A P P E N D I X **A**

Adjusting the Recording Gain for PIMG Units

This appendix contains the following sections:

Adjusting Recording Gain for a Single Phone System Integration

This section contains instructions on adjusting the recording gain in PIMG units for messages that are recorded in a configuration that has only one phone system integration.

Task List for a Single Phone System Integration

1. Set up the test configuration. See the "Setting up the Test Configuration" section on page A-1.

2. Enable the applicable traces for measuring recording gain. See the "Enabling Traces for Measuring Recording Gain" section on page A-4.

3. Call the test user 1 so that the message plays. See the "Calling Test User 1 So That the Message Plays" section on page A-4.

4. Review the trace log files for the traces that you enabled. See the "Reviewing the Trace Logs" section on page A-4.

5. Adjust recording gain in the PIMG units. See the "Adjusting the Recording Gain in the PIMG Units" section on page A-5.

6. Repeat Task 3. through Task 5. until the recording volume of messages is satisfactory for your system.

7. Disable the traces that you enabled. See the "Disabling the Traces" section on page A-5.

8. Remove the test users. See the "Removing the Test Users" section on page A-6.

Setting up the Test Configuration

Do the following procedures in the order given.

To Copy the Sample Message onto a Workstation

Step 1 On a Windows workstation that has access to the Internet, open a web browser and go to the **Cisco Unity PIMG Software Download** page at http://www.cisco.com/pcgi-bin/tablebuild.pl/unity-PIMG.

> **Note** To access the software download page, you must be logged on to Cisco.com as a registered user.

Step 2 On the Cisco Unity PIMG Software Download page, click **Sample_Message**.

Step 3 On the Details page, click **Next**.

Step 4 On the Document page, click **Accept**.

Step 5 In the Enter Network Password dialog box, enter your user name and password, then click **OK**.

Step 6 In the File Download dialog box, click **Save**.

Step 7 In the Save As dialog box, browse to the Windows workstation that will have access the PIMG units, and click **Save**.

Step 8 In the Download Complete dialog box, click **Close**.

To Set Up the Test Users

Step 1 Set up three test extensions (Phone 1, Phone 2, and Phone 3) on the same phone system that is integrated with Cisco Unity Connection.

Step 2 Set Phone 1 to forward calls to the Cisco Unity Connection pilot number when calls are not answered.

> **Caution** The phone system must forward calls to the Cisco Unity Connection pilot number in no fewer than four rings. Otherwise, the test may fail.

Step 3 To create a test user for testing, in Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 4 On the Search Users page, on the User menu, click **Add New**.

Step 5 On the New User page, enter the following settings.

Table A-1   Settings for the New User Page

Field	Setting
User Type	Click **User with Voice Mailbox**.
Based on Template	Click the applicable user template.
Alias	Enter **testuser**.
First Name	Enter **Test**.
Last Name	Enter **User**.
Display Name	Enter **Test User**.
Extension	Enter the extension of Phone 1.

Step 6   Click **Save**.

Step 7   In the Phone System field, confirm that the phone system selected is the phone system that Phone 1 is connected to.

Step 8   Uncheck the **Set for Self-enrollment at Next Login** check box.

Step 9   Click **Save**.

Step 10   On the Edit menu, click **Message Waiting Indicators**.

Step 11   On the Message Waiting Indicators page, click the message waiting indicator. If no message waiting indication is in the table, click **Add New**.

Step 12   On the Edit Message Waiting Indicator page, enter the following settings.

Table A-2   Settings for the Edit MWI Page

Field	Setting
Enabled	Check this check box to enable MWIs for the test user.
Display Name	Accept the default or enter a different name.
Inherit User's Extension	Check this check box to enable MWIs on Phone 1.

Step 13   Click **Save**.

Step 14   On the Edit menu, click **Transfer Options**.

Step 15   On the Transfer Options page, click the active option.

Step 16   On the Edit Transfer Option page, under Transfer Action, click the **Extension** option and enter the extension of Phone 1.

Step 17   In the Transfer Type field, click **Release to Switch**.

Step 18   Click **Save**.

Step 19   Repeat Step 3 through Step 18 to create test user 2.

To Copy the Sample Message as the Greeting for Test User 1

Step 1   In Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 2   On the Search Users page, click the name of test user 1.

Step 3   On the Edit User Basics page, in the Voice Name field, click **Play/Record**.

Step 4   On the Options menu of the Media Master, click **Open File**.

Step 5   In the Open dialog box, browse to the sample message that you copied to the Windows workstation in the "To Copy the Sample Message as the Greeting for Test User 1" procedure on page A-3.

Step 6   Click **Open**.

Step 7   When prompted to confirm overwriting the current message, click **OK**.

Enabling Traces for Measuring Recording Gain

Do the following procedure.

To Enable Traces for Measuring Recording Gain

Step 1   In Cisco Unity Connection Administration, in the Navigation field, click **Cisco Unity Connection Serviceability** and click **Go**.

Step 2   On the Trace menu, click **Micro Traces**.

Step 3   In the Server field, click the name of the Cisco Unity Connection server and click **Go**.

Step 4   In the Micro Trace field, click **MiuIO** and click **Go**.

Step 5   Check all the check boxes and click **Save**.

Calling Test User 1 So That the Message Plays

Do the following procedure.

To Call Test User 1 So That the Message Plays

Step 1   From Phone 3, call the extension for test user 1 (Phone 1).

Step 2   Let Phone 1 ring until the call is forwarded to Cisco Unity Connection and you hear the greeting for test user 1.

Step 3   When the greeting for test user 1 begins to play, create a conference call with test user 2 (Phone 2).

Step 4   Let Phone 2 ring until the call is forwarded to Cisco Unity Connection.

Step 5   Let the greeting for test user 2 play until Cisco Unity Connection sounds a tone and begins recording a message for test user 2.

Step 6   As Cisco Unity Connection records a message for test user 2, speak into the phone until the 30 seconds of silence in the greeting for test user 1 has finished playing.

Step 7   Put your phone on mute, and wait until the greeting for test user 1 has played completely into a message for test user 2.

Step 8   Hang up Phone 3.

Reviewing the Trace Logs

Do the following procedure.

To Review the Trace Logs

Step 1   Log on to the Cisco Unified Real-Time Monitoring Tool (RTMT).

Step 2   On the System menu, click **Tools > Trace > Trace & Log Central**.

Step 3   In the Trace & Log Central tree hierarchy, double-click **Collect Files**.

Step 4   On the Select CUC Services/Application tab, check the **Connection Conversation Manager** check box and click **Next**.

Step 5   On the Select System Services/Applications tab, click **Next**.

Step 6   Under Collect File Options, enter the applicable settings and click **Finish**.

Step 7   In the Trace & Log Central tree hierarchy, double-click **Local Browse**.

Step 8   Browse to the directory where you saved the log file and double-click the file that you want to view.

The trace log appears in a viewer that is associated with the log file type.

Step 9   Examine the log for the power levels of the recording samples, which appear similar to the following example.

```
MiuIO 23 [Thread 0x00000EB0] [Port 2] [AvWav: Miscellany]
Power = -31.012355dB Gain adjustment = 5.000000dB.
```

Adjusting the Recording Gain in the PIMG Units

Do the following procedure.

To Adjust the Recording Gain in PIMG Units

Step 1   In a web browser, go to **http://<IP address of PIMG unit>**.

Step 2   On the System Login page, enter the user name and password.

Step 3   Click **Log On**.

Step 4   Go to **http://<IP address of PIMG unit>/dsp.htm**.

Step 5   In the TDM to IP Gain Adjustment field, increase the value to make recordings louder, or lower the value to make recordings quieter.

> ⚠
> **Caution**   Increasing the recording gain too much can cause the PIMG unit to fail to recognize DTMF tones, which will result in integration problems. If DTMF recognition problems occur after increasing the recording gain, decrease the value in the TDM to IP Gain Adjustment field.

Step 6   Click **Apply Changes**.

Step 7   Repeat Step 1 through Step 6 for all remaining PIMG units.

Disabling the Traces

Do the following procedure.

To Enable Traces for Measuring Recording Gain

Step 1   In Cisco Unity Connection Serviceability, on the Trace menu, click **Micro Traces**.

Step 2   In the Server field, click the name of the Cisco Unity Connection server and click **Go**.

Step 3   In the Micro Trace field, click **MiuIO** and click **Go**.

Step 4   Uncheck all the check boxes and click **Save**.

Removing the Test Users

To Remove the Test Users

Step 1   In Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 2   On the Search Users page, check the check boxes next to the test users and click **Delete Selected**.

Adjusting Recording Gain for Multiple Phone System Integrations

This section contains instructions on adjusting the recording gain in PIMG units for messages that are recorded in a configuration that has only multiple phone system integrations. One of the integrations must be to an IP phone system such as Cisco Unified CallManager.

Task List for Multiple Phone System Integrations

1. Set up the test configuration. See the "Setting up the Test Configuration" section on page A-7.

2. Enable the applicable traces for measuring recording gain. See the "Enabling Traces for Measuring Recording Gain" section on page A-10.

3. To obtain an recording gain reference for an IP-only call, use IP Phone 3 to call IP test user 1 and conference to IP test user 2. See the "Calling from IP Phone 3 to IP Test User 1 and Conferencing to IP Test User 2" section on page A-11.

4. To obtain an recording gain reference for an IP-to-PIMG call, use IP Phone 3 to call PIMG test user 1 and conference to IP test user 2. See the "Calling from IP Phone 3 to PIMG Test User 1 and Conferencing to IP Test User 2" section on page A-11.

5. To obtain an recording gain reference for a PIMG-to-IP call, use IP Phone 3 to call IP test user 1 and conference to PIMG test user 2. See the "Calling from IP Phone 3 to IP Test User 1 and Conferencing to PIMG Test User 2" section on page A-12.

6. To obtain an recording gain reference for a PIMG-only call, use Phone 3 to call PIMG test user 1 and conference to PIMG test user 2. See the "Calling from Phone 3 to PIMG Test User 1 and Conferencing to PIMG Test User 2" section on page A-12.

7. Review the trace log files for the traces that you enabled. See the "Reviewing the Trace Logs" section on page A-13.

8. Adjust recording gain in the PIMG units. See the "Adjusting the Recording Gain in the PIMG Units" section on page A-13.

9. Repeat Task 4. through Task 8. until the recording volume of messages is satisfactory for your system.

10. Disable the traces that you enabled. See the "Disabling the Traces" section on page A-14.

11. Remove the test users. See the "Removing the Test Users" section on page A-14.

Setting up the Test Configuration

Do the following procedures in the order given.

To Copy the Sample Message onto a Workstation

Step 1 On a Windows workstation that has access to the Internet, open a web browser and go to the **Cisco Unity PIMG Software Download** page at http://www.cisco.com/pcgi-bin/tablebuild.pl/unity-PIMG.

✎
Note To access the software download page, you must be logged on to Cisco.com as a registered user.

Step 2 On the Cisco Unity PIMG Software Download page, click **Sample_Message**.

Step 3 On the Details page, click **Next**.

Step 4 On the Document page, click **Accept**.

Step 5 In the Enter Network Password dialog box, enter your user name and password, then click **OK**.

Step 6 In the File Download dialog box, click **Save**.

Step 7 In the Save As dialog box, browse to the Windows workstation that will have access the PIMG units, and click **Save**.

Step 8 In the Download Complete dialog box, click **Close**.

To Set Up the Test Users for the PIMG Integration

Step 1 Set up three test extensions (Phone 1, Phone 2, and Phone 3) on the same phone system that is integrated with Cisco Unity Connection.

Step 2 Set Phone 1 to forward calls to the Cisco Unity Connection pilot number when calls are not answered.

⚠
Caution The phone system must forward calls to the Cisco Unity Connection pilot number in no fewer than four rings. Otherwise, the test may fail.

Step 3 To create a test user for testing, in Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 4 On the Search Users page, on the User menu, click **Add New**.

Step 5 On the New User page, enter the following settings.

Table A-3   Settings for the New User Page

Field	Setting
User Type	Click **User with Voice Mailbox**.
Based on Template	Click the applicable user template.
Alias	Enter **testuser**.
First Name	Enter **Test**.
Last Name	Enter **User**.
Display Name	Enter **Test User**.
Extension	Enter the extension of Phone 1.

Step 6   Click **Save**.

Step 7   In the Phone System field, confirm that the phone system selected is the phone system that Phone 1 is connected to.

Step 8   Uncheck the **Set for Self-enrollment at Next Login** check box.

Step 9   Click **Save**.

Step 10   On the Edit menu, click **Message Waiting Indicators**.

Step 11   On the Message Waiting Indicators page, click the message waiting indicator. If no message waiting indication is in the table, click **Add New**.

Step 12   On the Edit Message Waiting Indicator page, enter the following settings.

Table A-4   Settings for the Edit MWI Page

Field	Setting
Enabled	Check this check box to enable MWIs for the test user.
Display Name	Accept the default or enter a different name.
Inherit User's Extension	Check this check box to enable MWIs on Phone 1.

Step 13   Click **Save**.

Step 14   On the Edit menu, click **Transfer Options**.

Step 15   On the Transfer Options page, click the active option.

Step 16   On the Edit Transfer Option page, under Transfer Action, click the **Extension** option and enter the extension of Phone 1.

Step 17   In the Transfer Type field, click **Release to Switch**.

Step 18   Click **Save**.

Step 19   Repeat Step 3 through Step 18 to create test user 2.

To Set Up the Test Users for the IP Phone System Integration

Step 1 Set up three test extensions (IP Phone 1, IP Phone 2, and IP Phone 3) on the same IP phone system that is integrated with Cisco Unity Connection.

Step 2 Set IP Phone 1 to forward calls to the Cisco Unity Connection pilot number when calls are not answered.

⚠

Caution The IP phone system must forward calls to the Cisco Unity Connection pilot number in no fewer than four rings. Otherwise, the test may fail.

Step 3 To create an IP test user for testing, in Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 4 On the Search Users page, on the User menu, click **Add New**.

Step 5 On the New User page, enter the following settings.

Table A-5   Settings for the New User Page

Field	Setting
User Type	Click **User with Voice Mailbox**.
Based on Template	Click the applicable user template.
Alias	Enter **testuser**.
First Name	Enter **IP Test**.
Last Name	Enter **User**.
Display Name	Enter **IP Test User**.
Extension	Enter the extension of IP Phone 1.

Step 6 Click **Save**.

Step 7 In the Phone System field, confirm that the phone system selected is the phone system that IP Phone 1 is connected to.

Step 8 Uncheck the **Set for Self-enrollment at Next Login** check box.

Step 9 Click **Save**.

Step 10 On the Edit menu, click **Message Waiting Indicators**.

Step 11 On the Message Waiting Indicators page, click the message waiting indicator. If no message waiting indication is in the table, click **Add New**.

Step 12 On the Edit Message Waiting Indicator page, enter the following settings.

Table A-6   Settings for the Edit MWI Page

Field	Setting
Enabled	Check this check box to enable MWIs for the test user.
Display Name	Accept the default or enter a different name.
Inherit User's Extension	Check this check box to enable MWIs on IP Phone 1.

Step 13   Click **Save**.

Step 14   On the Edit menu, click **Transfer Options**.

Step 15   On the Transfer Options page, click the active option.

Step 16   On the Edit Transfer Option page, under Transfer Action, click the **Extension** option and enter the extension of IP Phone 1.

Step 17   In the Transfer Type field, click **Release to Switch**.

Step 18   Click **Save**.

Step 19   Repeat Step 3 through Step 18 to create IP test user 2.

To Copy the Sample Message as the Greeting for Test User 1 in Both Integrations

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Step 1   In Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 2   On the Search Users page, click the name of test user 1.

Step 3   On the Edit User Basics page, in the Voice Name field, click **Play/Record**.

Step 4   On the Options menu of the Media Master, click **Open File**.

Step 5   In the Open dialog box, browse to the sample message that you copied to the Windows workstation in the "To Copy the Sample Message as the Greeting for Test User 1 in Both Integrations" procedure on page A-10.

Step 6   Click **Open**.

Step 7   When prompted to confirm overwriting the current message, click **OK**.

Step 8   Repeat Step 2 through Step 7 for IP test user 1 in the IP phone system integration.

Enabling Traces for Measuring Recording Gain

Do the following procedure.

To Enable Traces for Measuring Recording Gain

Step 1   In Cisco Unity Connection Administration, in the Navigation field, click **Cisco Unity Connection Serviceability** and click **Go**.

Step 2   On the Trace menu, click **Micro Traces**.

Step 3   In the Server field, click the name of the Cisco Unity Connection server and click **Go**.

Step 4   In the Micro Trace field, click **MiuIO** and click **Go**.

Step 5   Check all the check boxes and click **Save**.

Calling from IP Phone 3 to IP Test User 1 and Conferencing to IP Test User 2

Do the following procedure.

To Call from IP Phone 3 to IP Test User 1 and Conferencing to IP Test User 2

Step 1   From IP Phone 3, call the extension for IP test user 1 (IP Phone 1).

Step 2   Let IP Phone 1 ring until the call is forwarded to Cisco Unity Connection and you hear the greeting for IP test user 1.

Step 3   When the greeting for IP test user 1 begins to play, create a conference call with IP test user 2 (IP Phone 2).

Step 4   Let IP Phone 2 ring until the call is forwarded to Cisco Unity Connection.

Step 5   Let the greeting for IP test user 2 play until Cisco Unity Connection sounds a tone and begins recording a message for IP test user 2.

Step 6   As Cisco Unity Connection records a message for IP test user 2, speak into the phone until the 30 seconds of silence in the greeting for IP test user 1 has finished playing.

Step 7   Put your phone on mute, and wait until the greeting for IP test user 1 has played completely into a message for IP test user 2.

Step 8   Hang up IP Phone 3.

Calling from IP Phone 3 to PIMG Test User 1 and Conferencing to IP Test User 2

Do the following procedure.

To Call from IP Phone 3 to PIMG Test User 1 and Conferencing to IP Test User 2

Step 1   From IP Phone 3, call the extension for PIMG test user 1 (Phone 1).

Step 2   Let Phone 1 ring until the call is forwarded to Cisco Unity Connection and you hear the greeting for PIMG test user 1.

Step 3   When the greeting for PIMG test user 1 begins to play, create a conference call with IP test user 2 (IP Phone 2).

Step 4   Let IP Phone 2 ring until the call is forwarded to Cisco Unity Connection.

Step 5   Let the greeting for IP test user 2 play until Cisco Unity Connection sounds a tone and begins recording a message for IP test user 2.

Step 6   As Cisco Unity Connection records a message for IP test user 2, speak into the phone until the 30 seconds of silence in the greeting for PIMG test user 1 has finished playing.

Step 7   Put your phone on mute, and wait until the greeting for PIMG test user 1 has played completely into a message for IP test user 2.

Step 8   Hang up IP Phone 3.

Calling from IP Phone 3 to IP Test User 1 and Conferencing to PIMG Test User 2

Do the following procedure.

To Call from IP Phone 3 to IP Test User 1 and Conferencing to PIMG Test User 2

Step 1   From IP Phone 3, call the extension for IP test user 1 (IP Phone 1).

Step 2   Let IP Phone 1 ring until the call is forwarded to Cisco Unity Connection and you hear the greeting for IP test user 1.

Step 3   When the greeting for IP test user 1 begins to play, create a conference call with PIMG test user 2 (Phone 2).

Step 4   Let Phone 2 ring until the call is forwarded to Cisco Unity Connection.

Step 5   Let the greeting for PIMG test user 2 play until Cisco Unity Connection sounds a tone and begins recording a message for PIMG test user 2.

Step 6   As Cisco Unity Connection records a message for PIMG test user 2, speak into the phone until the 30 seconds of silence in the greeting for IP test user 1 has finished playing.

Step 7   Put your phone on mute, and wait until the greeting for IP test user 1 has played completely into a message for PIMG test user 2.

Step 8   Hang up IP Phone 3.

Calling from Phone 3 to PIMG Test User 1 and Conferencing to PIMG Test User 2

Do the following procedure.

To Call from Phone 3 to PIMG Test User 1 and Conferencing to PIMG Test User 2

Step 1   From Phone 3, call the extension for PIMG test user 1 (Phone 1).

Step 2   Let Phone 1 ring until the call is forwarded to Cisco Unity Connection and you hear the greeting for PIMG test user 1.

Step 3   When the greeting for PIMG test user 1 begins to play, create a conference call with PIMG test user 2 (Phone 2).

Step 4   Let Phone 2 ring until the call is forwarded to Cisco Unity Connection.

Step 5   Let the greeting for PIMG test user 2 play until Cisco Unity Connection sounds a tone and begins recording a message for PIMG test user 2.

Step 6   As Cisco Unity Connection records a message for PIMG test user 2, speak into the phone until the 30 seconds of silence in the greeting for PIMG test user 1 has finished playing.

Step 7   Put your phone on mute, and wait until the greeting for PIMG test user 1 has played completely into a message for PIMG test user 2.

Step 8   Hang up Phone 3.

Reviewing the Trace Logs

Do the following procedure.

To Review the Trace Logs

Step 1   Log on to the Cisco Unified Real-Time Monitoring Tool (RTMT).

Step 2   On the System menu, click **Tools > Trace > Trace & Log Central**.

Step 3   In the Trace & Log Central tree hierarchy, double-click **Collect Files**.

Step 4   On the Select CUC Services/Application tab, check the **Connection Conversation Manager** check box and click **Next**.

Step 5   On the Select System Services/Applications tab, click **Next**.

Step 6   Under Collect File Options, enter the applicable settings and click **Finish**.

Step 7   In the Trace & Log Central tree hierarchy, double-click **Local Browse**.

Step 8   Browse to the directory where you saved the log file and double-click the file that you want to view.

The trace log appears in a viewer that is associated with the log file type.

Step 9   Examine the log for the power levels of the recording samples, which appear similar to the following example.

```
MiuIO 23 [Thread 0x00000EB0] [Port 2] [AvWav: Miscellany]
Power = -31.012355dB Gain adjustment = 5.000000dB.
```

Adjusting the Recording Gain in the PIMG Units

Do the following procedure.

To Adjust the Recording Gain in PIMG Units

Step 1   In a web browser, go to **http://<IP address of PIMG unit>**.

Step 2   On the System Login page, enter the user name and password.

Step 3   Click **Log On**.

Step 4   Go to **http://<IP address of PIMG unit>/dsp.htm**.

Step 5   In the TDM to IP Gain Adjustment field, increase the value to make recordings louder, or lower the value to make recordings quieter.

> ⚠
> **Caution**   Increasing the recording gain too much can cause the PIMG unit to fail to recognize DTMF tones, which will result in integration problems. If DTMF recognition problems occur after increasing the recording gain, decrease the value in the TDM to IP Gain Adjustment field.

Step 6   Click **Apply Changes**.

Step 7   Repeat Step 1 through Step 6 for all remaining PIMG units.

Disabling the Traces

Do the following procedure.

To Enable Traces for Measuring Recording Gain

Step 1   In Cisco Unity Connection Serviceability, on the Trace menu, click **Micro Traces**.

Step 2   In the Server field, click the name of the Cisco Unity Connection server and click **Go**.

Step 3   In the Micro Trace field, click **MiuIO** and click **Go**.

Step 4   Uncheck all the check boxes and click **Save**.

Removing the Test Users

To Remove the Test Users

Step 1   In Cisco Unity Connection Administration, expand **Users**, then click **Users**.

Step 2   On the Search Users page, check the check boxes next to the test users and click **Delete Selected**.