



## CHAPTER 17

# Notification Devices

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Cisco Unity Connection can be configured to call a phone or pager or send text or SMS messages to notify users of new messages and calendar events. See the following sections for information on troubleshooting problems with notification devices:

- [Message Notifications Through Phones Is Slow for Multiple Users, page 17-1](#)
- [Message Notification Is Slow for a User, page 17-3](#)
- [Message Notification Is Not Working at All, page 17-5](#)
- [Message Notifications Function Intermittently, page 17-9](#)
- [Notification Devices Added in Cisco Unity Connection Administration Are Triggered at All Hours, page 17-9](#)
- [Message Notification Received When There Are No Messages, page 17-10](#)

## Message Notifications Through Phones Is Slow for Multiple Users

When message notification through phones is slow for multiple users, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

### Task List for Troubleshooting Slow Message Notifications Through Phones for Multiple Users

1. Confirm that ports are not too busy to handle message notification. See the [“Ports Are Too Busy to Make Notification Calls Promptly”](#) section on page 17-1.
2. Confirm that there are enough ports assigned to message notification. See the [“Not Enough Ports Are Set for Message Notification Only”](#) section on page 17-2.
3. Confirm that the phone system sends calls to ports that are set to answer calls. See the [“Confirming That the Phone System Sends Calls to the Ports Set to Answer Calls”](#) section on page 17-2.

## Ports Are Too Busy to Make Notification Calls Promptly

When the ports that make notification calls are also set to perform other operations, they may be too busy to make notification calls promptly. You can improve notification performance by dedicating a small number of ports to exclusively make notification calls.

Systems that handle a large volume of calls may require additional ports to improve notification performance.

#### To Review Port Configuration for Message Notification

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- Step 1** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then click **Port**.
  - Step 2** On the Search Ports page, review the existing port configuration and determine whether one or more ports can be set to dial out for message notification only.
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## Not Enough Ports Are Set for Message Notification Only

When a small number of ports are set to make notification calls and Cisco Unity Connection takes a lot of messages, the notification ports may not always be able to dial out promptly.

If the percentage of ports used for dialing out for message notification exceeds 70 percent usage during peak periods, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.

If the percentage of ports used for dialing out for message notification does not exceed 70 percent usage during peak periods, the number of notification ports is adequate. Contact Cisco TAC to resolve the problem.

#### To Determine Whether the Number of Message Notification Ports Is Adequate

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- Step 1** Log on to Cisco Unity Connection Serviceability.
  - Step 2** On the Tools menu, click **Reports**.
  - Step 3** On the Serviceability Reports page, click **Port Activity Report**.
  - Step 4** On the Port Activity Report page, select the applicable file format for the report output.
  - Step 5** Set a date range by clicking the beginning and ending month, day, year, and time.
  - Step 6** Click **Generate Report**.
  - Step 7** View the report output, depending on the file format that you chose in [Step 4](#).
  - Step 8** If the port usage during peak periods does not exceed 70 percent, the number of message waiting indication ports is adequate. Skip the remaining steps in this procedure.  
  
If the port usage during peak periods exceeds 70 percent, in Cisco Unity Connection Administration, expand **Telephony Integrations**, then click **Port**.
  - Step 9** On the Search Ports page, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.
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## Confirming That the Phone System Sends Calls to the Ports Set to Answer Calls

If the phone system is programmed to send calls to a port on Cisco Unity Connection that is not configured to answer calls, it is possible for a call collision to occur, which can freeze the port.

### To Confirm That Calls Are Being Sent to the Correct Cisco Unity Connection Ports

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- Step 1** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then click **Port**.
- Step 2** Note which ports are set to answer calls.
- Step 3** In the phone system programming, confirm that calls are only being sent to ports set to answer calls. Change the phone system programming if necessary.
- Step 4** If you make a change to the phone system programming, in Cisco Unity Connection Administration, click the display name of the port that you changed in [Step 3](#).
- Step 5** On the Port Basics page, under Phone System Port, click **Restart**.
- Step 6** When prompted that restarting the port will terminate any call that the port is currently handling, click **OK**.
- Step 7** Repeat [Step 4](#) through [Step 6](#) for all remaining ports that you changed in [Step 3](#).
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## Message Notification Is Slow for a User

There are several possible reasons that message notification may appear to be slow for a user. Use the following task list to troubleshoot the possible causes.

### Task List for Troubleshooting Slow Message Notification for a Single User

1. The user settings may not be adequate for the needs of the user. See the [“Message Notification Setup Is Inadequate”](#) section on page 17-3.
2. The user settings may need adjustment to more correctly map to the work schedule of the user. See the [“Notification Attempts Are Missed”](#) section on page 17-4.
3. The user may not clearly understand how repeat notifications are handled by Cisco Unity Connection. See the [“Repeat Notification Option Is Misunderstood”](#) section on page 17-5.

## Message Notification Setup Is Inadequate

When a user complains that notification calls are not being received when expected, the problem may be with the notification settings.

### To Determine Whether Notification Setup Is Adequate

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.



**Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.

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- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.

- Step 5** On the Edit Notification Device page, confirm that the notification device is configured to meet the needs of the user. If the user has selected a very busy phone for Connection to call, ask the user if there is an alternate device to use for message notification.
- Step 6** In the Related Links list, click **Edit Notification Device Details**, and click **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.

## Notification Attempts Are Missed

A user who is frequently away from or busy using a notification device (especially when the device is a phone) may repeatedly miss notification attempts. To the user, it appears that Cisco Unity Connection has delayed message notification.

### To Resolve Missed Notification Attempts

- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.
-  **Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.
- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.
- Step 5** On the Edit Notification Device page, check the **Repeat Notification If There Are Still New Messages** check box.
- Step 6** If the user has another notification device available, for On Notification Failure, click **Send To**, and choose the device.
-  **Note** Because Connection does not detect notification failure for SMTP devices, the On Notification Failure field is not available for notification devices of this type.
- Step 7** For phone or pager notification devices, in the Busy Retry Limit and RNA Retry Limit fields, increase the numbers so that Connection makes more notification calls when the device does not answer or is busy.
- Step 8** For phone or pager notification devices, in the Busy Retry Interval and RNA Retry Interval fields, decrease the numbers so that Connection makes notification calls more often when the device does not answer or is busy.
- Step 9** Click **Save**.
- Step 10** If you chose another device in [Step 6](#), do the following sub-steps:
- On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
  - On the Notification Devices page, click the display name of the correct notification device.
  - On the Edit Notification Device page, enter settings for the additional device.

d. Click **Save**.

**Step 11** For phone notification devices, suggest that the user set up an answering machine for the notification phone, so that notification calls are received even when the user is unavailable.

When Connection is set to call a phone that has an answering machine, verify with the user that the answering machine greeting is short enough so that the machine starts recording before the notification message is repeated.

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## Repeat Notification Option Is Misunderstood

Setting Cisco Unity Connection to repeat notification at a particular interval when there are still new messages can be useful for users who receive a lot of messages but who do not need immediate notification. However, when a user chooses not to have Connection restart notification each time a new message arrives, setting a long interval between repeat notification calls may lead the user to believe that Connection is delaying notification.

### To Resolve a Repeat Notification Problem

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

**Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.



**Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.

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**Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.

**Step 4** On the Notification Devices page, click the display name of the correct notification device.

**Step 5** On the Edit Notification Device page, in the Notification Repeat Interval box, set a shorter interval, such as 15 minutes.

**Step 6** Click **Save**.

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## Message Notification Is Not Working at All

There are several possible reasons that message notification may not work at all for a user or group of users. Use the following task list to troubleshoot the possible causes.

### Task List for Troubleshooting Non-Functional Message Notifications for a User or Group of Users

- **For all types of notification device:** Confirm that the notification device is enabled and that the notification schedule is set correctly. See the [“Notification Device Is Disabled or the Schedule Is Inactive”](#) section on page 17-6.

Confirm that message notification is enabled for the correct types of messages. See the [“Only Certain Types of Messages Are Set to Trigger Notification”](#) section on page 17-6.

- **For phone or pager notification devices:** Confirm that the message notification phone number is correct and that it includes the access code for an external line if notification is to an external phone. See the “[Notification Number Is Incorrect or Access Code for an External Line Is Missing \(Phone and Pager Notification Devices Only\)](#)” section on page 17-7.

Confirm that the notification device is assigned to the correct phone system. See the “[Notification Device Phone System Assignment Is Incorrect \(Phone and Pager Notification Devices Only\)](#)” section on page 17-8.

- **For SMS notification devices:** See the “[SMS Notifications Are Not Working](#)” section on page 17-8 for additional troubleshooting steps.
- **For SMTP notification devices:** See the “[SMTP Message Notification Is Not Working at All for Multiple Users](#)” section on page 17-9 for additional troubleshooting steps.

## Notification Device Is Disabled or the Schedule Is Inactive

When you are troubleshooting message notifications, start by confirming that the device is enabled, and that the notification schedule for the device is currently active.

### To Verify a Device Status and Schedule

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.
-  **Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.
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- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.
- Step 5** On the Edit Notification Device page, confirm that the **Enabled** check box is checked.
- Step 6** In the Related Links list, click **Edit Notification Device Details**, and click **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.
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## Only Certain Types of Messages Are Set to Trigger Notification

Cisco Unity Connection can be set so that a user is notified only of certain types of messages. For example, if user notification is set up only for urgent voice messages, regular voice messages do not trigger the notification device.

### To Change the Message Types That Trigger a Notification Device

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.



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**Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.

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- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.
- Step 5** On the Edit Notification Device page, under Notification Rule Events, verify the selected message types with the user.
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## Notification Number Is Incorrect or Access Code for an External Line Is Missing (Phone and Pager Notification Devices Only)

If notifications to a phone or pager are not working at all, the user may have entered a wrong phone number for Cisco Unity Connection to call.

To place an external call, a user usually must dial an access code (for example, 9) to get an external line. When the phone system requires an access code, an external message notification phone number set in Cisco Unity Connection must include the access code.

In addition, some phone systems may require a brief pause between dialing the access code and being connected to an external line.

### To Verify the Device Phone Number and Access Code for a Phone or Pager Notification Device

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- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.



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**Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.

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- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.
- Step 5** On the Edit Notification Device page, under Phone Settings, confirm that the correct access code and phone number are entered in the Phone Number field for the device.

If the phone system requires a pause, enter two commas between the access code and the phone number (for example, 9,,5551234).

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### To Test a Phone or Pager Notification Device

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- Step 1** If the notification device is a mobile phone or pager, ask the user to have it available for the test. If the notification device is a home phone or another phone away from the office, ask the user to have someone available to answer the phone during the test.
- Step 2** Confirm that the notification device is on.

- Step 3** Set up a test phone (Phone 1) for single-line testing. Use a line connected to a port that is set to dial out for message notification.
- Step 4** On Phone 1, dial the notification number set in Connection for the device.
- If the pager is activated or the phone rings, you have confirmed that Connection can call the device.
- If the pager is not activated or the phone does not ring, there may be a problem with the device. Consult the documentation from the device manufacturer, or ask the user to obtain a different notification device and repeat the test.

## Notification Device Phone System Assignment Is Incorrect (Phone and Pager Notification Devices Only)

### To Verify Notification Device Phone System Assignment

- Step 1** In Cisco Unity Connection Administration, expand **Users**, then click **Users**.
- Step 2** On the Search Users page, in the Search Results table, click the alias of the applicable user.
-  **Note** If the user does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and click **Find**.
- Step 3** On the Edit User Basics page, on the Edit menu, click **Notification Devices**.
- Step 4** On the Notification Devices page, click the display name of the correct notification device.
- Step 5** On the Edit Notification Device page, under Phone Settings, note the phone system that is specified in the Phone System field.
- Step 6** In Cisco Unity Connection Administration, expand **Telephony Integrations**, then click **Port**.
- Step 7** On the Search Ports page, confirm that the phone system assigned to the notification device has at least one port designated for message notification. Correct the port settings if necessary.

## SMS Notifications Are Not Working

If SMS notifications are not working, in Cisco Unity Connection Administration, check the settings on the System Settings > Advanced > SMPP Providers > Edit SMPP Provider page to confirm that the settings match the settings specified by the provider.

If settings on the Edit SMPP Provider page are correct, enable the SMS Device (level 30) micro trace to collect trace information that will help you troubleshoot the problem. For detailed instructions on enabling and collecting diagnostic traces, see the “[Diagnostic Traces](#)” chapter.

Common error codes and explanations for SMS problems are listed in the following table:

|                           |  |
|---------------------------|--|
| <b>SmppConnect failed</b> | Connection was unable to connect to the SMPP provider. |
|---------------------------|--|

|                                   |   |
|-----------------------------------|---|
| <b>SmppBindTransmitter failed</b> | Connection was unable to log in to the SMPP provider.                 |
| <b>SmppSubmitSm failed</b>        | Connection was unable to submit the SMS message to the SMPP provider. |

## SMTP Message Notification Is Not Working at All for Multiple Users

If SMTP notifications are not working, in Cisco Unity Connection Administration, check the System Settings > SMTP Configuration > Smart Host page to confirm that a smart host is configured. To enable Connection to send text message notifications by using SMTP, your Connection server must be configured to relay messages through a smart host.

If a smart host is already configured on the Smart Host page, note the IP address or host name of the smart host and check to make sure that this smart host is configured to accept messages from the Connection server.

If the smart host settings are configured correctly, you can use traces to track whether the SMTP notification messages are being sent by the Connection server. The default SMTP micro traces (levels 10, 11, 12 and 13) indicate if there is a permanent problem with delivery of a notification message to the smart host. The SMTP micro trace level 18 (Network Messages) shows the details if the notification message is delivered to the smart host. For detailed instructions on enabling and collecting diagnostic traces, see the “[Diagnostic Traces](#)” chapter.

## Message Notifications Function Intermittently

A possible cause for notification devices (such as phones, pagers, SMTP, and SMS) to function intermittently is that the schedule for the notification device for the user is not active during the time in question.

To correct the problem, edit the schedules of the notification devices for the user so that the notification devices are active when the user wants message notifications delivered. You must log on to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Cisco Unity Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Connection Administration, you can navigate to the Cisco PCA page for the user by clicking the Edit Notification Device Details link in the Related Links list.

For details on using the Cisco PCA, see the *User Guide for the Cisco Unity Connection Assistant Web Tool (Release 7.x)* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/7x/user/guide/assistant/7xcucugasstx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/user/guide/assistant/7xcucugasstx.html).

## Notification Devices Added in Cisco Unity Connection Administration Are Triggered at All Hours

When a notification device is added for a user in Cisco Unity Connection Administration, by default, the device is active at all times. If a user is receiving notifications at unexpected times, you can modify the notification device schedule to prevent this. You must log on to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Connection Administration, you can navigate to the Cisco PCA page for the user by clicking the Edit Notification Device Details link in the Related Links list.

For details on using the Cisco PCA, see the *User Guide for the Cisco Unity Connection Assistant Web Tool (Release 7.x)* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/7x/user/guide/assistant/7xcucugasstx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/user/guide/assistant/7xcucugasstx.html).

## Message Notification Received When There Are No Messages

When users are members of a distribution list that is the recipient of a call handler that is configured to mark messages for dispatch delivery, it is possible for a user to receive a message notification for a message that no longer appears in the user inbox when he or she attempts to access it. This can happen because another member of the distribution list has accepted the message between the time that the notification was sent and the time that the user tries to listen to the message.

When configuring message notification rules to include dispatch messages, make users aware that by the time they receive the notification and call in to retrieve the message, it may be gone from their mailboxes because another user has already accepted the message.

For more information on dispatch messages, see the “[Dispatch Messages](#)” section in the “Messages” chapter of the *System Administration Guide for Cisco Unity Connection Release 7.x*.