



Message Waiting Indicators

About Problems with MWIs

Problems with message waiting indicators (MWIs) fall into three categories:

MWIs are not turned on or off at all

When MWIs are not working at all, a phone system integration problem or Cisco Unity setup problem is the likely cause. See the [“MWIs Are Not Being Turned On and Off at All for Multiple Subscribers”](#) section on page 5-2. Isolated complaints about MWIs not working can be caused by a problem with a subscriber phone or settings. See the [“MWIs Are Not Being Turned On and Off at All for a Subscriber”](#) section on page 5-8.

Additional information about MWI issues can be found in the [“MWI Frequently Asked Questions”](#) section on page 5-2.

MWIs are turned on and off slowly

Some Cisco Unity setup problems can prevent prompt activation of MWIs. See the [“MWIs Are Being Turned On and Off Slowly”](#) section on page 5-9.

MWIs are turned off intermittently

Some phone systems may require special port setup for MWIs. See the [“MWIs Are Sometimes Not Being Turned Off”](#) section on page 5-12.

MWI Frequently Asked Questions

Question	Answer
Can MWIs be set to turn on for new e-mail messages?	No. MWIs are only activated by voice messages. E-mail messages cannot activate MWIs.
Do Outlook rules affect MWIs?	Yes. MWIs are turned on only when the inbound voice message is left in the subscriber inbox. If the message is moved from the inbox to another folder via a rule, it will shut off the MWI.
If a subscriber marks a message as unread in Outlook, will the MWI be turned back on again?	Yes, but only if the message is still in the subscriber inbox.

MWIs Are Not Being Turned On and Off at All for Multiple Subscribers

There are several possible reasons that MWIs may not be turned on and off at all for multiple subscribers. In this section, possible causes are listed in order, from most likely to least likely to occur:

- [The Phone System Settings Are Incorrect, page 5-3](#)
- [The MWI Codes Are Incorrect, page 5-4](#)
- [The Phone System Is Not Set To Turn MWIs On and Off, page 5-5](#)
- [The Phone System Is Not Able To Turn MWIs On and Off, page 5-5](#)
- [The DTMF Duration and Delay Settings Are Incorrect \(Circuit-Switched Phone Systems Only\), page 5-7](#)
- [MAPI Logon Delay After Restarting the Cisco Unity Server, page 5-7](#)

The Phone System Settings Are Incorrect

When the phone system settings in the Cisco Unity Administrator do not match the type of phone system that Cisco Unity is connected to, Cisco Unity may not turn MWIs on and off.

To verify phone system settings in the Cisco Unity Administrator

- Step 1** In the Cisco Unity Administrator, click **System > Switch**.
- Step 2** In the Set Active Switch Type section, verify all values.
- Step 3** Correct any incorrect values for the phone system.
- Step 4** Go to **System > Ports**.
- Step 5** In the Port Assignments section, verify that the correct port ranges have been assigned to the appropriate phone system.
- Step 6** If you made a change either to the phone system settings or to the port assignments, shut down and restart Cisco Unity.

If the phone system values and port assignments are correct, if the integration uses multiple CallManager clusters, and if MWIs still do not turn on and off, continue with the next procedure, [To verify multiple cluster phone system settings \(CallManager integration only\)](#).

If the integration uses multiple CallManager clusters, Cisco Unity must have at least one port connected to each CallManager cluster that is designated for MWI only.

To verify multiple cluster phone system settings (CallManager integration only)

- Step 1** In the Cisco Unity Administrator, click **System > Ports**.
- Step 2** Confirm that at least one voice messaging port is dedicated to each cluster and set to Dial Out MWI.
- Step 3** In the Cisco CallManager programming, confirm that these dedicated MWI voice messaging ports are not in the Cisco CallManager hunt group for incoming calls.
- Step 4** If you make a change to either the Cisco Unity or the CallManager port configuration, shut down and restart the Cisco Unity server.

If the phone system values and port assignments are correct, and MWIs still do not turn on and off, continue with the following [“The MWI Codes Are Incorrect”](#) section.

The MWI Codes Are Incorrect

Cisco Unity may be sending the wrong code to the phone system for turning MWIs on or off. If the On code is wrong, MWIs will not be turned on for any subscriber. If the Off code is wrong, MWIs will not be turned off once they have been turned on.

Some phone systems may not allow you to change MWI codes. If that is true for your phone system, the MWI On Code and MWI Off Code boxes will not be available in the Cisco Unity Administrator. For help resolving this problem, contact the Cisco Technical Assistance Center (TAC).

To verify the MWI codes (analog integrations only)

- Step 1** In the phone system programming or documentation, locate and write down the codes that turn MWIs on and off.
 - Step 2** In the Cisco Unity Administrator, click **System > Switch**.
 - Step 3** Compare the codes for the phone system with the codes in the MWI On Code and MWI Off Code boxes in the Active Switch Settings section.

If either of the codes in the Cisco Unity Administrator is different from the related code for the phone system, change the value in Cisco Unity, and continue with [Step 4](#).

If both codes in the Cisco Unity Administrator are correct, contact Cisco TAC to resolve the problem.
 - Step 4** If you changed either value in [Step 3](#), click **Save**.
 - Step 5** Shut down and restart Cisco Unity.
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The Phone System Is Not Set To Turn MWIs On and Off

When the phone system is not set to turn MWIs on and off, it does not matter whether Cisco Unity is sending the codes that the phone system is expecting. The MWIs will not be turned on or off.

In the phone system programming, confirm that the phone system is set to turn MWIs on and off.

The Phone System Is Not Able To Turn MWIs On and Off

To test whether the phone system can turn MWIs on and off (Cisco CallManager integration only)

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- Step 1** From a test phone whose MWI is off, dial the number that turns MWIs on. The indicator should turn on. If the indicator turns on, continue with [Step 2](#). If not, skip to [Step 3](#).
 - Step 2** Dial the number that turns MWIs off. The indicator should turn off. If it is off, continue with the next possible cause in the “[Subscriber Phone System Assignment Is Incorrect \(Dual Integrations Only\)](#)” section on page 5-8. If it is not off, continue with [Step 3](#).
 - Step 3** Confirm that the MessageWaitingOnDN and MessageWaitingOffDN extensions are not used by any device on CallManager.
 - Step 4** Confirm that there are no other dialable extensions in the same range as the MessageWaitingOnDN and MessageWaitingOffDN extensions. For example, confirm that extensions 1xxx do not interfere with extensions 1xxxx.
 - Step 5** Confirm that all of the CallManager voice messaging ports are in the same Calling Search Space as all of the subscriber phones. Change the Calling Search Space assignments if necessary.
 - Step 6** Confirm that CallManager port forwarding and hunt groups do not include the MWI ports. Change the port forwarding or hunt group programming if necessary.
 - Step 7** Confirm that you are using the correct version of the TSP for your Cisco Unity release. For a list of the TSP versions that each version of Cisco Unity supports, refer to *Cisco Unity-CM TSP Release Notes*, available on Cisco.com at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/tsp/index.htm and on the Cisco Documentation CD-ROM.

- Step 8** Confirm that the MessageWaitingOnDN and MessageWaitingOffDN extensions specified in the Cisco CallManager Service Parameters are the same as those specified in the TAPI Service Provider settings. If they are not the same, change the TAPI Service Provider settings.
- Step 9** If you made a change to the Cisco CallManager or TAPI Service Provider settings, shut down and restart the Cisco CallManager service and the Cisco Unity server for the changes to take effect.
- Step 10** Perform [Step 1](#) and [Step 2](#) again. If you hear a reorder tone, then the MessageWaitingOnDn and MessageWaitingOffDn settings are not correct on CallManager. Return to [Step 3](#). If you do not hear reorder tone, but the MWIs are not on or turned off, then your route plan may be causing the problem. Review the route plan and return to [Step 5](#).
- Step 11** If MWIs still are not working, contact Cisco TAC.
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To test whether the phone system can turn MWIs on and off (analog voice lines that use the analog MWI method only)

- Step 1** Set up a test phone (Phone 1) for single-line testing by following the instructions in the [“Troubleshooting Preparation”](#) section on [page 1-1](#). Use a line connected to a port that is set to dial out for Message Waiting Indication.
- Step 2** On Phone 1, dial the code to turn on the MWI on a nearby phone (Phone 2). Hang up Phone 1.
- Step 3** Confirm that the MWI on Phone 2 is on.
If the MWI is not on, contact the phone system vendor to resolve the problem.
- Step 4** On Phone 1, dial the code to turn off the MWI on Phone 2. Hang up Phone 1.
- Step 5** Confirm that the MWI on Phone 2 is off.
If the MWI is not off, contact the phone system vendor to resolve the problem.
- Step 6** Repeat [Step 2](#) through [Step 5](#) for each subscriber extension, if necessary.
- Step 7** Confirm that Cisco Unity recognizes the phone system dial tone by running the Learn Tones utility. For more information, see the [“Learn Tones”](#) section on [page 9-7](#).

If running the Learn Tones utility does not resolve the problem, continue with the next possible cause in the following [“The DTMF Duration and Delay Settings Are Incorrect \(Circuit-Switched Phone Systems Only\)”](#) section.

The DTMF Duration and Delay Settings Are Incorrect (Circuit-Switched Phone Systems Only)

If Cisco Unity is dialing longer or shorter tones than the phone system is expecting, the phone system may not realize that Cisco Unity is trying to turn MWIs on and off. The same miscommunication may occur if Cisco Unity is waiting a longer or shorter period to dial the next digit than the phone system is expecting.

To verify the DTMF duration and delay settings

- Step 1** In the phone system programming or documentation, locate and write down the values for the duration of DTMF tones and the delay between digits that the phone system will accept.
 - Step 2** Start the **Edit Switch** utility, and locate the Dialed DTMF Duration and Delay Between Dialed DTMF Digits boxes.
 - Step 3** Compare the phone system values with the Cisco Unity values.
If either of the Cisco Unity values is different from the related phone system value, contact Cisco TAC to correct the value.
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MAPI Logon Delay After Restarting the Cisco Unity Server

Restarting the Cisco Unity server may result in delayed message waiting indication until MAPI logon to all subscriber mailboxes has been completed. Depending on the size of the subscriber database, it could take several hours to complete the MAPI logon.

MWIs Are Not Being Turned On and Off at All for a Subscriber

There are several possible reasons that MWIs may not be turned on and off at all for a single subscriber. In this section, possible causes are listed in order, from most to least likely to occur:

- [Subscriber Phone System Assignment Is Incorrect \(Dual Integrations Only\), page 5-8](#)
- [Subscriber MWI Settings Are Incorrect in Cisco Unity, page 5-8](#)
- [An MWI Is Malfunctioning, page 5-9](#)

Subscriber Phone System Assignment Is Incorrect (Dual Integrations Only)

To verify subscriber phone system assignment

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- Step 1** In the Cisco Unity Administrator, click **Subscribers > Subscribers > Profile**.
 - Step 2** In the Subscriber Information section, verify that the correct phone system has been selected for the subscriber. Correct if necessary.
 - Step 3** If you made a change to either the phone system settings or to the port assignments, shut down and restart Cisco Unity.
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Subscriber MWI Settings Are Incorrect in Cisco Unity

Subscriber message settings control whether an MWI is used for message notification. They also control which primary and alternate extensions receive MWI on and off commands for the subscriber from the phone system. Note that a subscriber can have up to ten alternate extensions.

To confirm subscriber MWI settings in Cisco Unity

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- Step 1** In the Cisco Unity Administrator, click **Subscribers > Subscribers > Messages** for the subscriber account.

- Step 2** Confirm that the Use MWI For Message Notification box is checked.
 - Step 3** Confirm that the value in the Extension field is correct for the subscriber.
 - Step 4** Confirm that the MWI Extensions (alternate subscriber extensions) are correct for the subscriber.
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An MWI Is Malfunctioning

When an MWI problem is limited to a single subscriber, the subscriber phone may have a malfunctioning MWI.

To test an MWI

- Step 1** Replace the subscriber phone with another phone that has a working MWI.
 - Step 2** If you have a Cisco CallManager integration, dial the extension that turns message waiting indicators on.

If you have a circuit-switched phone system integration, leave a test message for the subscriber.
 - Step 3** Confirm that the MWI is on.

If the MWI is still not working, contact Cisco TAC.
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MWIs Are Being Turned On and Off Slowly

There are several possible reasons that MWIs may be turned on and off slowly, as follows:

- [Exchange and Cisco Unity Need To Be Restarted, page 5-10](#)
- [The Cisco Unity Primary Exchange Server Is Down or Is Disconnected, page 5-10](#)
- [Ports Are Too Busy To Turn MWIs On and Off Promptly, page 5-10](#)
- [Not Enough Ports Are Set for Message Waiting Indication, page 5-11](#)

- [Calls Sent to the Wrong Cisco Unity Ports Cause the Ports To Hang, page 5-12](#)

Exchange and Cisco Unity Need To Be Restarted

There may be a situation in which the communication between Cisco Unity and Exchange slows down to the point where it takes 30-60 seconds for a message waiting indicator to be turned on or off. In this case, the communication between Cisco Unity and the phone system is not affected.

To restart Cisco Unity and Exchange

- Step 1 Shut down Exchange.
 - Step 2 Shut down the Cisco Unity server.
 - Step 3 Start Exchange.
 - Step 4 Wait for a few minutes, then restart Cisco Unity.
 - Step 5 If the problem still is not resolved within 10 to 15 minutes after the restart, continue with the next possible cause in the following [“The Cisco Unity Primary Exchange Server Is Down or Is Disconnected”](#) section.
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The Cisco Unity Primary Exchange Server Is Down or Is Disconnected

Messages recorded while the primary Exchange server is down or disconnected are stored until the server is brought back up. Since MWIs are not lit until a message is actually delivered to a subscriber, the delay experienced between the time a message is recorded and its delivery is entirely dependant on the amount of time that the primary Exchange server was down or disconnected.

Ports Are Too Busy To Turn MWIs On and Off Promptly

When the ports that turn MWIs on and off are also set to perform other operations, they may be too busy to turn MWIs on and off promptly. You can improve MWI performance by dedicating a smaller number of ports exclusively to turning MWIs on and off.

You can also improve MWI performance by making sure that the entry point of the Cisco Unity port-hunting chain is not a port that also handles MWIs.

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

To review port configuration for message waiting indication (non-serial integrations only)

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- Step 1** In the Cisco Unity Administrator, click **System > Ports**.
 - Step 2** Review the existing port configuration and determine if one or more ports can be set to dial out for Message Waiting Indication only.
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Not Enough Ports Are Set for Message Waiting Indication

When Cisco Unity takes a lot of messages, the ports assigned to turn MWIs on and off may not always be able to dial out promptly. A single port set to dial out only for Message Waiting Indication with an IP phone system integration can change approximately 240 to 360 MWIs per hour, depending on the phone system. An analog integration can take up to 7 seconds per MWI change.

To determine if the number of message waiting indication ports is adequate

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- Step 1** In the Cisco Unity Administrator, click **Reports > System > Port Usage**.
 - Step 2** Generate a port usage report for the ports set to dial out for Message Waiting Indication only.

If the value of Percentage Of Ports Used exceeds 40 percent usage during peak periods, click **System > Ports** in the Cisco Unity Administrator, then continue with [Step 3](#).

If the value of Percentage Of Ports Used does not exceed 40 percent usage during peak periods, then the number of message waiting indication ports is adequate. Contact Cisco TAC to resolve the problem.
 - Step 3** Review the existing port configuration and determine if one or more additional ports can be set to dial out for Message Waiting Indication only.
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Calls Sent to the Wrong Cisco Unity Ports Cause the Ports To Hang

If the phone system is programmed to send calls to a port on Cisco Unity that is not configured to answer calls, Cisco Unity will not answer the call. In addition, for systems equipped with certain voice cards, the call will never be dropped. This means the port will not be used again for its designated purpose (for example, turning message waiting indicators on and off) until the Cisco Unity server is restarted.

To confirm that calls are being sent to the correct Cisco Unity ports

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- Step 1** In the Cisco Unity Administrator, click **System > Ports**.
 - Step 2** Note which ports are designated to answer calls.
 - Step 3** In the phone system programming, confirm that calls are only being sent to ports designated to answer calls.
 - Step 4** If you make a change to the phone system programming, shut down and restart the Cisco Unity server to clear any hung ports.
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MWIs Are Sometimes Not Being Turned Off

In this section, possible reasons that MWIs are not turned off are described. The possible causes are listed in order, from most likely to least likely to occur:

- [MWIs Have Lost Synchronization, page 5-12](#)
- [The Phone System Restricts Message Waiting Indication, page 5-13](#)

MWIs Have Lost Synchronization

MWIs may lose synchronization if, for example, the phone system is off-line when an MWI status changes.

Perform the following procedure.

To resynchronize MWIs

- Step 1** In the Cisco Unity Administrator, click **System > Switch**.
 - Step 2** In the Resynch All Message Waiting Indicators section, click **Resynch Now**.
 - Step 3** If desired, check the Resynch Every Day check box, and choose the time that you want the system to resynchronize the MWIs.
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The Phone System Restricts Message Waiting Indication

Some phone systems require that the same port that turns on an MWI also must turn it off. When multiple ports are set for message waiting indication on such a phone system, MWIs may be turned off intermittently.

To test for a phone system restriction on message waiting indication (circuit-switched phone systems only)

- Step 1** Set up two test phones (Phones 1 and 2) for single-line testing. For more information, see the [“Troubleshooting Preparation” section on page 1-1](#). Use lines connected to ports that are set to dial out for Message Waiting Indication only.
- Step 2** On Phone 1, dial the code to turn on the MWI on a nearby phone (Phone 3).
- Step 3** On Phone 2, dial the code to turn on the MWI on another nearby phone (Phone 4).
- Step 4** On Phone 1, dial the code to turn off the MWI on Phone 3.
If the MWI on Phone 3 is still on, and you have confirmed that the MWI code you are using is correct, contact Cisco TAC.
- Step 5** On Phone 1, dial the code to turn off the MWI on Phone 4.
If the MWI is on, continue with [Step 6](#).
If the MWI is off, you can use more than one port to dial out for MWIs, and a phone system restriction is not causing MWIs to be turned off intermittently. Contact Cisco TAC to resolve the problem.
- Step 6** On Phone 2, dial the code to turn off the MWI on Phone 4.

■ MWIs Are Sometimes Not Being Turned Off

If the MWI is off, this means that a port that turns on an MWI must also be the port that turns off the MWI. In the Cisco Unity Administrator, set only one port to dial out for Message Waiting Indication.
