Cisco VCS CUC Voicemail Integration

Deployment Guide

First Published: February 2011
Last Updated: November 2015

Cisco VCS X8.7
CUC version 8
Cisco TMS 13.2 or later
Introduction

Objectives and Intended Audience

This deployment guide provides guidelines on how to configure the Cisco TelePresence Video Communication Server (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 VCS users.

Deployment Scenario

A company already has CUC running their telephone network. They want to integrate this with a 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 CUC (version 8), VCS Control (version X7.1 or later) and 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, Cisco TMS and CUC) separately.
Configuring VCS 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 Configuration > Zones > Zones.
2. Click New.
3. Configure the fields as follows (leave all other fields with default values):

<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>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 registrations</td>
<td>Select Allow.</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 Configuration > Dial plan > Search rules.
2. Click New.
3. Configure the fields as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</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>Protocol</td>
<td>Select Any.</td>
</tr>
<tr>
<td>Source</td>
<td>Select Any.</td>
</tr>
<tr>
<td>Request must be authenticated</td>
<td>Select No.</td>
</tr>
<tr>
<td>Mode</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.

Create search rule
Configuring Cisco TMS 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 (Cisco TMSPE), so that Busy or No Answer calls are forwarded to the voicemail system

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.
Configuring CUC

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>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phone System</strong></td>
<td>Select the new Phone System, for example “VCSSystem”.</td>
</tr>
<tr>
<td><strong>Create From</strong></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><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 we recommend 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 Unified CM phone, the VCS username can be entered as an **Alternate Extension** for the existing Unified CM mailbox. This allows the user to only have a single voicemail box to manage, rather than individual mailboxes for Unified CM 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**.

   ![User Configuration Screen]

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

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: You cannot configure CUC to send Message Waiting Indicators to an alphanumeric extension at present. See “Message Waiting Indicator to Alphanumeric Extensions, page 14” for more information.
Supplementary information

FindMe

When using Cisco TMSPE mode, the FindMe page will look as follows:

Integrating CUC with a 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.
3. 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 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, for example 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.
Document Revision History

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2014</td>
<td>Republished for X8.5.</td>
</tr>
<tr>
<td>June 2014</td>
<td>Republished for X8.2.</td>
</tr>
<tr>
<td>December 2013</td>
<td>Updated for VCS X8.1.</td>
</tr>
<tr>
<td>August 2012</td>
<td>Updated for Cisco VCS X7.2.</td>
</tr>
<tr>
<td>March 2012</td>
<td>Updated for Cisco VCS X7.1 and Cisco TMS Provisioning Extension mode.</td>
</tr>
<tr>
<td>September 2011</td>
<td>Added a note to clarify how to add a Cisco VCS user to an existing mailbox.</td>
</tr>
<tr>
<td>February 2011</td>
<td>Initial release.</td>
</tr>
</tbody>
</table>

Cisco Legal Information

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB’s public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED “AS IS” WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

All printed copies and duplicate soft copies are considered un-Controlled copies and the original on-line version should be referred to for latest version.

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco website at www.cisco.com/go/offices.

© 2015 Cisco Systems, Inc. All rights reserved.
Cisco Trademark

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)