

Solutions for Cisco Unity Message Waiting Indicator (MWI) Problems

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Introduction

A Message Waiting Indicator (MWI) can be found on subscriber phones as a lamp, flashing LCD panel, or special dial tone to let the subscribers know that a voice message is waiting. The type of indicator depends on both the phone system and the types of phones that the subscribers use. Two principal events cause Cisco Unity® to activate and deactivate MWIs:

- When a caller leaves a message for a subscriber, Cisco Unity notifies the phone system to activate the MWI on the subscriber's phone.
- When the subscriber listens to the message, Cisco Unity notifies the phone system to deactivate the MWI on the phone.

This document discusses three MWI problems and provides relevant solutions:

1. The MWI light on an IP phone does not turn on to indicate a new voice message.

This problem can occur for these reasons:

- ◆ The common parameters in the Cisco Unity and Cisco CallManager® server configurations are not set properly.
 - ◆ A configuration of the Calling Search Space (CSS) feature is incorrect.
2. MWIs occasionally do not turn off as expected. This indicates that the MWIs have lost synchronization.
 3. The MWI does not refresh automatically. This problem can occur if the DNS server is unable to resolve the IP address of the Active Directory Server.

Prerequisites

Requirements

Cisco recommends a basic knowledge of these topics:

- Cisco CallManager
- Cisco Unity
- CSS

Components Used

The information in this document is based on these software and hardware versions:

- Cisco Unity Version 4.x and later
- Cisco CallManager Version 3.3 and higher

The information in this document was created from the devices in a specific lab environment. All the devices used in this document began with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Note: Cisco Unity 4.x does not support Microsoft Exchange server 2007. MWI does not work if you have upgraded the partner exchange server from Exchange 2003 to Exchange 2007. Microsoft Exchange 2007 server is supported in Cisco Unity 5.0.

Note: Cisco Unity 5.x supports maximum 10 MWI extension for each voice mail box.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Background Information

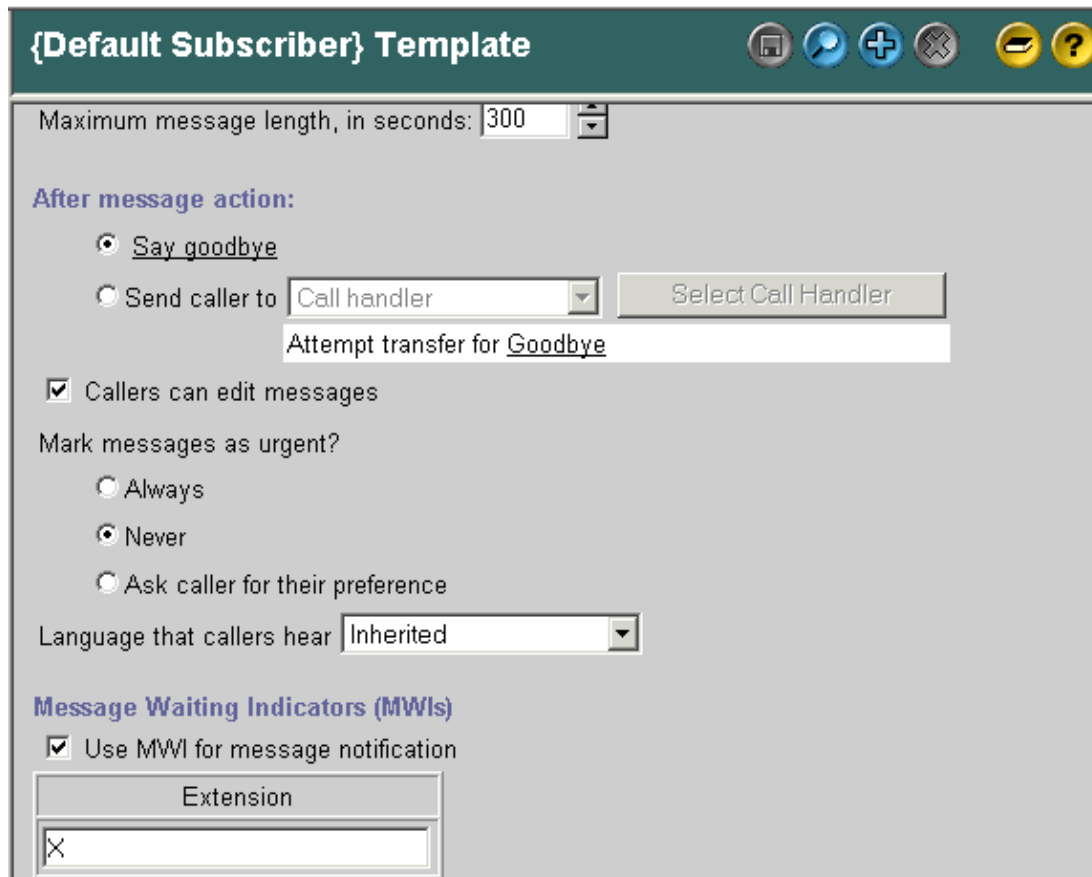
Initial Verification

Verify whether these two tests are successful before you proceed:

- Test whether the CallManager and Unity servers are able to ping each other. This test ensures that IP connectivity is available.
- Check whether you are able to dial the IP phone whose MWI light does not activate. This test causes the IP phone to ring.

Configure the Default Subscriber Template to Enable the Use of the MWI Feature for a New Subscriber

When a new subscriber is created, the behavior of the MWI feature is inherited from the Default Subscriber Template. In this Default Subscriber Template window, the use of MWIs is enabled. The extension is set to X by default, which uses the subscriber's extension for MWI. This can be changed if you plan to light the MWI of a different extension than the one that received the message.



The screenshot shows the configuration window for the Default Subscriber Template. The title bar reads "{Default Subscriber} Template". The window contains the following settings:

- Maximum message length, in seconds: 300
- After message action:
 - Say goodbye
 - Send caller to: Call handler (dropdown menu) [Select Call Handler button]
 - Attempt transfer for: Goodbye
- Callers can edit messages
- Mark messages as urgent?:
 - Always
 - Never
 - Ask caller for their preference
- Language that callers hear: Inherited (dropdown menu)
- Message Waiting Indicators (MWIs):
 - Use MWI for message notification
 - Extension: X

After this option is enabled in the Default Subscriber Template, the MWI feature becomes active for new subscribers.

Note: This does not affect current subscribers. Once a subscriber's profile is created, all changes must be made on the individual subscriber's profile.

Configure the Subscriber's Profile to Enable the Use of the MWI Feature for a Current Subscriber

In the **Subscribers > Messages** window, the subscriber's MWI feature appears to be disabled, but it is actually enabled because of the MWI behavior inherited from the Default Subscriber Template. The System Administrator has not made any changes that would override this behavior.

The Refresh Status option is not active in this window and cannot be used. Check the Use MWI box and add an X in the Extension area to temporarily activate the Refresh Status option but not save the changes. If you have any doubts about this subscriber's MWI feature status, save this change.

Enrique Zurita*

Send caller to: Call handler (select Call handler)

Attempt transfer for: Goodbye

Callers can edit messages

Mark messages as urgent?

Always

Never

Ask caller for their preference

Language that callers hear: Inherited

Message Waiting Indicators (MWIs)

Use MWI for message notification Refresh status

Indicator Lamps: Off

MWI Extensions

Delete	Extension
<input type="checkbox"/>	

Select All Clear All Delete Add

In this window, the Refresh status option is now active.



MWI Light Does Not Turn On

The MWI light on an IP phone does not turn on to indicate a new voice message.

Problem: Incorrect Cisco Unity or Cisco CallManager Parameter Configuration

If the Cisco Unity or Cisco CallManager systems are configured incorrectly, the MWI does not turn on. This incorrect configuration can occur because of any of these possibilities:

- The unique extensions to turn MWIs on and off have not been entered in the MWI On Extension and MWI Off Extension fields in the Unity Telephony Integration Manager (UTIM), or the Cisco Unity server has not been restarted to enable these values.
- The unique extensions to turn MWIs on and off have not been entered in the Cisco CallManager server, or that server has not been restarted to enable these values.
- The unique extensions to turn MWIs on and off in the Cisco CallManager server are not identical to the values entered in the MWI On Extension and MWI Off Extension fields in UTIM.

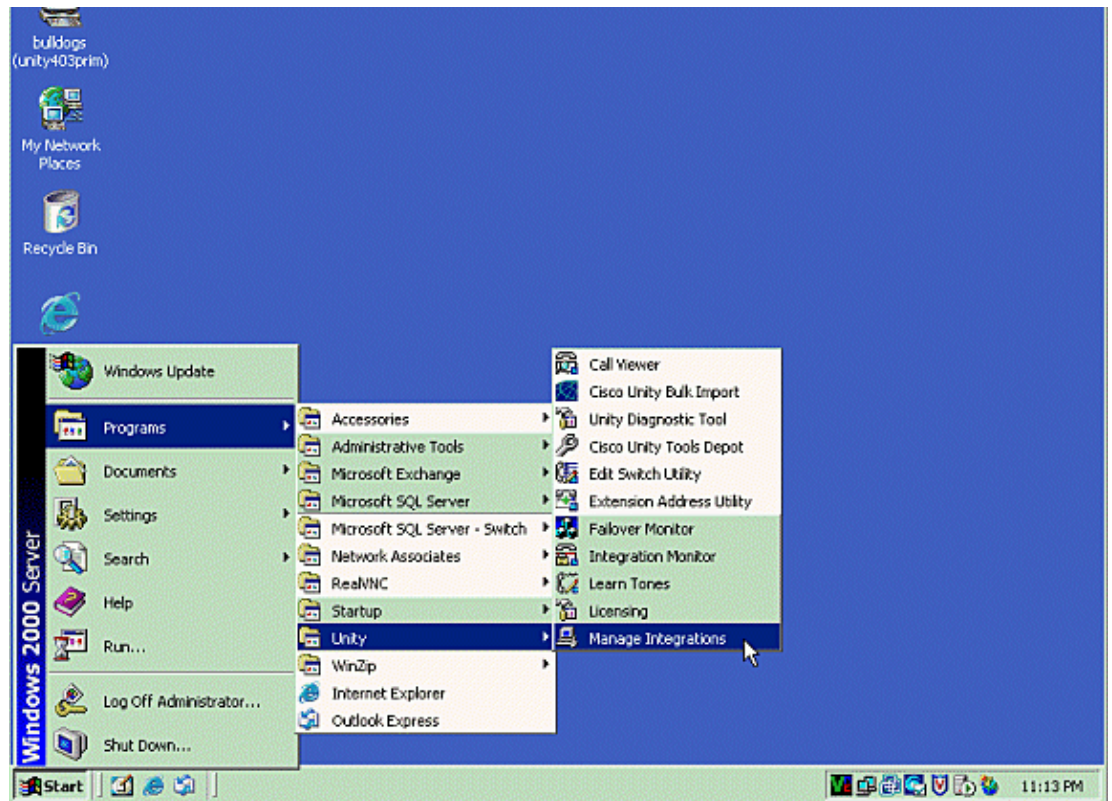
Refer to Resolving Cisco CallManager Integration Problems for more information on the MWI configuration issues in Cisco CallManager and Cisco Unity.

Solution: Configure/Verify Unity Parameters

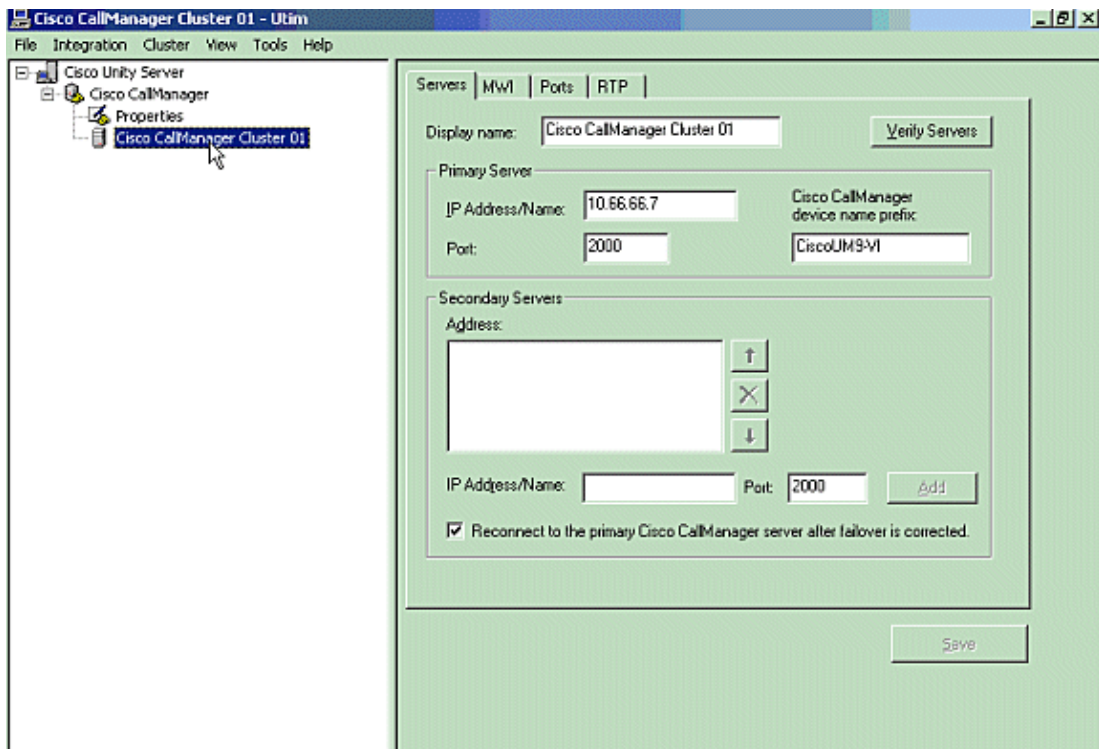
Follow these procedures to make sure that the unique extensions to turn MWIs on and off have been entered correctly in the MWI On Extension and MWI Off Extension fields in UTIM:

1. On the Windows Start menu of the Cisco Unity server, click **Programs**.

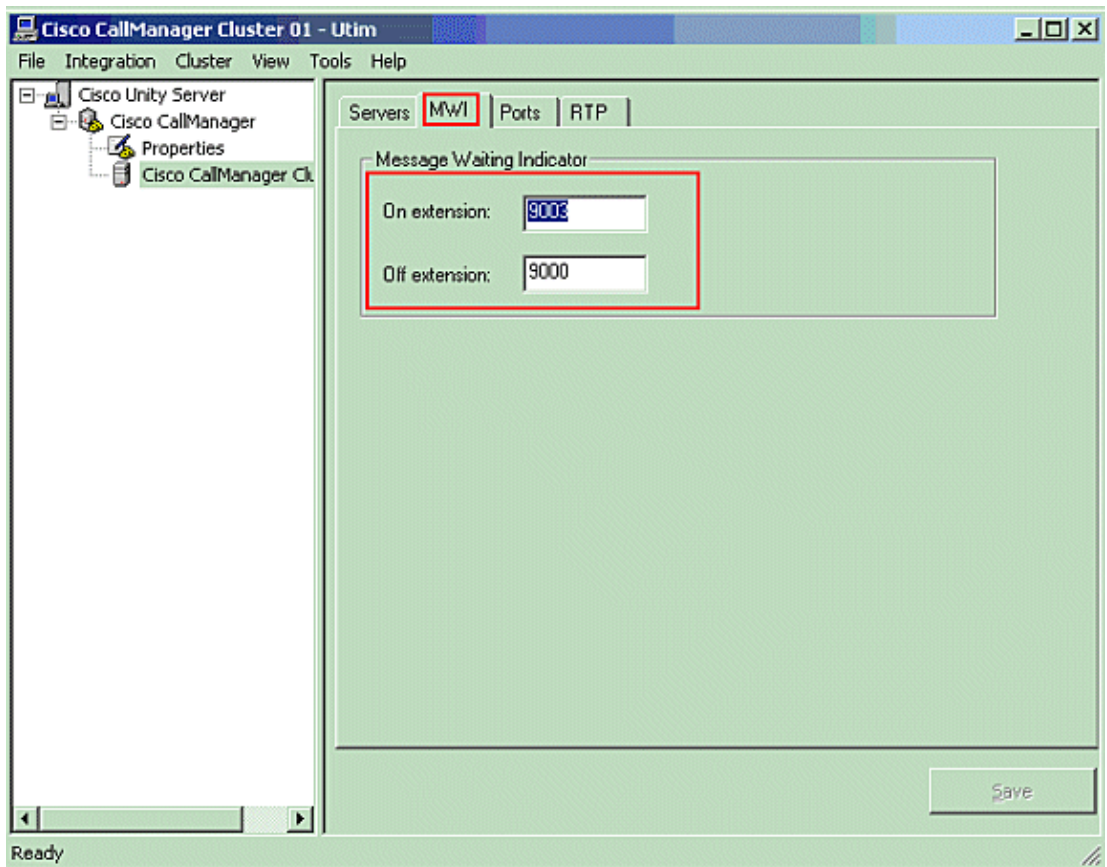
- a. Click **Unity**.
- b. Click **Manage Integrations**.
- c. The UTIM window displays.



2. In the left pane, click the applicable integration, which in this example is **Cisco CallManager Cluster 01**.



3. In the right pane, click the **MWI** tab. Confirm that the extensions to activate and deactivate the MWIs are correct. The values in the MWI On Extension and MWI Off Extension fields should match the extensions configured on the phone system.



4. If the extensions are not correct, change them and click **Save**. Click **Yes** for the prompt, which asks whether or not to restart the Unity Services.

Solution: Configure/Verify Cisco Callmanager Parameters

Ensure that the unique extensions to turn MWIs on and off have been entered in the Cisco CallManager server. Confirm that they match the MWI On Extension and MWI Off Extension fields in UTIM.

Complete these six steps:

1. Open the Cisco CallManager Administration page.
2. Choose **Feature > Voice Mail > Message Waiting**.

3. Specify the appropriate search text, if applicable, and click **Find**.
4. Confirm that the unique extensions to turn MWIs on and off are identical to the values entered in the MWI On Extension and MWI Off Extension fields in UTIM.

5. If the the values differ from UTIM MWI values, follow these procedures to change the values.
 - a. From the list of records that match, choose the appropriate record
 - b. Click the information in any of the fields: Directory Number, Description, Partition, or Calling Search Space. For example, click **MWI DN for On** in the 9003 record row.
 - c. The information is a link to the Message Waiting Configuration window.
 - d. Click **Update** after the changes are made.

The screenshot shows the Cisco CallManager Administration web interface. At the top, there is a navigation menu with links: System, Route Plan, Service, Feature, Device, User, Application, and Help. Below the menu is the Cisco CallManager Administration logo and the Cisco Systems logo. The main heading is "Message Waiting Configuration". To the right of the heading are two links: "Add a New Message Waiting Number" and "Back to Find/List Message Waiting Numbers". The configuration details for Message Waiting Number 9003 are shown. The status is "Update completed". There are three buttons: Copy, Update, and Delete. The Message Waiting Number is 9003. The Description is "MWI DN for On". The Message Waiting Indicator is set to "On". The Partition is "MWI" and the Calling Search Space is "MWI_CSS". A note at the bottom left states "* indicates required item".

6. Restart the Cisco CallManager Server.

Note: In a CallManager cluster, it is recommended to restart one server at a time, with the Publisher restarted first.

Problem: Cisco CallManager CSS Misconfiguration

The second cause of the MWI light on an IP phone that does not light up relates to an incorrect configuration of the CSS feature. If your installation does not utilize the CSS feature, you cannot apply the solution in this section to your problem.

This problem occurs when the IP phone is not in the same calling search space or partition as the Cisco Unity voice messaging ports. To determine this, dial the extension that turns on MWIs from a phone. If you hear the fast busy (reorder tone), the extension to turn MWIs on is not assigned to the correct calling search space or partition in the Cisco CallManager. If you do not hear the fast busy, and the MWI is not activated or deactivated, a route plan may be the cause of the problem.

Solution: Place Cisco Unity Devices and IP Phones in Same CSS

Place the Cisco Unity devices and the IP phones in the same CSS in order to solve this problem. For more information on Calling Search Spaces, refer to Understanding and Using Partitions and Calling Search Spaces with Cisco CallManager.

Note: If the MWIs do not turn on or if there is a delay in that action, it could be because there is a firewall between Cisco Unity and Microsoft Exchange. A firewall between Cisco Unity and Microsoft Exchange is not supported for this reason. MWI messages are sent from the Exchange server in the form of User Datagram Protocol (UDP) messages, which use random ports. This is a UDP port in the 1024–65535 range. Since the server does not always use the same port when the notification is sent, there is no way to predict either the source or destination ports that this traffic uses. If you put the Cisco Unity and Exchange server on the same side of the network or open the right ports in the firewall for Unity, this resolves this issue.

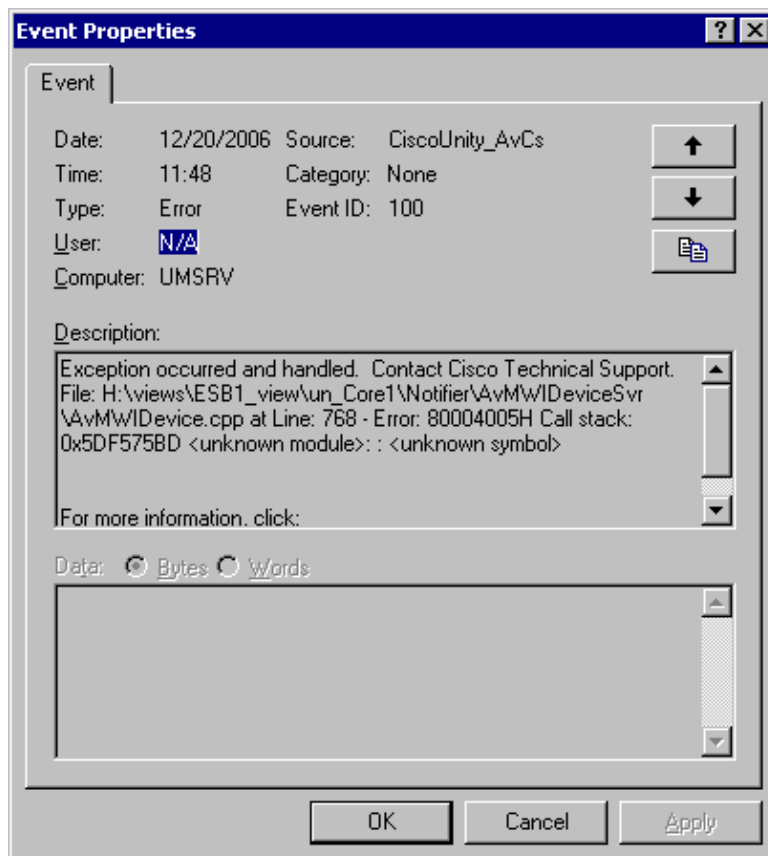
Problem: Error Message in the Application Event Log Viewer

The MWI light on an IP phone does not turn on to indicate a new voice message. An error message that is similar to one of these messages appears in the Application Event log viewer:

```
Event Type:      Error
Event Source:    CiscoUnity_AvCs
Event Category:  None
Event ID:        100
Date:            27/06/2006
Time:            05:52:27
User:            N/A
Computer:        UNITYSERVER
Description:
Exception occurred and handled. Contact Cisco Technical Support. File:
e:\views\Unity4.0.2.122\un_Core1\Notifier\AvMWIDeviceSvr\AvMWIDevice.cpp at Line: 768 -
Error:80004005H Call stack:
0x5DF772DD AvMWIDeviceSvr.dll: <unknown symbol>
```

or

```
AvCsGateway: FindCsComponents failed for caller NTl\unityadmin with subscriber type
Subscriber+Administrator+StatusMonitor.
```



Solution: Restart Services

Complete these steps in order to overcome this problem:

1. Open a command prompt and run this command:

```
regsvr32 X:\commserver\components\avmwidicesvr.dll
```

Where X: is the drive where your commserver directory is located
2. Then go into Services and restart these:

- ◆ AvNotifierMgr
- ◆ AvMsgStoreMonitorSvr
- ◆ AvCsNotifier
- ◆ AvDSGlobalCatalog AvDSAD
- ◆ AvDSAD

Alternatively, after you run this command, you can try to reboot the box.

If still the problem persists, check that the Active Directory Server is reachable and running.

Problem: MWI Not Turned ON for Messages from a Specific User

MWI is not turned ON for messages from a specific subscriber and it works fine for the messages from all the other subscribers.

Solution

If the voicemail messages do not come into the `Inbox` folder or if the subscriber has created a rule to move the voicemail message from a particular sender to a different folder, then it is not reported to the Cisco Unity and thus MWI does not glow. But the voicemail messages are accessible on Outlook. The voicemail messages must be always in the `Inbox` folder in order to retrieve from the Cisco Unity server.

Problem: MWI Does Not Work After Exchange Server Migration

The MWI does not work after the Cisco Unity server has been migrated to a new exchange server. This can happen when the `Cisco Unity_ServerName` account mailbox is still on the old exchange server.

Solution

If you move the `Unity_ServerName` account mailbox to the newly migrated exchange server, it solves the problem. Run the Permission Wizard followed by the Message Store Configuration Wizard, and then reboot both the Exchange and Cisco Unity servers. Refer to the Verify the Unity ServerName Account is in Active Directory for more information about the `Unity_ServerName` account mailbox.

Problem: MWI Does Not Work And AvNotifierMgr Fails To Start As a Service

The MWI does not work and the `AvNotifierMgr` fails to start as a service.

Solution

Complete these steps in order to fix this issue:

1. Log on to the Cisco Unity server by using an account that:

- ◆ Is a member of the Domain Admins group in the domain in which the Cisco Unity server is being installed, or that has permissions equivalent to the default permissions for the Domain Admins group.
- ◆ Is either an Exchange Full Administrator or a member of the Domain Admins group in the domain that contains all of the domains from which you want to import Cisco Unity

subscribers.

2. Choose **Cisco Unity Tools Depot > Administration Tools** and run the **Service Configuration Wizard** and **Permission Wizard**.
3. Choose **Start > Run** and enter the **AvNotifierMgr.exe –service** command.

MWI does not work for a particular hunt list

Cisco Unity MWI does not work for a particular hunt list.

Solution

In order to resolve this, in the CUCM Administration page, choose **Service Parameters > Cisco CallManager** and search for **Multiple Tenant MWI**. Make sure that this parameter is set to **True**.

MWI does not work for a user migrated to a new message store

Cisco Unity MWI does not work for a user migrated to a new message store.

Solution

Complete these steps in order to resolve the issue:

1. Go to **Cisco Unity Tools Depot > Switch Integration Tools > Telephone Integration Manager > Cisco CallManager > Properties > MWI synchronization**. Choose MWI Synchronization area and click the **Resynchronize Now** button.
2. Run **DBWalker** in order to see if there is any mismatch of Switch ID. If yes, then you need to run a query to update the values on SQL or recreate the integration.
3. Go to any subscriber on Cisco Unity for which MWI is not working and choose **Messages > Refresh Status**, check if Cisco Unity sends **SET** or **Cancel**.

Make sure that messages go into the Inbox (Outlook Client). If the messages are moved from the Inbox to another folder (Custom Folder), Cisco Unity does not detect the message and MWI light is not turned on (MWI–Cancel).

4. Run the Permission Wizard and Message Store Configuration Wizard in order to check permissions.
5. Restart **AvMsgStoreMonitorSvr** and **AvNotifierMgr** services.

Problem: MWI Failed because there are no Suitable Ports for MWIs

For every MWI that is sent out, this error appears in the Application Event Log:

```
Event Type:      Error
Event Source:    CiscoUnity_Notifier
Event Category: Run
Event ID:        1041
Date:           10/29/2004
Time:           6:23:58 PM
User:           N/A
Computer:       TSPUNITY
Description:
Failed to set message waiting lamp for usr_080795, ext 2001, switch 0, cluster 2,
reason: no suitable port. Verify the MWI port configuration.
```

This issue occurs when you have a Cisco Unity integration with more than one Cisco CallManager cluster defined on the Cisco Unity server. All but one cluster has ports enabled for MWIs and you receive the error messages for the clusters that have no MWIs enabled. This message is logged for every MWI that is sent out,

which potentially causes quite a few messages in the event log.

Solution

You can turn on a single port for MWIs on each cluster that does not send MWIs to stop the error messages.

MWIs Do Not Turn Off

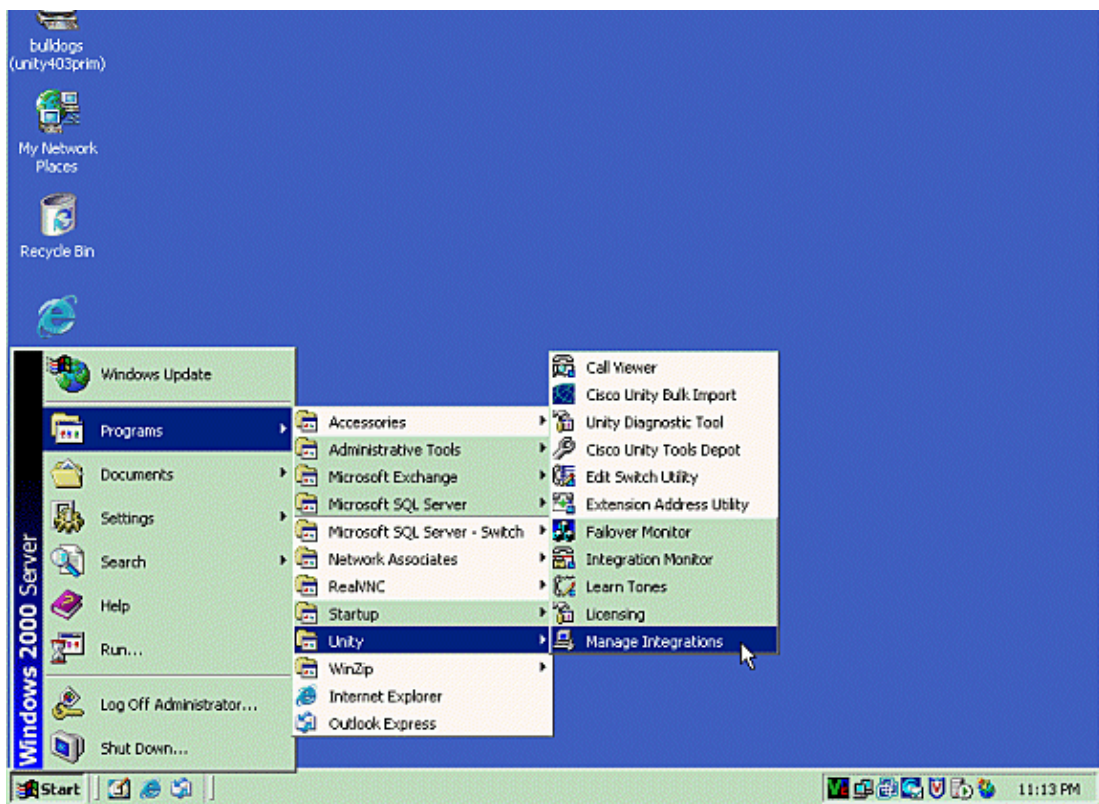
Problem: MWIs Lost Synchronization

The possible reason that MWIs do not turn off as expected is that the MWIs have lost synchronization. MWIs lose synchronization if the phone system is off-line when an MWI status changes.

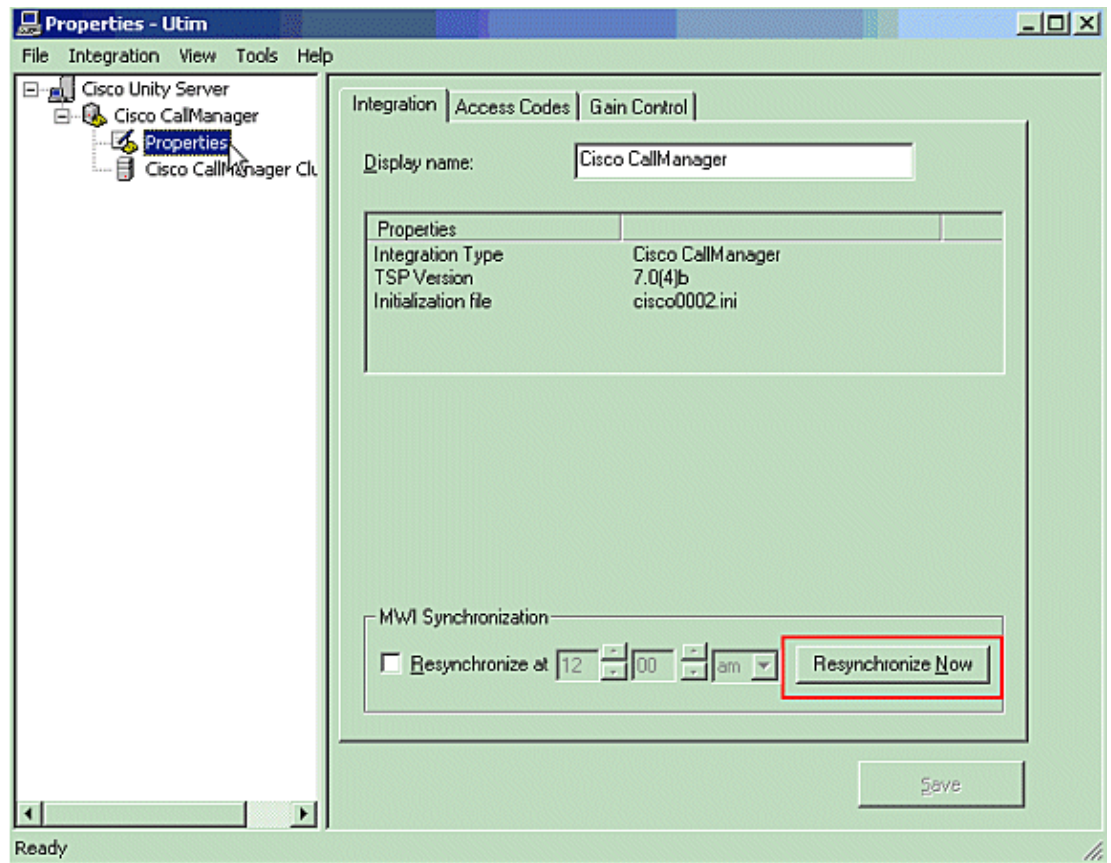
Solution 1: Resynchronize MWIs

Resynchronize the MWIs with this procedure in order to resolve the issue:

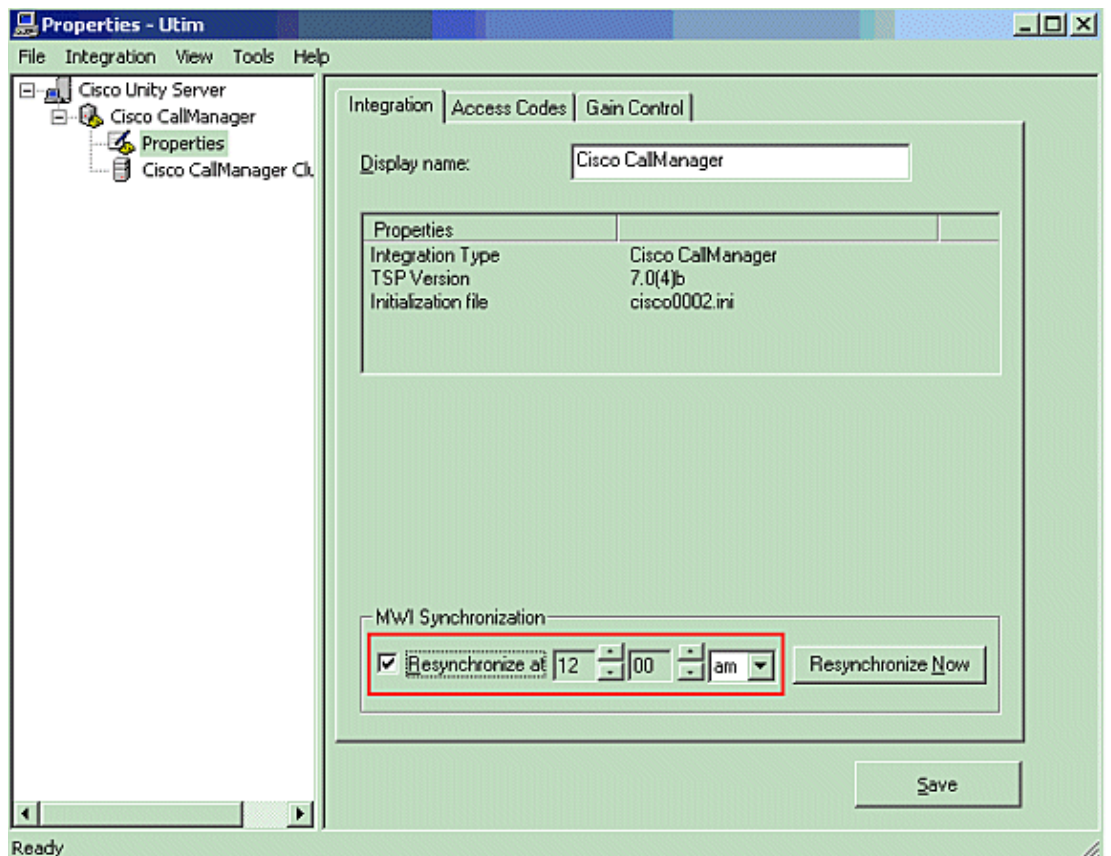
1. On the Windows Start menu of the Cisco Unity server, choose **Programs > Unity > Manage Integrations**.



2. On the Integration tab, click **Properties** in the left pane.
 - ◆ Choose MWI Synchronization area and click the **Resynchronize Now** button in order to start the process immediately.



- ◆ To start the process at a later time, go to MWI Synchronization area and check the **Resynchronize at** check box. Choose the time for the system to resynchronize the MWIs. Cisco recommends that you choose a time outside of regular business hours because of the Cisco Unity resources needed for resynchronization. Click **Save**.



Note: If you get the MWI Request Pending error message while you try to resynchronize the MWIs, restart the AvMsgStoreMonitorSvr and AvNotifierMgr services, and then try to resynchronize the MWIs. Also, make sure that the AvMsgStoreMonitorSvr service is running with the UnityMsgStoreSvc account and that this account has the correct permissions.

Solution 2

If the MWIs has lost synchronization after the installation of a new message store on the Cisco Unity failover cluster, complete these steps:

1. In the Cisco Unity sever, choose **Cisco Unity Tools Depot > Administrative Tools > Permissions Wizard** in order to run the Permissions Wizard.
2. While you run the wizard, you see a checkbox to choose mailstores. Click on that in order to choose both the old and new mailstores.
3. After you run the Permissions wizard, restart the AvNotifierMgr service on the Cisco Unity server.

Solution 3

Complete these steps:

1. Choose **Start** and then click **Run**. Type **regedit**, and then click **OK**.
2. Locate this registry subkey:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Exchange\Exchange Provider
```

3. On the Edit menu, click **New**, and then click the **DWORD** Value.
4. In the Details pane, type **EMSAB_UserAuth_Credentials**, and then press **Enter**.
5. Right-click **EMSAB_UserAuth_Credentials**, and then click **Modify**.
6. In the Edit DWORD Value dialog box, click **Decimal** in the Base area.
7. In the Value data box, type **1**, and then click **OK**.
8. Exit Registry Editor.

MWI Does Not Refresh

Problem: No Automatic Refresh

The MWI does not refresh automatically.

Solution 1: Add Active Directory Server into DNS Server

This problem can occur if the DNS server is unable to resolve the IP address of the Active Directory Server.

1. In order to solve this problem, add the Active Directory Server into the DNS server or manually include the hostname of the Active Directory in the hostsfile of the Unity server.
2. For more information on how to edit the hostsfile, refer to Edit the Hosts File.
3. For more information on how to troubleshoot issues related to DNS in the Cisco Unity Server, refer to Basic DNS Troubleshooting for Cisco Unity Servers.
4. Refer to The Phone System Is Not Set To Turn MWIs On and Off in order to obtain more information about how to troubleshoot MWI issues.

Solution 2: Resynchronize

For Cisco Unity 4.0(4) and later versions, complete these steps in order to resync:

1. Start the **Bulk Logout utility**, available in Tools Depot and then run it on the drive on which Cisco Unity is installed. Choose **X > CommServer > Utilities > Bulk Logout tool** where X: is the drive.
2. Choose the users and click **Next**.
3. Click **Resync** Subscribers.

Problem: MWI does not Refresh When Lotus Domino is Used with Cisco Unity

MWI does not work after a period of time when IBM Lotus Domino Unified Communications (DUC) is used with Cisco Unity.

Solution: Edit Notes.ini

The DUC for Cisco fails to notify Cisco Unity to turn off MWIs when both of these conditions are met:

- The Domino server Notes.ini file contains multiple ExtMgr_Addins tasks.
- The DUC for Cisco server extension (**ucextn**) is not listed first in the ExtMgr_Addins line.
- If you use Lotus DUC 1.2.1 or 1.2.2, add the parameter **UCCacheSize=0** to the Notes.ini.

Complete these steps in order to correct the Notes.ini File on the Domino Server:

1. Locate the file **Notes.ini** (usually located in **C:\Lotus\Notes** or **C:\Program Files\Lotus\Notes**) in the Domino server.
2. Double-click the file **Notes.ini**. The file opens in Notepad.
3. Locate the line that begins with **ExtMgr_Addins=** .
4. Revise the line so that the DUC server extension (**ucextn**) appears first in the list.

This example is correct: **ExtMgr_Addins=ucextn, nnem.dll**.

5. **Note:** A mechanism to cache was introduced in the release of Lotus DUC 1.2.1. Its purpose was to cache users' DUC-enablement UC profile. DUC Version 1.2.2 further enhanced the cache and introduced the concept of extended cache. This mechanism has been problematic, and areas that can be affected are DUC-enablement and disablement of subscribers, message categorization by DUC, **message notification**, and, in rare cases, instability on the Lotus Domino server when DUC is installed and/or as users become DUC-enabled. This is seen in a Cisco Unity 4.x with IBM Lotus Domino integration when DUC Version 1.2.1 or 1.2.2 is installed on the Lotus Domino server.

The workaround for this problem is to add the parameter **UCCacheSize=0** to Notes.ini.

Note: This parameter is case sensitive.

6. Save the file and restart the Domino server.

MWI Light is On; No Voicemail Appears in the Mailbox

On the IP Phone, the MWI light is on, and the message envelope also shows, but when the user logs into voice mail, there is no voice mail. Sometimes, the voicemail messages are received with a delay.

This can happen when there is some issue with the ports integration configuration on the Cisco Unity server. Complete these steps in order to verify if the port integration is configured correctly:

1. On the Cisco Unity server, double-click the **Cisco Unity Tools Depot** icon on the desktop.
2. Under **Switch Integration Tools**, double-click **Telephone Integration Manager**.
3. Choose **Cisco CallManager** and click the **Ports** tab.
4. Under the **Ports** tab, verify this configuration:
 - a. 75% of the ports should have **Answer Calls Checked**.
 - b. 25% of the ports should have **Message Notification , Dial Out MWI and TRAP Connection Checked**.

Error: No Services Configured

When you press the *Messages button* on the Cisco IP Phone to access the voicemail, this error message is displayed:

No Services Configured

Solution

Complete these steps in order to resolve this issue:

1. Choose Cisco Unified Communications Manager Administration Page and then choose **Device > Device settings > IP Phone services**.
2. Check if the voicemail service is shown there. If not, run this query in CLI in order to create the voicemail service.

```
run sql insert into telecasterservice
(pkid,Name,NameASCII,Description,URLTemplate,tkPhoneService,EnterpriseSubscription,
y) values('ca69f2e4-d088-47f8-acb2-
ceea6722272e','Voicemail','Voicemail','Voicemail','Application:Cisco/Voicemail',2,'
```

3. Reset the IP phone for changes to take effect.

Related Information

- **Message Waiting Indicators (MWIs)**
- **Cisco Unity Messaging Integration**
- **Cisco Unity Troubleshooting Guide (With IBM Lotus Domino), Release 4.0(5)**
- **Cisco CallManager Administration Guide, Release 4.0(1) – Message Waiting Configuration**
- **Voice Technology Support**
- **Voice and Unified Communications Product Support**
- **Troubleshooting Cisco IP Telephony**
- **Technical Support & Documentation – Cisco Systems**

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