2. Click Add New.
3. Configure the fields as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone System</td>
<td>Select the new Phone System, for example “VCSSystem”</td>
</tr>
<tr>
<td>Create From</td>
<td>Select Port Group Template and choose SIP</td>
</tr>
<tr>
<td><strong>Display Name</strong></td>
<td>Accept the default display name, in this case “VCSSystem-1”</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Authenticate with SIP Server</strong></td>
<td>Select this check box and enter authentication details as appropriate if using device authentication on the VCS</td>
</tr>
<tr>
<td><strong>SIP Security Profile</strong></td>
<td>Select 5060</td>
</tr>
<tr>
<td><strong>Transport Protocol</strong></td>
<td>Select TCP</td>
</tr>
<tr>
<td><strong>IP Address or Host name</strong></td>
<td>Enter the IP address or host name of the VCS</td>
</tr>
</tbody>
</table>

4. **Click** Save.

5. **Edit** the new Port Group and make sure that **Enable Message Waiting Indicators** is selected.
6. **Click** Save.
7. **If required, click** Reset to reset the Port Group.
Create the Ports for the new Port Group:

1. Go to Telephony Integrations > Port.
2. Add a Port to the Port Group, ensuring that it is **Enabled** and that every Port Behavior option is selected.
3. Click **Save**.
Create the VCS users' mailboxes on the CUC:

The VCS users have to be manually added to the CUC.

- The **Extension** MUST be numeric. Therefore it is recommended that it is set to match the user’s E.164 ENUM number or FindMe Caller ID number.
- If the VCS user already has a mailbox for their CUCM phone, the VCS username can be entered as an **Alternate Extension** for the existing CUCM mailbox. This allows the user to only have a single voicemail box to manage, rather than individual mailboxes for CUCM and VCS accounts.

To configure a new CUC user:

1. Go to **Users > Users**.
2. Click **Add New**.
3. Enter the user details as appropriate, at a minimum:
   a. Set **Alias** to the username for the VCS user.
   b. Set **Extension** to the **FindMe Caller ID** or **E.164 number** for the VCS user, or their VCS username if it is purely numeric.
4. Click **Save**.

5. Set up the users’ passwords according to local policy by going to **Users > Users > [Select the User to be edited] > Edit > Password Settings**.
Alternate extensions

Cisco VCS users who have an alphanumeric username must have Alternate Extensions configured on their CUC user account. To do this:

1. Go to Users > Users > [Select the User to be edited] > Edit > Alternate Extensions.
2. Click Add New.
3. Select a Phone Type from as appropriate.
4. Enter the Phone Number of the user. This must match the alphanumeric username of the user on the VCS.
5. Click Save.

Note: It is not possible to configure CUC to send Message Waiting Indicators to an alphanumeric extension at present. See “Message Waiting Indicator to alphanumeric extensions” for more information.
Supplementary information

FindMe

TMS Agent Legacy mode

On the user’s FindMe page, voicemail devices display as a tape icon, for example:

<table>
<thead>
<tr>
<th>My devices</th>
<th>My Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E20</td>
<td>Office</td>
</tr>
<tr>
<td>Mobile</td>
<td>Active</td>
</tr>
<tr>
<td>Voicemail</td>
<td>Forward calls to</td>
</tr>
<tr>
<td></td>
<td>Direct when busy to</td>
</tr>
<tr>
<td></td>
<td>Direct when not answered to</td>
</tr>
</tbody>
</table>

TMS Provisioning Extension mode

If using TMS Provisioning Extension mode with TMS13.2 and VCS X7.1 or later, the FindMe page will look as follows:

Initial devices:
- E20: USER@E20
- Mobile: USER@MOBILE
- Voicemail: USER@VOICEMAIL

If busy:
- On initial devices, ring
- Voicemail: USER@VOICEMAIL

If no answer:
- At initial devices, ring
- E20: USER@E20
- Voicemail: USER@VOICEMAIL
Integrating CUC with a Cisco VCS cluster

Multiple VCS IP addresses can be added to a single Telephony Integration in CUC. To do this:

1. Go to Telephony Integration > Port Group > [Select Port Group to be edited] > Edit Servers.
2. Add a new SIP Server with appropriate details, and click Save.

Note that after adding a new SIP Server to the Port Group, the Port Group may need to be reset.

Message Waiting Indicator to alphanumeric extensions

The CUC sends the SIP NOTIFY message with MWI to the primary extension at the configured IP address or hostname of the SIP Server, for example 53003@10.44.9.217

The VCS can use an ENUM zone to convert this extension back to an alphanumeric SIP URI, and therefore display the MWI indicator on the appropriate E20 endpoint.

See ENUM dialing on VCS deployment guide (document number D14465) for further information.

Endpoint specific considerations

E20 with TE4.0 firmware

The E20 now sends a Remote-Party-ID filed, which is favored over the From field by Unity to associate the incoming call with a mailbox. The Remote-Party-ID field is not rewritten as part of the source alias rewriting for FindMe.

Therefore an Alternate Extension should also be datafilled for the E20 URI. i.e. if the FindMe address is vcsuser03 and that has been added as one alternate extension, another should be added for vcsuser03.e20 depending on the naming schema used.
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