



# Setting Up an Avaya S8500/S8700 In-Band TIMG Integration with Cisco Unity Connection

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## Introduction

This chapter contains detailed instructions for setting up an Avaya S8500/S8700 in-band TIMG integration with Cisco Unity Connection,



**Note** Caller ID is supported for internal callers only. The Avaya S8500/S8700 phone system does not support caller ID for external callers.

## Task List to Create an Avaya S8500/S8700 In-Band TIMG Integration

Before doing the following tasks to integrate Unity Connection with the phone system using the T1 media gateway (TIMG), confirm that the Cisco Unity Connection server is ready for the integration after completing the installation following the steps as mentioned in the “[Installing Cisco Unity Connection](#)” chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection, Release 12.x*, available at [https://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/12x/install\\_upgrade/guide/b\\_12xcuciumg.html](https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/install_upgrade/guide/b_12xcuciumg.html)

Review the system and equipment requirements to confirm that all phone system and Unity Connection server requirements have been met. See the [Requirements](#) section.

1. Plan how the voice messaging ports used by Unity Connection. See the [Planning the Usage of Voice Messaging Port in Cisco Unity Connection](#) chapter.

2. Program the phone system and extensions. See the [Programming Phone System for In-Band TIMG Integration](#) section.
3. Set up the TIMG units for an in-band integration. See the [Setting UP TIMG Units](#) section.
4. Create the integration. See the [Creating an Integration with the Phone System](#) section.
5. Test the integration. See the [Testing the Integration](#) chapter.
6. If this integration is a second or subsequent integration, add the applicable new user templates for the new phone system. See the [Adding New User Templates for Multiple Integrations](#) chapter.

## Requirements

The Avaya S8500/S8700 in-band TIMG integration supports configurations of the following components:

### Phone System

- Avaya S8500/S8700 phone system.
- Software version Cisco Unified CallManager 2.0.
- T1 digital trunk interface card.
- One or more TIMG units (media gateways).
- The voice messaging ports in the phone system connected by T1 digital lines (DS1 or “dry T1” digital lines only) to the ports on the TIMG units.



#### Note

T1 (or “wet T1”) connections to the PSTN must be through an MTU, CSU, or other device that provides line isolation. Otherwise, the TIMG units may be damaged.

- The TIMG units connected to the same LAN or WAN that Unity Connection is connected to.
- If the TIMG units connect to a WAN, the requirements for the WAN network connections are:
  - For G.729a codec formatting, a minimum of 32.76 Kbps guaranteed bandwidth for each voice messaging port.
  - For G.711 codec formatting, a minimum of 91.56 Kbps guaranteed bandwidth for each voice messaging port.
  - No network devices that implement network address translation (NAT).
  - A maximum 200 ms one-way one-way network latency.

### Unity Connection Server

The Avaya S8500/S8700 in-band TIMG integration supports configurations of the following components:

- Unity Connection installed and ready for the integration after completing the installation following the steps as mentioned in the [Installing Cisco Unity Connection](#) chapter of the Install, Upgrade, and Maintenance Guide for Cisco Unity Connection Release 11.x at [https://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/11x/install\\_upgrade/guide/b\\_11xcuciumg.html](https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/11x/install_upgrade/guide/b_11xcuciumg.html).
- A license that enables the applicable number of voice messaging ports.

## Centralized Voice Messaging

Unity Connection supports centralized voice messaging through the phone system, which supports various inter-phone system networking protocols including proprietary protocols such as Avaya DCS, Nortel MCDN, or Siemens CorNet, and standards-based protocols such as QSIG or DPNSS. Note that centralized voice messaging is a function of the phone system and its inter-phone system networking, not voicemail. Unity Connection supports centralized voice messaging as long as the phone system and its inter-phone system networking are properly configured.

## Programming Phone System for In-Band TIMG Integration

If you use programming options other than those supplied in the following procedure, the performance of the integration may be affected.



### Caution

In programming the phone system, do not send calls to voice messaging ports in Unity Connection that cannot answer calls (voice messaging ports that are not set to Answer Calls). For example, if a voice messaging port is set only to Perform Message Notification, do not send calls to it.

### SUMMARY STEPS

1. Create a coverage path which contains the TIMG unit hunt group number as the coverage point.
2. Assign the coverage path that you created in [Step 1](#) to the user stations that must forward to the voice messaging ports on the TIMG units when calls are not answered or when the user station is busy, based on one of the call transfer types shown in [Table 4-1](#).
3. Assign an extension number for each voice messaging port, which is a digital line that connects to the TIMG unit, and set the voice messaging port options as shown in [Table 4-2](#).
4. Set the DS1 Circuit Pack options as shown in [Table 4-3](#).
5. Assign a the voice messaging ports to a hunt group by setting the options shown in [Table 4-4](#).
6. Enter the group member assignments for the voice messaging ports that answer calls and press **Enter**.

### DETAILED STEPS

- 
- Step 1** Create a coverage path which contains the TIMG unit hunt group number as the coverage point.
- Step 2** Assign the coverage path that you created in [Step 1](#) to the user stations that must forward to the voice messaging ports on the TIMG units when calls are not answered or when the user station is busy, based on one of the call transfer types shown in [Table 4-1](#).

**Table 1: Call Transfer Types**

Transfer Type	Usage
Release transfer (blind transfer)	Program the user station to forward calls to the pilot number when: <ul style="list-style-type: none"> <li>• The extension is busy.</li> <li>• The call is not answered.</li> </ul>
Supervised transfer	Program the user station to forward calls to the pilot number only when the call is not answered (on the phone system, the number of rings before forwarding must be more than the number of rings to supervise the call). Confirm that call forwarding is disabled when the extension is busy.

**Step 3** Assign an extension number for each voice messaging port, which is a digital line that connects to the TIMG unit, and set the voice messaging port options as shown in [Table 4-2](#).

**Note** You should distribute the voice messaging ports among multiple phone system line cards so that call processing can continue even if a line card becomes inactive.

**Table 2: Voice Messaging Port Options for All Lines**

Option	Setting
Extension	Enter the extension number of the digital line.
Type	Enter the applicable setting: <ul style="list-style-type: none"> <li>• VMI</li> <li>• VMIFD</li> </ul>
Loss Group	Enter <b>4</b> .
Off Premises Station	Enter <b>y</b> .
R Balance Network	Enter <b>n</b> .
Survivable COR	Enter <b>internal</b> .
Survivable Trunk Dest	Enter <b>y</b> .
LWC Activation	Enter <b>y</b> .
LWC Log External Calls	Enter <b>n</b> .
CDR Privacy	Enter <b>n</b> .
Redirect Notification	Enter <b>y</b> .
Per Button Ring Control	Enter <b>n</b> .
Bridged Call Alerting	Enter <b>n</b> .

Option	Setting
Switch hook Flash	Enter <b>y</b> .
Ignore Rotary Digits	Enter <b>n</b> .
H.320 Conversion	Enter <b>n</b> .
Service Link Mode	Enter <b>as-needed</b> .
Multimedia Mode	Enter <b>basic</b> .
Coverage Message Retrieval	Enter <b>y</b> .
Auto Answer	Enter <b>none</b> .
Data Restriction	Enter <b>n</b> .
Distinctive Audible Alert	Enter <b>y</b> .
Adjunct Supervision	Enter <b>y</b> .
Audible Message Waiting	Enter <b>n</b> .
Coverage After Forwarding	Enter <b>s</b> .
Multimedia Early Answer	Enter <b>n</b> .
LWC Appearance	Enter <b>call-appr</b> .

**Step 4** Set the DS1 Circuit Pack options as shown in [Table 4-3](#).

**Table 3: DS1 Circuit Pack Options**

Option	Setting
Line Compensation	Enter <b>1</b> .
Signaling Mode	Enter <b>robbed-bit</b> .
Line Coding	Enter <b>b8zs</b> .
Framing Mode	Enter <b>esf</b> .
Interface Companding	Enter <b>mulaw</b> .
Idle Code	Enter <b>11111111</b> .
Slip Detection	Enter <b>n</b> .
Echo Cancellation	Enter <b>n</b> .
Near-end CSU Type	Enter <b>other</b> .

**Step 5** Assign a the voice messaging ports to a hunt group by setting the options shown in [Table 4-4](#).

Table 4: Hunt Group Options

Option	Setting
LWC Reception	Enter <b>none</b> .
Message Center	Enter <b>none</b> .
Group Number	Enter the hunt group number.
Group Extension	Enter the pilot number for the hunt group.
Group Type	Enter <b>ucd-mia</b> .
Group Name	Enter the display name for the hunt group.
Queue?	Enter <b>n</b> .

- Step 6** Enter the group member assignments for the voice messaging ports that answer calls and press **Enter**. If you plan to set the voice messaging ports to either answer calls or to dial out (for example, to set MWIs), make sure that you include in the hunt group only the voice messaging ports are set to answer calls. For smaller systems, include in the hunt group all voice messaging ports when the ports are set to both answer calls and dial out (for example, to set MWIs).

## Setting Up the TIMG Units

Do the following procedures to set up the TIMG units (media gateways) that are connected to the phone system.

These procedures require that the following tasks have already been completed:

- The phone system is connected to the TIMG units using T1 digital lines.
- The TIMG units are connected to a power source.
- The TIMG units are ready to be connected to the LAN or WAN.



**Note** Because TIMG units have the same default IP address, you must set them up one at a time. Otherwise, you can experience IP address conflicts.

Fields that are not mentioned in the following procedures must keep their default values. For the default values of all fields, see the manufacturer documentation for the TIMG units.

## Downloading TIMG Firmware Update Files

- Step 1** On a Windows workstation that have access to the TIMG units, go to the following link:  
<http://software.cisco.com/download/navigator.html?mdfid=280082558&i=rm>.

**Note** To access the software download page, you must be signed in to Cisco.com as a registered user. This procedure describes the steps when using Internet Explorer as your web browser. If you are using a different web browser, the steps may differ.

- Step 2** In the tree control on the Downloads Home page, expand Unified Communications> Unified Communications Applications > Messaging > Cisco Unity and select Cisco Unity Telephony Integration.
- Step 3** On the Log In page, enter your username and password, then select **Log In**.
- Step 4** On the Select a Release page, under Latest Releases, select the most recent release.
- Step 5** In the right column, select the version of the firmware for your TIMG units.
- Step 6** On the Download Image page, select **Download**.
- Step 7** On the Supporting Document(s) page, select **Agree**.
- Step 8** In the File Download dialog box, select **Save**.
- Step 9** In the Save As dialog box, browse to the Windows workstation that have access the TIMG units, browse to a directory where you want to save the file, and select **Save**.
- Step 10** In the Download Complete dialog box, select **Open**. The window for extracting the TIMG firmware update files appears.
- Step 11** Select **Extract**.
- Step 12** In the Extract dialog box, browse to the directory where you want the extracted files, and select **Extract**.
- Step 13** Close the window for the extracting application.

## Setting Up the TIMG Units (Firmware Version 6.x)

- Step 1** On the Windows workstation, add a temporary route to enable access to the TIMG units.
  - a) On the Windows Start menu, select **Run**.
  - b) Enter **cmd**, and press **Enter**. The Command Prompt window appears.
  - c) At the command prompt, enter **route add 10.12.13.74 <IP Address of Workstation>**, and press **Enter**.  
 For example, if the IP address of the workstation is 198.1.3.25, enter “route add 10.12.13.74<space>198.1.3.25” in the Command Prompt window.
  - d) Close the Command Prompt window.
- Step 2** Connect a TIMG unit to the network.
- Step 3** In the web browser, go to **http://10.12.13.74**.
- Step 4** To sign in, enter the following case-sensitive settings.

*Table 5: Sign-in Settings*

Field	Setting
Username	Enter <b>admin</b> .
Password	Enter <b>IpodAdmin</b> .

- Step 5** Select **OK**.
- Step 6** On the System menu, select **Upgrade**.

- Step 7** On the Upgrade page, under Browse for Upgrade File, select **Browse**.
- Step 8** In the Choose File dialog box, browse to the directory on the Windows workstation that has the extracted TIMG firmware update files.
- Step 9** Select **T1E1\_<xx> .app** (where <xx> is multiple digits), and select **Open**.
- Step 10** On the Upgrade page, select **Install File**.
- Step 11** After the file is installed, a message prompting you to restart the TIMG unit appears. Select **Cancel**.
- Caution** Do not restart the TIMG unit until you are instructed to do so later in this procedure, even if the file installation fails. Restarting the TIMG unit at this step may prevent the TIMG unit from functioning correctly.
- Step 12** Repeat **Step 6** through **Step 11** for the following files:
- T1E1\_<xx>.fsh
  - T1E1\_<xx>.msd
- Step 13** On the Configuration menu, select **Import/Export**.
- Step 14** On the Import/Export page, select **Browse**.
- Step 15** In the Choose File dialog box, browse to the file T1\_LS\_Cfg\_Avaya8500.ini.
- Step 16** Select **T1\_LS\_Cfg\_Avaya8500.ini**, and select **Open**.
- Step 17** On the Import/Export page, select **Import File**.
- Step 18** After the file is imported, a message prompting you to restart the TIMG unit appears. Select **OK**.
- Step 19** In the web browser, go to **http://10.12.13.74**.
- Step 20** To sign in, enter the following case-sensitive settings.

*Table 6: Sign-in Settings*

Field	Setting
Username	Enter <b>admin</b> .
Password	Enter <b>IpodAdmin</b> .

- Step 21** Select **OK**.
- Step 22** On the System menu, select **Password**.
- Step 23** On the Change Password page, enter the following settings.

*Table 7: Change Password Page Settings*

Field	Setting
Old Password	Enter <b>IpodAdmin</b> . (This setting is case sensitive.)
New Password	Enter your new password. (This setting is case sensitive.)
Confirm Password	Enter your new password. (This setting is case sensitive.)



**Step 24** Select **Change**.

**Step 25** On the Configuration menu, select **Mgmt Protocols**.

**Step 26** On the Management Protocols page, enter the following settings.

**Table 8: Management Protocols Page Settings**

Field	Settings
E-mail Alarms Enabled	Select <b>No</b> .
SNMP Traps Enabled	Select <b>No</b> .
HTTP Server Enabled	Select <b>Yes</b> .
HTTPs Server Enabled	Select <b>No</b> .

**Step 27** Select **Submit**.

**Step 28** On the Configuration menu, select **Routing Table**.

**Step 29** On the Routing Table page, under Router Configuration, select **VoIP Host Groups**.

**Step 30** Under VoIP Host Groups, enter the following settings for the first VoIP Host Group.

**Table 9: First VoIP Host Group Settings**

Field	Settings
Name	Accept the default or enter another descriptive name of the VoIP host group.
Load-Balanced	<i>(Unity Connection without a cluster)</i> Select <b>False</b> . <i>(Unity Connection with a cluster configured)</i> Select <b>False</b> .
Fault-Tolerant	<i>(Unity Connection without a cluster)</i> Select <b>False</b> . <i>(Unity Connection with a cluster configured)</i> Select <b>True</b> .

**Step 31** For Unity Connection without a cluster, under Host List, enter the host name or IP address of the Unity Connection server and the server port in the format <host name or IP address>:5060.

For Unity Connection with a cluster configured, under Host List, enter the host name or IP address of the subscriber server (the second Unity Connection server that you installed) and the server port in the format <host name or IP address>:5060.

**Step 32** For Unity Connection without a cluster, continue to [Step 34](#). For Unity Connection with a cluster configured, select **Add Host**.

**Step 33** In the second field, enter the host name or IP address of the publisher server (the first Unity Connection server that you installed) and the server port in the format <host name or IP address>:5060.

**Caution** Do not add a third host under Host List or a second host group under VoIP Host Groups. Otherwise, the Unity Connection cluster may not function correctly.

**Step 34** Select **Submit**.

**Step 35** On the Configuration menu, select **TDM > T1/E1**.

**Step 36** On the T1/E1 Configuration page, enter the following settings.

**Table 10: T1/E1 Configuration Page Settings**

Field	Settings
<b>Line Settings</b>	
Line Mode	Select <b>T1</b> .
Signaling Mode	Select <b>CAS</b> .
Interface Mode	Select <b>Terminal</b> .
<b>T1 Line</b>	
Line Encoding	Select <b>B8ZS</b> .
Framing	Select <b>EFS</b> .
Selects Transmit Pulse Waveform	Select <b>Short_Haul_110ft</b> .
<b>T1 CAS Protocol</b>	
T1 CAS Protocol	Select <b>Loop_Start</b> .
Flash Hook	Enter <b>550</b> .
Consult Call Dialtone Drop Code	Enter <b>!!</b> .
Consult Call Proceeding Drop Code	Enter <b>!!</b> .
Consult Call Busy Drop Code	Enter <b>!</b> .
Consult Call Error Drop Code	Enter <b>!!</b> .
Consult Call Connected Drop Code	Enter <b>,,,,</b> .
Consult Call Disconnected Drop Code	Enter <b>!</b> .
MWI confirmation Tone	Select <b>No</b> .
CPID Type	Select <b>TypeII_CPID</b> .
Initial Wait for Inband CPID	Enter <b>5000</b> .
Inband CPID Complete Timeout	Enter <b>500</b> .
<b>Failover Settings</b>	
Enable Failover	Select <b>No</b> .

**Step 37** Select **Submit**.

**Step 38** On the Configuration menu, select **TDM > General**.

**Step 39** On the TDM General Settings page, enter the following settings.

**Table 11: TDM General Settings Page Settings**

Field	Settings
PCM Coding	Select <b>uLaw</b> .
Minimum Call Party Delay (ms)	Enter <b>500</b> .
Maximum Call Party Delay (ms)	Enter <b>2000</b> .
Dial Digit on Time (ms)	Enter <b>100</b> .
Dial Inter-Digit Time (ms)	Enter <b>100</b> .
Dial Pause Time (ms)	Enter <b>2000</b> .
Turn MWI On FAC	Enter the code that the phone system uses to turn MWIs on.
Turn MWI Off FAC	Enter the code that the phone system uses to turn MWIs off.
Outbound Call Connect Timeout (ms)	Enter <b>10000</b> .
Wait for Ringback/Connect on Blind Transfer	Select <b>Yes</b> .
Hunt Group Extension	Enter the pilot number of the Unity Connection voice messaging ports.

**Step 40** Select **Submit**.

**Step 41** On the Configuration menu, select **TDM > Port Enable**.

**Step 42** On the TDM Port Enabling page, select **No** for the ports that you want to disable on the TIMG unit.

**Step 43** Confirm that **Yes** is selected for all other ports on the TIMG unit.

**Step 44** Select **Submit**.

**Step 45** On the Configuration menu, select **VoIP > General**.

**Step 46** On the VoIP General Settings page, enter the following settings.

**Table 12: VoIP General Settings Page Settings**

Field	Setting
<b>User-Agent</b>	
Host and Domain Name	Enter the domain name of the TIMG unit.
Transport Type	Select <b>UDP</b> .
Call as Domain Name	Select <b>No</b> .
SIPS URI Scheme Enabled	Select <b>No</b> .
Invite Expiration (sec)	Enter <b>120</b> .

Field	Setting
<b>Server</b>	
DNS Server Address	Enter the IP Address of the Domain Name Server that the TIMG unit use.
Registration Server Address	Leave this field blank.
Registration Server Port	Enter <b>5060</b> .
Registration Expiration (sec)	Enter <b>3600</b> .
<b>TCP/UDP</b>	
UDP/TCP Transports Enabled	Select <b>Yes</b> .
TCP/UDP Server Port	Enter <b>5060</b> .
<b>Proxy</b>	
Primary Proxy Server Address	Leave this field blank.
Primary Proxy Server Port	Not applicable. Leave the default setting.
Backup Proxy Server Address	Not applicable. Leave the default setting.
Backup Proxy Server Port	Not applicable. Leave the default setting.
Proxy Query Interval	Enter <b>10</b> .
<b>Timing</b>	
T1 Time	Enter <b>500</b> .
T2 Time	Enter <b>4000</b> .
T4 Time	Enter <b>5000</b> .
<b>Monitoring</b>	
Monitor Call Connections	Select <b>No</b> .

**Step 47** Select **Submit**.

**Step 48** On the Configuration menu, select **VoIP > Media**.

**Step 49** On the VoIP Media Settings page, enter the following settings.

*Table 13: VoIP Media Settings Page Settings*

Field	Settings
<b>Audio</b>	

Field	Settings
Audio Compression	Select the preferred codec for audio compression: <ul style="list-style-type: none"> <li>• <b>G.711u</b>—The TIMG unit uses only the G.711 mu-law codec.</li> <li>• <b>G.729AB</b>—The TIMG unit prefers the G.729 codec but can also use the G.711 mu-law codec.</li> </ul>
RTP Digit Relay Mode	Select <b>RFC2833</b> .
Signaling Digit Relay Mode	Select <b>Off</b> .
Voice Activity Detection	Select <b>On</b> .
Frame Size	Select the applicable setting: <ul style="list-style-type: none"> <li>• <b>G.711—20</b></li> <li>• <b>G.729AB—10</b></li> </ul> <p><b>Caution</b> Failure to use the correct setting results in recorded messages containing nothing but silence.</p>
Frames Per Packet	Select the applicable setting: <ul style="list-style-type: none"> <li>• <b>G.711—1</b></li> <li>• <b>G.729AB—2</b></li> </ul> <p><b>Caution</b> Failure to use the correct setting results in recorded messages containing nothing but silence.</p>

**Step 50** Select **Submit**.

**Step 51** On the Configuration menu, select **VoIP > QOS**.

**Step 52** On the VoIP QOS Configuration page, enter the following settings.

**Table 14: VoIP QOS Configurative Page Settings**

Field	Settings
Call Control QOS Byte	Enter <b>104</b> (equivalent to DSCP AF31).
RTP QOS Byte	Enter <b>184</b> (equivalent to DSCP EF).

**Step 53** Select **Submit**.

**Step 54** On the Configuration menu, select **IP**.

**Step 55** On the IP Settings, LAN1 page, enter the following settings.

Table 15: IP Settings, LAN1 Page Settings

Field	Settings
Client IP Address	Enter the new IP address that you want to use for the TIMG unit.  (This is the IP address that you enter in Cisco Unity Connection Administration when you create the integration.)
Client Subnet Mask	Enter the new subnet mask, if the subnet mask is different from the default IP address.
Default Network Gateway Address	Enter the IP address of the default network gateway router that the TIMG units use.
BOOTP Enabled	If you are using DHCP, select <b>Yes</b> .  If you are not using DHCP, select <b>No</b> .

**Step 56** Select **Submit**.

**Step 57** On the Configuration menu, select **Tone Detection**.

**Step 58** On the Tone Detection page, under Call Progress Tone - Learn, in the Learn Tone Event field, select **Busy** and do the following substeps to verify that the tone is correct.

- a) From a available phone, call a second phone.
- b) Answer the second phone when it rings, and leave both handsets off so that both phones are busy.
- c) From a third phone, dial one of the busy phones.
- d) Confirm that you hear a busy tone.
- e) Hang up the third phone but leave the handsets for the other two phones off.

**Step 59** Under Call Progress Tone - Learn, in the Dial String field, enter the extension that you dialed in [Step 58c](#). from the third phone.

**Step 60** Select **Learn**.

**Step 61** On the Tone Detection page, under Call Progress Tone - Learn, in the Learn field, select **Error** and do the following substeps to verify that the tone is correct.

- a) From an available phone, dial an extension that does not exist.
- b) Confirm that you hear the reorder or error tone.
- c) Hang up the phone.

**Step 62** Under Call Progress Tone - Learn, in the Dial String field, enter the extension that you dialed in [Step 61a](#).

**Step 63** Select **Learn**.

**Step 64** On the Tone Detection page, under Call Progress Tone - Learn, in the Learn field, select **Ringback** and do the following substeps to verify that the tone is correct.

- a) From an available phone, dial an extension that does exist.
- b) Confirm that you hear the ringback tone.
- c) Hang up the phone.

**Step 65** Under Call Progress Tone - Learn, in the Dial String field, enter the extension that you dialed in [Step 64a](#).

**Step 66** Select **Learn**.

**Step 67** Select **Submit**.

- Step 68** Hang up the phones that you used in [Step 58](#).
- Step 69** On the Configuration menu, select **Import/Export**.
- Step 70** On the Import/Export page, under Export Files, select **Export All Settings**.
- Step 71** In the File Download dialog box, select **Save**.
- Step 72** In the Save As dialog box, browse to the Windows workstation that has access to the TIMG units, browse to a directory where you want to save the file, and select **Save**.
- Step 73** In the Download Complete dialog box, select **Open**. Notepad opens the file Config.ini that you saved.
- Step 74** Locate the line with the following parameter:

```
telautoanswer
```

- Step 75** Confirm that the value of the parameter is **no** so that the line reads as follows:

```
telautoanswer = no
```

- Step 76** Locate the line with the following parameter:

```
telFacCDropProc
```

- Step 77** Confirm that the value of the parameter is **!!** so that the line reads as follows:

```
telFacCDropProc = !!
```

**Caution** The telFacCDropProc parameter must be set to !!. If the telFacCDropProc parameter is set to 1, supervised transfers fail, and the caller hears the called party standard greeting two times.

- Step 78** Save the file, and exit Notepad.
- Step 79** On the Configuration menu of the TIMG unit, select **Import/Export**.
- Step 80** On the Import/Export page, under Browse for Import File, select **Browse**.
- Step 81** In the Choose File dialog box, browse to the file Config.ini that you saved.
- Step 82** Select **Config.ini**, and select **Open**.
- Step 83** On the Import/Export page, select **Import File**.
- Step 84** When prompted to restart the TIMG unit, select **OK**.
- Step 85** Repeat [Step 2](#) through [Step 84](#) on all remaining TIMG units.

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## Creating an Integration with the Phone System

After ensuring that the phone system, the TIMG units, and the Unity Connection server are ready for the integration, do the following procedures to set up the integration and to enter the port settings.

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- Step 1** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Phone System**.
- Step 2** On the Search Phone Systems page, under Display Name, select the name of the default phone system.
- Step 3** On the Phone System Basics page, in the Phone System Name field, enter the descriptive name that you want for the phone system.

- Step 4** If you want to use this phone system as the default for TRaP connections so that administrators and users without voicemail boxes can record and playback through the phone in Unity Connection web applications, check the **Default TRAP Switch** check box. If you want to use another phone system as the default for TRaP connections, uncheck this check box.
- Step 5** Select **Save**.
- Step 6** On the Phone System Basics page, in the Related Links drop-down box, select **Add Port Group** and select **Go**.
- Step 7** On the New Port Group page, enter the applicable settings and select **Save**.

**Table 16: Settings for the New Port Group Page**

Field	Setting
Phone System	Select the name of the phone system that you entered in <a href="#">Step 3</a> .
Create From	Select <b>Port Group Template</b> and select <b>SIP to DMG/PIMG/TIMG</b> in the drop-down box.
Display Name	Enter a descriptive name for the port group. You can accept the default name or enter the name that you want.
SIP Security Profile	Select <b>5060</b> .
SIP Transport Protocol	Select the SIP transport protocol that Unity Connection uses.
IPv4 Address or Host Name	Enter the IP address of the TIMG unit that you are integrating with Unity Connection.
IPv6 Address or Host Name	Do not enter a value in this field. IPv6 is not supported for TIMG integrations.
IP Address or Host Name	Enter the IP address of the TIMG unit that you are integrating with Unity Connection.
Port	Enter the SIP port of the TIMG unit that Unity Connection connects to. We recommend that you use the default setting.  <b>Caution</b> This name must match the setting in the TCP/UDP Server Port field on the Configuration > VoIP > General page of the TIMG unit. Otherwise, the integration do not function correctly.

- Step 8** On the Port Group Basics page, in the Related Links drop-down box, select **Add Ports** and select **Go**.
- Step 9** On the New Port page, enter the following settings and select **Save**.

**Table 17: Settings for the New Ports Page**

Field	Considerations
Enabled	Check this check box.



Field	Considerations
Number of Ports	Enter the number of voice messaging ports that you want to create in this port group.  <b>Note</b> For a Unity Connection cluster, the server must have the number of voice messaging ports that are set up on the phone system for the TIMG integration so that this server can handle all voice messaging traffic for the cluster if one of the servers stops functioning. For example, if the phone system is set up with 16 voice messaging ports, this server must have 16 voice messaging ports.
Phone System	Select the name of the phone system that you entered in <a href="#">Step 3</a> .
Port Group	Select the name of the port group that you added in <a href="#">Step 7</a> .

**Step 10** On the Search Ports page, select the display name of the first voice messaging port that you created for this phone system integration.

**Note** By default, the display names for the voice messaging ports are composed of the port group display name followed by incrementing numbers.

**Step 11** On the Port Basics page, set the voice messaging port settings as applicable. The fields in the following table are the ones that you can change.

**Table 18: Settings for the Voice Messaging Ports**

Field	Considerations
Enabled	Check this check box to enable the port. The port is enabled during normal operation.  Uncheck this check box to disable the port. When the port is disabled, calls to the port get a ringing tone but are not answered. Typically, the port is disabled only by the installer during testing.
Extension	Enter the extension for the port as assigned on the phone system.
Answer Calls	Check this check box to designate the port for answering calls. These calls can be incoming calls from unidentified callers or from users.
Perform Message Notification	Check this check box to designate the port for notifying users of messages. Assign Perform Message Notification to the least busy ports.

Field	Considerations
Send MWI Requests	Check this check box to designate the port for turning MWIs on and off. Assign Send MWI Requests to the least busy ports.
Allow TRAP Connections	Check this check box so that users can use the port for recording and playback through the phone in Unity Connection web applications. Assign Allow TRAP Connections to the least busy ports.
Outgoing Hunt Order	Enter the priority order in which Unity Connection uses the ports when dialing out (for example, if the Perform Message Notification, Send MWI Requests, or Allow TRAP Connections check box is checked). The highest numbers are used first. However, when multiple ports have the same Outgoing Hunt Order number, Unity Connection uses the port that has been idle the longest.

**Step 12** Select **Save**.

**Step 13** Select **Next**.

**Step 14** Repeat [Step 11](#) through [Step 13](#) for all remaining voice messaging ports for the phone system.

**Step 15** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Phone System**.

**Step 16** On the Search Phone Systems page, under Display Name, select the name of the phone system that you entered in [Step 3](#).

**Step 17** Repeat [Step 6](#) through [Step 16](#) for each remaining TIMG unit integrated with Unity Connection.

**Note** Each TIMG unit is connected to one port group with the applicable voice messaging ports. For example, a system that uses two TIMG units requires two port groups, one port group for each TIMG unit.

**Step 18** If another phone system integration exists, in Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Trunk**. Otherwise, skip to [Step 22](#).

**Step 19** On the Search Phone System Trunks page, on the Phone System Trunk menu, select **New Phone System Trunk**.

**Step 20** On the New Phone System Trunk page, enter the following settings for the phone system trunk and select **Save**.

**Table 19: Settings for the Phone System Trunk**

Field	Setting
From Phone System	Enter the display name of the phone system that you are creating a trunk for.
To Phone System	Enter the display name of the previously existing phone system that the trunk connects to.
Trunk Access Code	Enter the extra digits that Unity Connection must dial to transfer calls through the gateway to extensions on the previously existing phone system.

**Step 21** Repeat [Step 19](#) and [Step 20](#) for all remaining phone system trunks that you want to create.

**Step 22** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.

- Step 23** On the Search Port Groups page, select the display name of the port group that you added in [Step 7](#).
- Step 24** On the Port Group Basics page, select **Reset**.
- Step 25** When prompted that resetting terminates all call traffic, select **OK**.
- Step 26** In the Related Links drop-down list, select **Check Telephony Configuration** and select **Go** to confirm the phone system integration settings.
- If the test is not successful, the Task Execution Results displays one or more messages with troubleshooting steps. After correcting the problems, test the connection again.
- Step 27** In the Task Execution Results window, select **Close**.
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