



NORTEL

Nortel Communication Server 1000

Communication Server 1000 with Microsoft Exchange Server 2007 Unified Messaging Fundamentals

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New in this Release

There have been no updates to the document in this release.

Other

Revision History

October 2008	Standard 02.04. This document is up-issued to reflect changes in the section Configure a new dial plan for Microsoft Exchange Unified messaging to support to support Communication Server 1000 Release 5.0 and Microsoft Exchange 2007 Unified Messaging.
May 2008	Standard 02.03. This document is issued to reflect changes in technical content.
March 2008	Standard 02.02. This document is issued to reflect changes due to CR#Q01808992.
December 2007	Standard 02.01. This document is issued to support Communication Server 1000 Release 5.5.
August 2007	Standard 01.01. This document is issued to support Communication Server 1000 Release 5.0 and Microsoft Exchange 2007 Unified Messaging.

How to get help

Contents

This section contains information on the following topics:

- Getting help from the Nortel web site
- Getting help over the telephone from a Nortel Solutions Center
- Getting help from a specialist by using an Express Routing Code
- Getting help through a Nortel distributor or reseller

Getting help from the Nortel web site

The best way to get technical support for Nortel products is from the Nortel Technical Support web site:

www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the telephone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support web site, and you have a Nortel support contract, you can also get help over the telephone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following web site to obtain the telephone number for your region:

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging

Overview

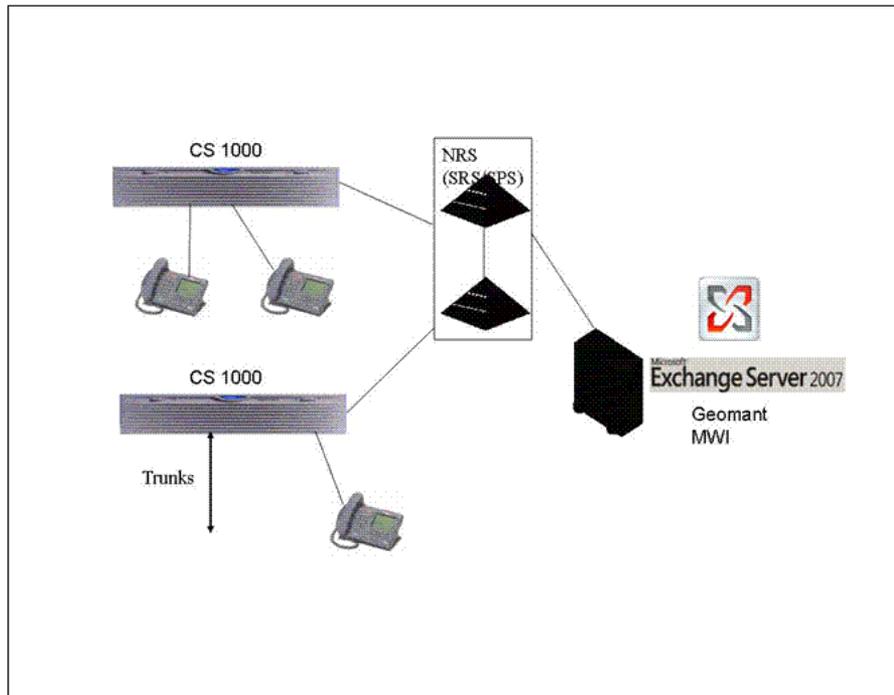
CS 1000 support for Microsoft Exchange Server 2007 Unified Messaging enables interoperability between the voice service capabilities of Communication Server 1000 and the Unified Messaging solution provided as a component of Microsoft Exchange Server 2007. This interoperability provides the following capabilities:

- **Call Answering:** With call answering, Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging is configured to answer incoming calls on behalf of a user by playing their personal greeting, recording a voice message from the caller, and submitting it for delivery to the user inbox as an e-mail message.
- **Subscriber Access:** enables dial-in access for users. A subscriber dialing into the Microsoft Exchange Unified Messaging system accesses their mailbox using Outlook 2007 Voice Access, enabling access using either a telephone keypad or voice inputs. When dialed into the Unified Messaging system using a telephone, a subscriber or user can perform the following functions:
 - Listen to, forward, or reply to voice mail messages, and call the sender of the voice mail.
 - Listen to calendar information.
 - Access or dial contacts stored in the global address list or in a personal contact list.
 - Accept or cancel meeting requests.
 - Set a voice mail Out-of-Office message.
 - Set security preferences and personal options.
- **Auto Attendant:** Provides a set of voice prompts that provides access to the Microsoft Exchange Unified Messaging system by external users. Using the Auto Attendant, the external user navigates the menu

structure, using either the telephone keypad or speech inputs, to place a call to a user or to locate a user for the purpose of placing a call to that user. In addition, the Auto Attendant gives system administrators the ability to perform the following functions:

- Create a customizable set of menus for use by external users.
 - Define informational greetings, business hours greetings, and non-business hours greetings, and greetings for holiday schedules.
 - Add instructions for callers describing how to search the organizational directory, and how to connect to a specific user by means of their extension number.
 - Enable access for external callers to the operator. For more information, see [“Configure the Operator Assistance feature”](#) (page 30).
- **Play on Phone:** Allows a Microsoft Exchange Unified Messaging-enabled user to access a voice mail message through Outlook 2007 or Outlook Web Access and listen to the message over a telephone.
 - **Message Waiting Indication (MWI):** Designed by Geomant, the MWI application is an add-on to the Microsoft Exchange Unified Messaging Server 2007 which provides support for MWI notifications to users connected to the Microsoft Exchange Unified Messaging Server. For more information on the installation and configuration of the Geomant MWI application, see [“Install Geomant Message Waiting Indicator \(MWI\) application”](#) (page 33) and [“Configure Geomant Message Waiting Indicator \(MWI\) application”](#) (page 34).

Note: The MWI 2007 software is a third-party software developed by Geomant. Information on Geomant and MWI 2007 is provided in this documentation for ease of reference only. Nortel does not sell, warrant or provide operational support for Geomant’s MWI 2007 software product, nor warrant the accuracy of MWI 2007 descriptions contained in this document. Customers using this document are strongly recommended to obtain the most recent MWI 2007 documentation from Geomant.



Multiple Microsoft Exchange Unified Messaging servers on a single network

Multiple Servers can be configured for a single network to ensure the effective handling of potential issues caused by challenges of:

- **Capacity:** Each Microsoft Exchange Unified Messaging Server is capable of supporting a maximum of 200 total concurrent (combination of inbound and outbound) calls. In larger customer networks that need to support a higher volume of concurrent calls, additional Microsoft Exchange Unified Messaging Servers can be configured in the same network so that users can be load-balanced.
- **Redundancy:** An additional Microsoft Exchange Unified Messaging Server can be configured as a redundant server in a network by utilizing the Least Cost Routing Mechanism on the Network Routing Service (NRS) - configuring an additional Microsoft Exchange Unified Messaging Server provides a greater measure of fault tolerance for the services provided, allowing a continuation of those services in the event of system failure
- **Geographical location:** If network systems are located across multiple geographic locations, Microsoft Exchange Unified Messaging Servers can be implemented in such a way that they are both local and specific to each location. Configuring multiple servers in this way would

automatically result in load sharing of access to Microsoft Exchange Unified Messaging services by users in the network.

Operational Considerations

Considerations specific to Microsoft Exchange Server 2007 are as follows:

- The only supported codecs are G711 and G723.
- RFC2833 is required for DTMF digit transmission to the Exchange Server.
- Exchange Server 2007 must always be configured as a static endpoint on the NRS as Registration is not supported.
- The Fax on UM capability is supported.
- Geomant Message Waiting Indicator (MWI) 2007 is a required add-on for MWI functionality.
- Microsoft Outlook 2007 is required.
- Exchange Server 2007 requires the use of x64 processors.
- For the Play on Phone option to function, the default Outlook data file used must be of type **.ost**. If the default Outlook data file is of type **.pst**, the Play on Phone option will not be available.
- Calling a non-Exchange user using the Auto Attendant functionality is not supported by Microsoft Exchange Unified Messaging.
- Due to known issue concerning support of Payload 101 for RFC2833, intermittent DTMF issues will be experienced with PC-based clients.
- Interoperability with BCM/SRG and CS 2100 over H.323 causes speech path issues due to non-handling of RE-INVITE requests by Microsoft Exchange Unified Messaging Server.

Considerations specific to the Geomant MWI Application are as follows:

- In a Main Office-Branch Office (MO-BO) environment, MWI functionality is provided in either Normal or Local mode, as MWI is not supported as multiple instances in the same domain.
- In a Geographic Redundant System environment, MWI functionality is provided in either a Primary Call Server (PCS) or a Secondary Call Server (SCS) system, as MWI is not supported as multiple instances in the same domain

Considerations specific to the Communication Server 1000 are as follows:

- Only CDP dialing is supported between the home CS 1000 and the UM Server - users dial in to the home CS 1000 using any configured

dialing plan to access services provided by Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging.

- Configuration of the voice mail soft key cannot be changed if there is a combination of CallPilot and Microsoft Exchange Unified Messaging voice mail users on a single node. A recommended deployment solution would be to have CallPilot users and Microsoft Exchange Unified Messaging users associated with separate Line TPS nodes.

The voice mail soft key feature on the phone set assigns a unique key to each of the voice messaging functions.

- While operating with an MCS PC Client, Microsoft Exchange Unified Messaging calls can not be placed on hold.
- The existing limitation on the NRS of multiple endpoints with the same static IP address is not supported. This affects network environments where two CDP domains are configured to use the same Microsoft Exchange Server 2007.
- The IP Softphone 2050 does not support RFC2833; therefore, it can not be used with the Subscriber Access and Auto Attendant features of the Exchange Server 2007.
- If a call originates from an H.323 endpoint (CS 1000/BCM/SRG) and is tandem transferred by the CS 1000 to the Microsoft Exchange Unified Messaging Server using SIP, the Subscriber Access and Auto Attendant feature can only be accessed by voice command and not by keypad (DTMF), as there is no support for RFC2833 over an H.323 network.
- If the far end does not support RFC2833 (with a payload value of 101), the Play on Phone functionality is not supported.
- Calls forwarded by Integrated Call Director (ICD) to Microsoft Exchange Unified Messaging are not supported.

Microsoft Exchange Unified Messaging operational characteristics

- When a Microsoft Exchange Unified Messaging-enabled user plays back stored voice mail messages, the order of playback begins with the last message recorded. That is, when voice mail has been received (in order) from User 1, User 2, and User 3, the messages are replayed in the order of User 3, User 2, User 1.
- For a voice mail message that is a reply to an earlier voice mail message, the reply message is played before the playback of the original message.
- If there is only one voice mail message waiting for the user, it is not possible to undelete that voice mail message once it has been deleted.

- Voice mail messages that have been listened to will continue to register as a new message until the next option is used.
- When a user dials the Auto Attendant number (with speech enabled) and does not provide a name, Auto Attendant repeats the prompt for a name three times. After the third prompt, the call is forwarded to the operator automatically.

CS 1000 set configuration

This section details appropriate set configuration to provide operation for Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging.

Required class of service configurations are as follows:

- **CFXA (Call Forward External):** Allowed
- **FNA (Call Forward No Answer):** Allowed
- **HTA (Hunting):** Allowed
- **CLS (Trunk: Call Access Restriction):** Unrestricted
- **MWA (Message Waiting Indicator):** Allowed

Both **FDN (Call Forward No Answer DN)** and **Hunt (Hunt DN)** must be set to the value for the configured **Subscriber Access DN**.

SIP provisioning guidelines

This section details the SIP provisioning requirements for operations on Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging.

Assumptions

- Call model and traffic rate calculations are based on the assumptions provided by Microsoft for a typical heavy user, as described at the following URL: <http://msexchangeteam.com/archive/2006/08/14/428677.aspx>
- A single Microsoft Unified Messaging server can have up to 3000 heavy users associated with it.
- All Microsoft Unified Messaging messages are received by telephone using an SIP Trunk, and not using Microsoft Exchange Client (which does not use an SIP Trunk).
- The use of Auto Attendant for Thru-Dial and other custom voice menu services makes the following assumptions:

- Menu selection and call transfer time is 30 seconds, with a completed call duration of 180 seconds.
- Busy Hour (BH) Auto Attendant usage is 0.35 calls per hour for each Microsoft Unified Messaging user.
- Auto Attendant operation requires the usage of two SIP trunks, which remain in use for the duration of the call.
- If Microsoft Unified Messaging system usage differs from the call model described for the purpose of SIP trunk table calculations, it is the responsibility of the customer to monitor the actual usage of the system and ensure that there are sufficient SIP trunks available for use.

Number of UM Users	Typical BH Call Duration (seconds)	Typical BH CCS	Erlangs (ccs/36)	Number of SIP Trunks (Erlang B P05 Grade of Service)	Number of SIP Trunks (Erlang B P01 Grade of Service)	Number of SIP Trunks (Erlang B, Non-blocking)
50	15000	150	4.17	8	10	24
100	30000	300	8.33	13	16	33
200	60000	600	16.67	22	26	49
500	150000	1500	42	48	55	89
1000	300000	3000	83	88	99	147
2000	600000	6000	167	170	187	254
3000	900000	9000	250	250	273	355

Configuration of Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging

For the tasks and procedures associated with configuring Communications Server 1000 with Microsoft Exchange Server 2007 Unified Messaging, please refer to the sections that follow:

- “Configure a new user mailbox for Microsoft Exchange Unified Messaging” (page 18)
- “Enable a new user mailbox for use with Microsoft Exchange Unified Messaging” (page 22)
- “Configure a new Dial Plan for Microsoft Exchange Unified Messaging” (page 25)
- “Configure the Operator Assistance feature” (page 30)
- “Install Geomant Message Waiting Indicator (MWI) application” (page 33)
- “Configure Geomant Message Waiting Indicator (MWI) application” (page 34)
- “Configure Microsoft Exchange Unified Messaging in CS 1000 Element Manager” (page 38)
- “Allowing calling party numbers to update while leaving message” (page 44)
- Disable a user mailbox

Note: Throughout this document, screen captures of third-party software are included for the purposes of illustration only. While the screen captures in this document are believed to be accurate and reliable in their depiction of third-party software used in conjunction with this feature, the information is subject to change without notice. Therefore, Nortel presents all third-party screen captures in this document without express or implied warranty with regard to their complete accuracy.



- 3 Select **New user** and click **Next**, as shown in the following figure:



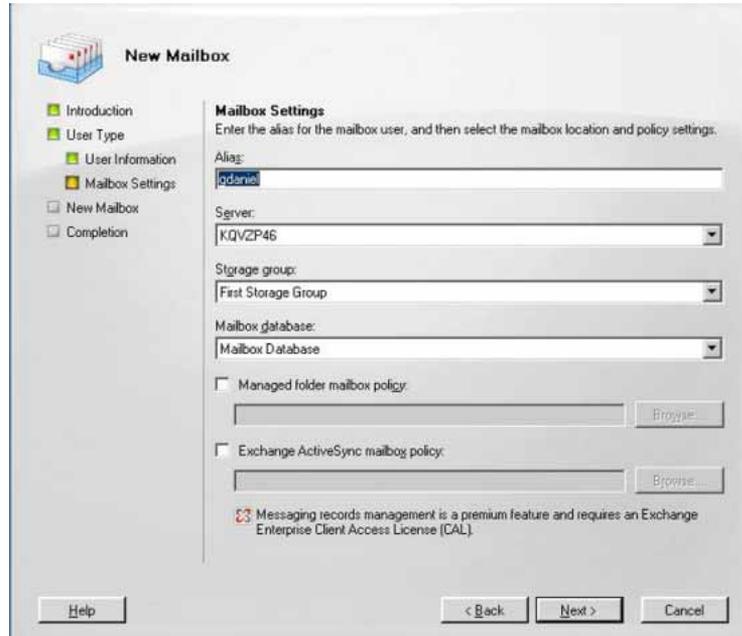
- 4 Enter account information for the mailbox user, as appropriate, as shown in the following figure:

The screenshot shows the 'New Mailbox' wizard in a Windows-style window. On the left is a navigation pane with a tree view containing: Introduction (selected), User Type, User Information (selected), Mailbox Settings, New Mailbox, and Completion. The main area is titled 'User Information' and contains the following fields and controls:

- Organizational unit: A text box containing 'um2007r.corp.nortel.com/Users' and a 'Browse...' button.
- First name: A text box containing 'George'.
- Initials: An empty text box.
- Last name: A text box containing 'Daniel'.
- Name: A text box containing 'George Daniel'.
- User logon name (User Principal Name): A text box containing 'gdaniel' and a dropdown menu showing '@um2007r.corp.nortel.com'.
- User logon name (pre-Windows 2000): A text box containing 'gdaniel'.
- Password: A text box with masked characters (dots).
- Confirm password: A text box with masked characters (dots).
- A checkbox labeled 'User must change password at next logon' which is currently unchecked.

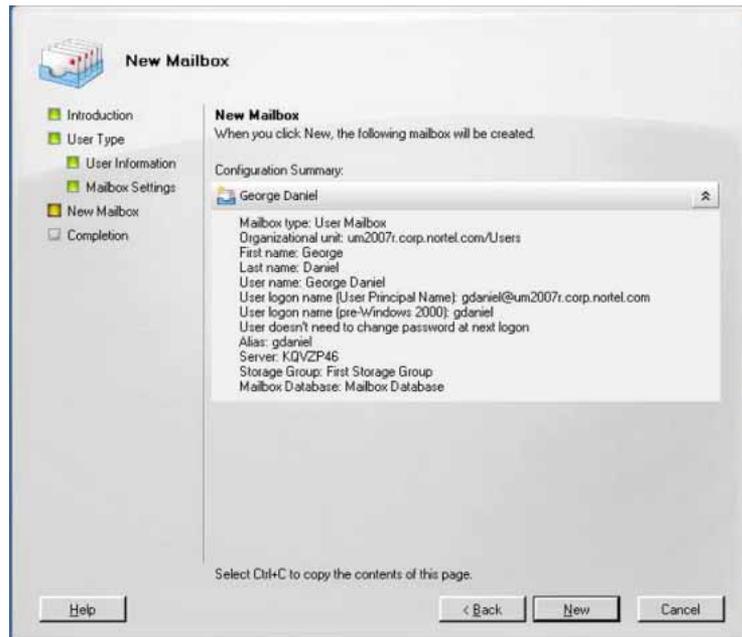
At the bottom of the window are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

- 5 Click **Next** to continue
- 6 Enter the alias for the mailbox user, and select the mailbox location and policy settings, as shown in the following figure.

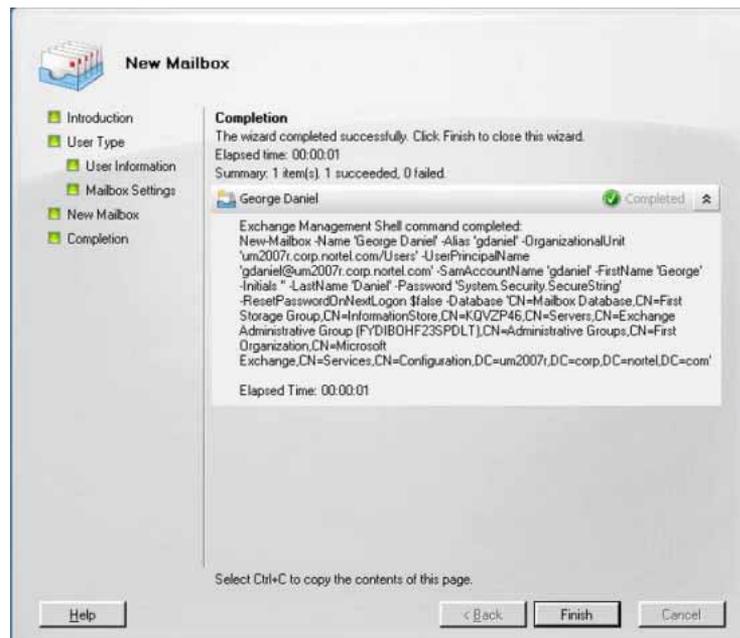


7 Click **Next** to continue.

8 The Configuration Summary for the current user mailbox is displayed, as shown in the following figure. Review for accuracy, and click **New** to create the user mailbox.



- 9 The completion screen of the New Mailbox Wizard appears. Click **Finish** to exit, as shown in the following figure:



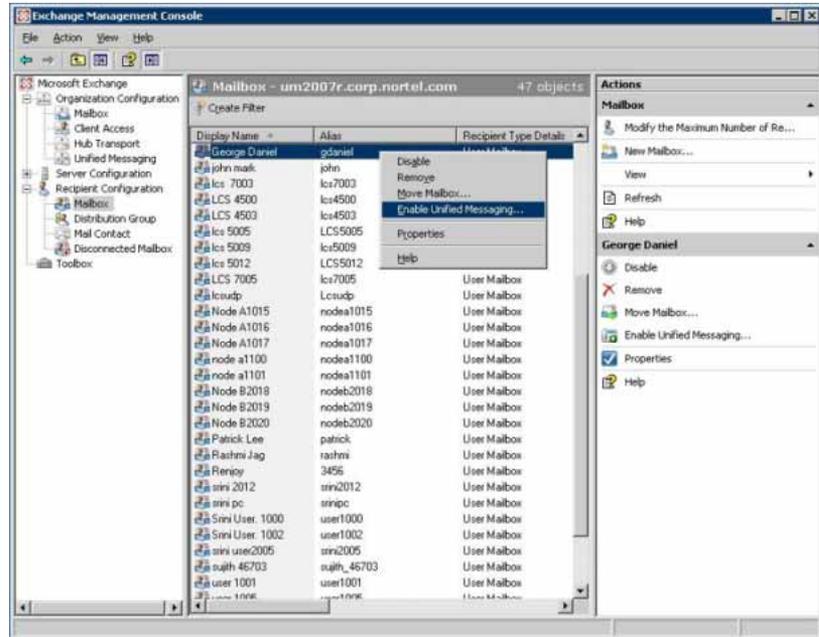
--End--

Enable a new user mailbox for use with Microsoft Exchange Unified Messaging

The following section details the required steps for the enabling an existing user mailbox for use with Microsoft Exchange Unified Messaging.

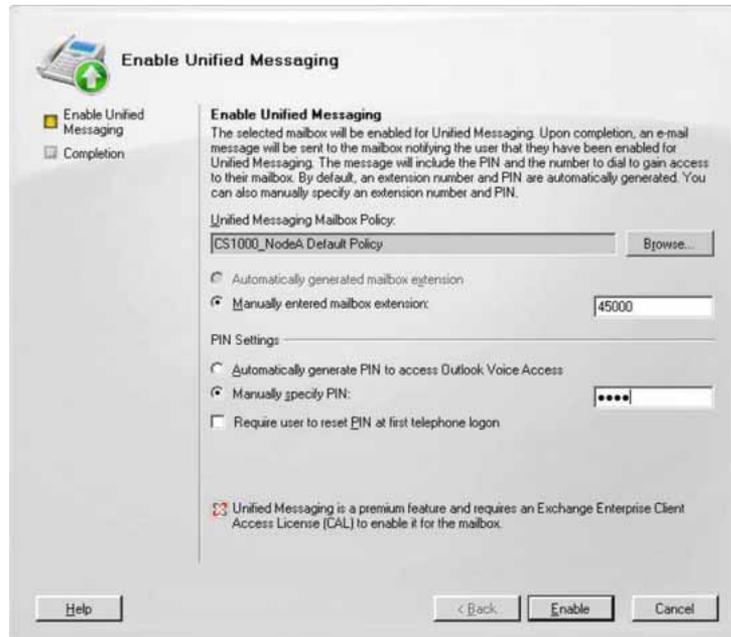
Enabling a user mailbox for use with Microsoft Exchange Unified Messaging

Step	Action
1	From the Exchange Management Console, select Recipient Configuration > Mailbox . Right click the specific user mailbox to be enabled and select Enable Unified Messaging , as shown in the following figure:

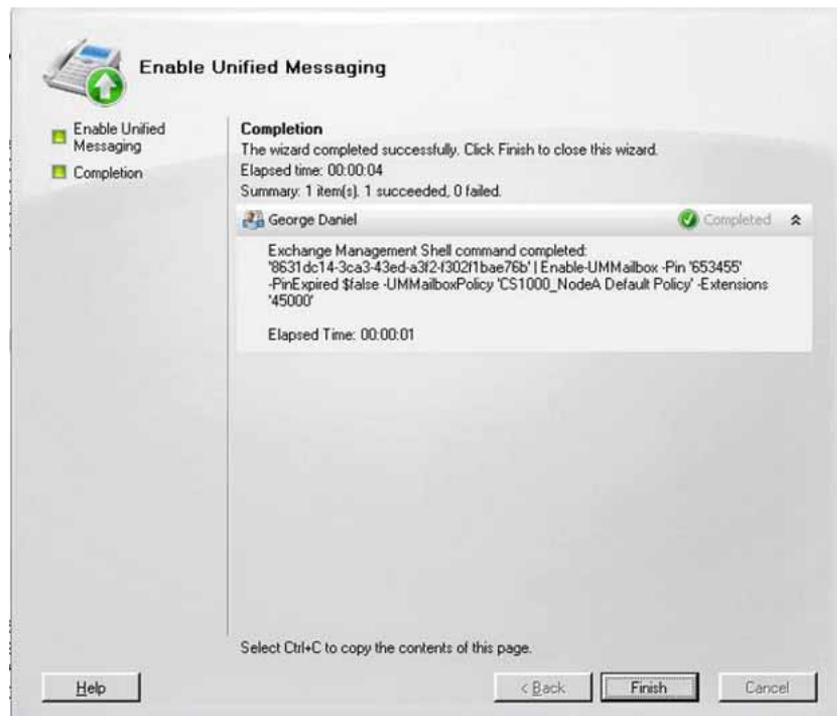


- 2 The Enable Unified Messaging Wizard appears, as shown in the following figure. Configure the Unified Messaging Mailbox Policy and PIN options, as appropriate for use on your network, and click **Enable**.

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- 3 The completion screen of the Enable Unified Messaging Wizard appears. Click **Finish** to exit, as shown in the following figure:



--End--

Configure a new Dial Plan for Microsoft Exchange Unified Messaging

The following section details the required steps for the configuration of the Microsoft Exchange Unified Messaging Dial Plan.

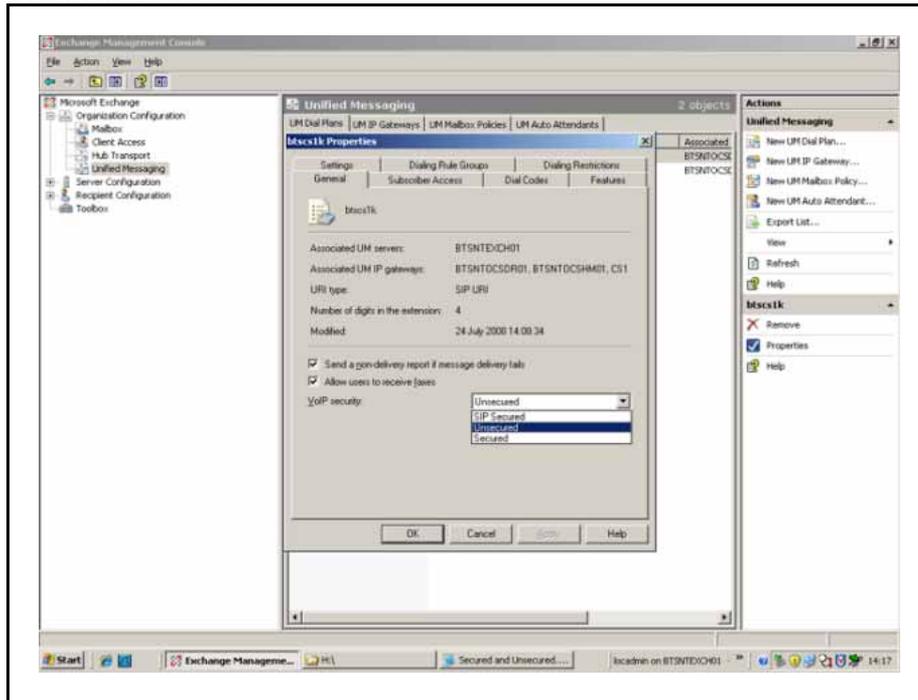
Configure the Microsoft Exchange Unified Messaging Dial Plan

Step	Action
1	From the Exchange Management Console, select Organization Configuration > Unified Messaging > New UM Dial Plan . The New UM Dial Plan screen appears, as shown in the following figure: Figure 1 New UM Dial Plan screen



- 2 Enter the Dial Plan name and the number of digits used for the user extension expected. Click **New**. Right-click the newly-created Dial Plan and select **Properties**. The Dial Plan Properties screen appears.
- 3 Click the **General** tab. From the **VoIP security** drop-down list, select Unsecured, as shown in the following figure:

Figure 2
Dial Plan General tab

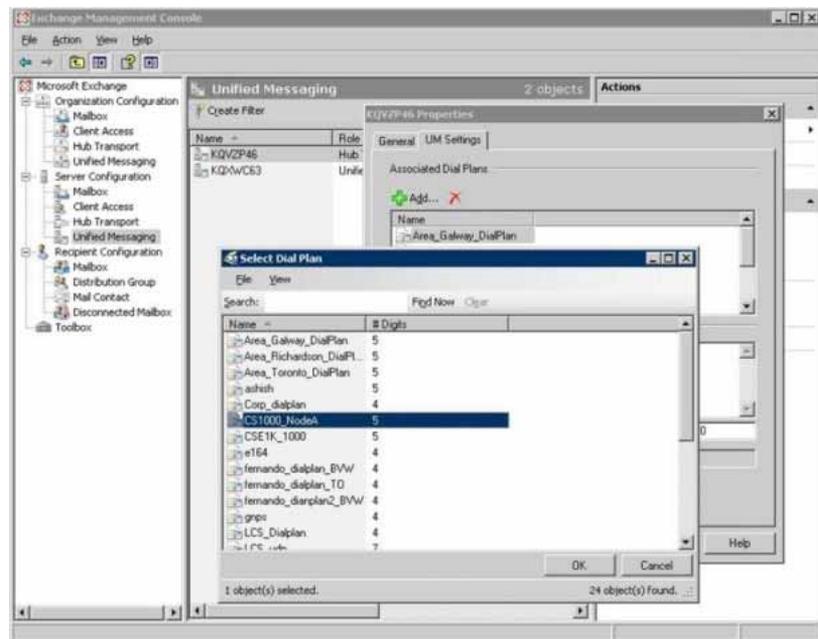


- 4 Click the **Subscriber Access** tab. Specify the Welcome Greeting, Informational announcement value, and the Subscriber Access and Call Answer number to be associated with the new Dial Plan. Click **Apply** and then **OK** to accept, as shown in the following figure:

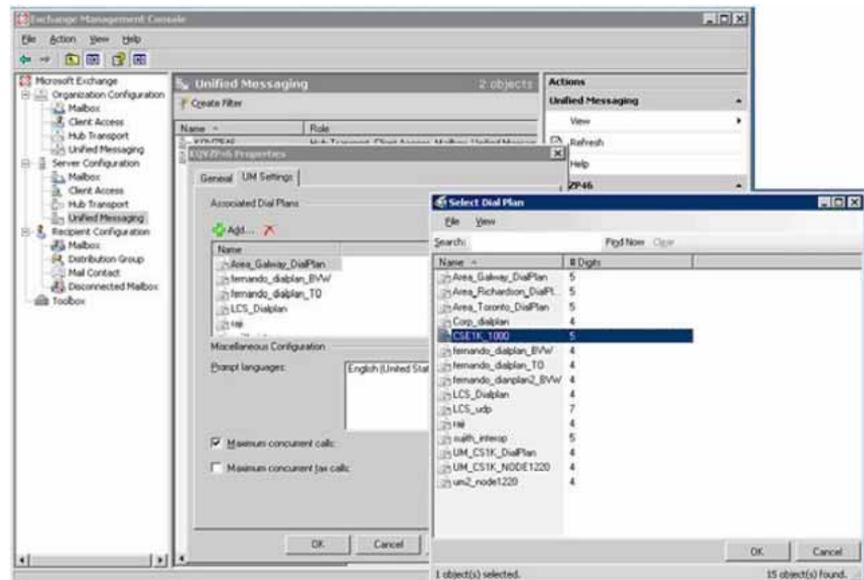
Figure 3
Dial Plan Subscriber Access tab



- 5 Select **Server Configuration > Unified Messaging**, and right-click the server name for which your newly-created Dial Plan is intended. Select **Properties**, as shown in the following figure:

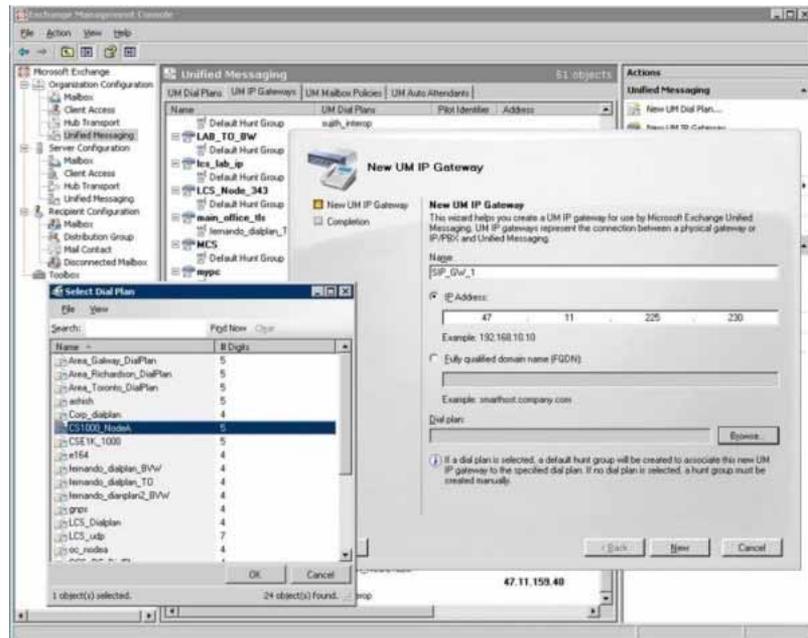


- 6 Add the configured Dial Plan under the **UM Settings** tab, as shown in the following figure:

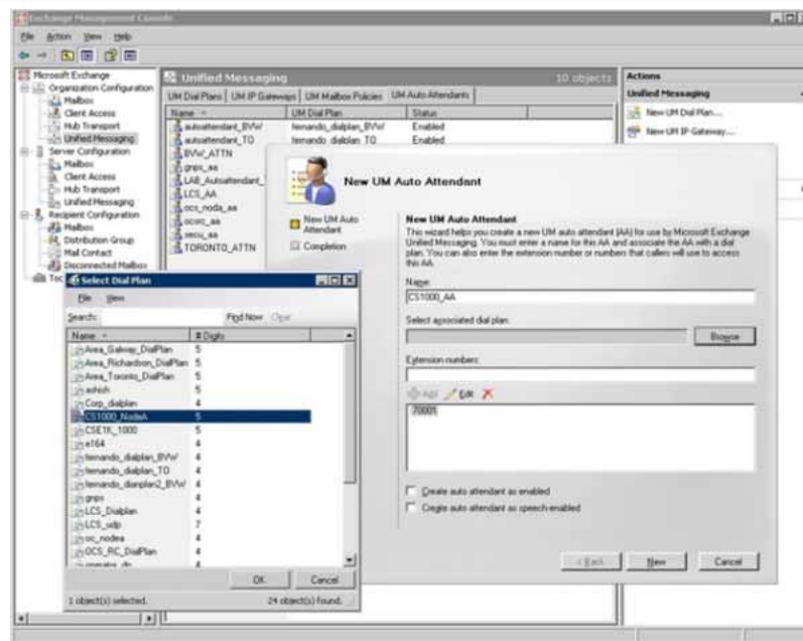


- 7 Click **OK**.
- 8 Specify the SIP Gateway name and IP address (Signaling Server node address) for the current Dial plan, as shown in the following figure:

Figure 4
Configuration screen for new UM IP Gateway



- Specify Auto Attendant name and number for the new UM Dial plan. The Auto Attendant Configuration number is provided for the UM Dial Plan configured, as shown in the following figure:



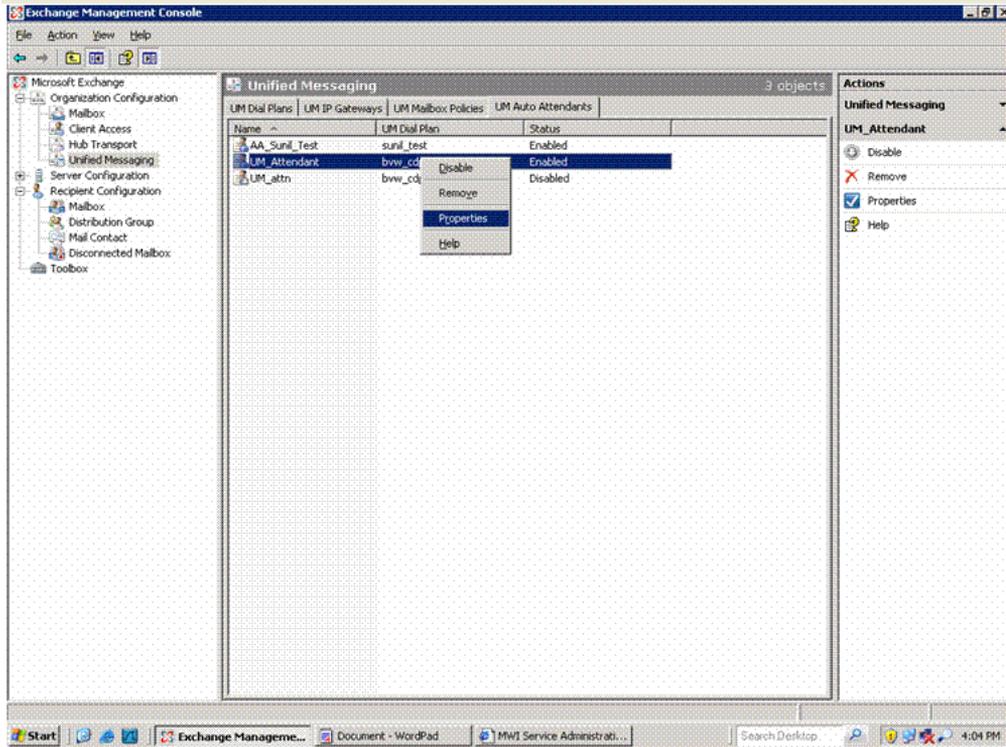
--End--

Configure the Operator Assistance feature

To configure the Operator Assistance feature to be used with a configured UM Dial Plan, perform the tasks in the following procedure:

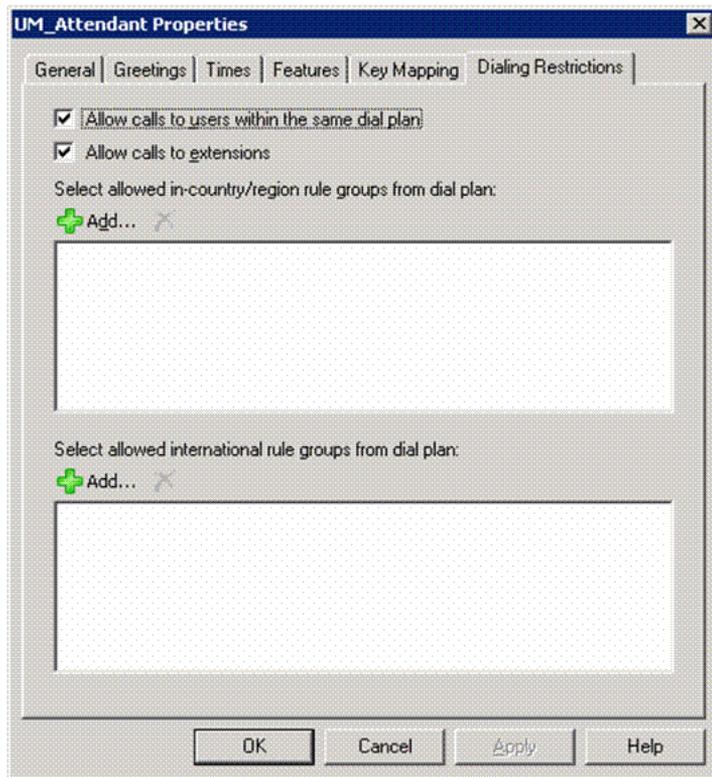
Configure the Operator Assistance feature

Step	Action
1	After providing the operator assistance number in Dial Plan and Mailbox users, open the Exchange Management Shell.
2	Right-click on the dial plan, and select Properties from the list of the available options. Optionally, you can click on the properties menu in the action pane as shown in the following figure:



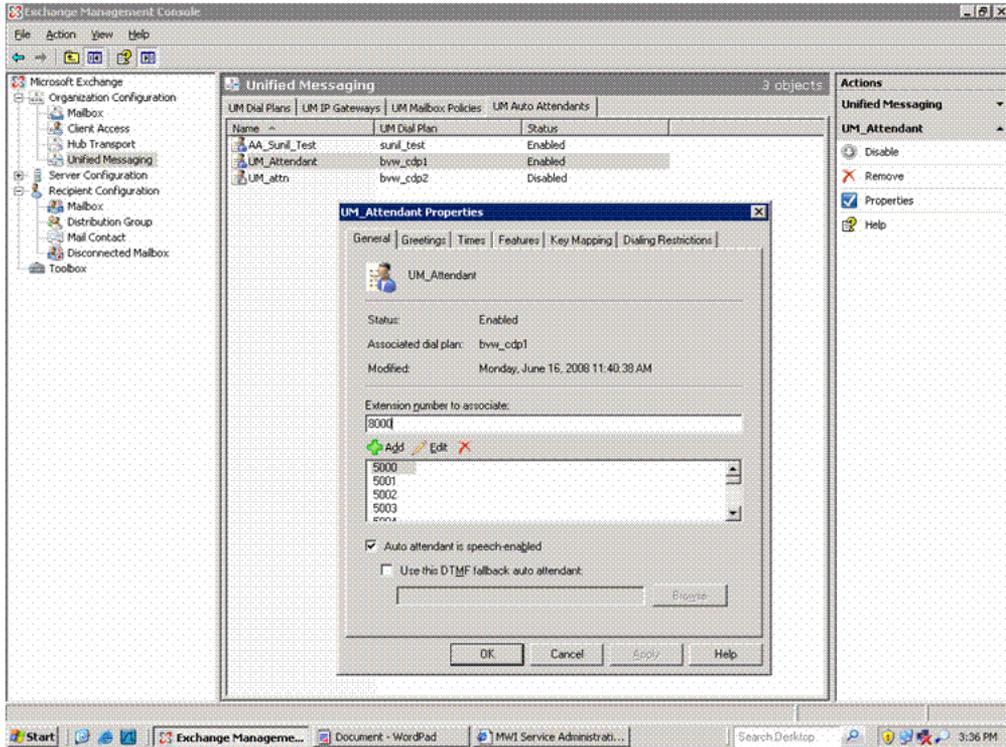
The Attendant properties window appears:

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Select **Allow calls to extensions** under **Dialing Restrictions** and click **OK**.

- 3 Add an attendant number on the properties window, under the **General** tab, enter the DN number for the auto attendant, click **Add** and then **OK** to add:



After dialling the number, the prompts for Auto Attendant service are heard by the user.

--End--

Install Geomant Message Waiting Indicator (MWI) application

Note: The MWI 2007 software is a third-party software developed by Geomant. Information on Geomant and MWI 2007 is provided in this documentation for ease of reference only. Nortel does not sell, warrant or provide operational support for Geomant's MWI 2007 software product, nor warrant the accuracy of MWI 2007 descriptions contained in this document. Customers using this document are strongly recommended to obtain the most recent MWI 2007 documentation from Geomant.

The Message Waiting Indicator (MWI) functionality of Microsoft Exchange Unified Messaging is not provided through Exchange Server 2007. Geomant MWI, a third-party vendor application, is an add-on application for use with Exchange 2007 Server, and is used to provide all notifications of new incoming messages to user telephones associated with a voice mail account on the Exchange Server 2007.

Each implemented instance of Geomant MWI is capable of providing message waiting indications for 2500 users, and has a 10 minute built-in timer for user notification time-out purposes.

Detailed procedures to be used in the installation of the Geomant MWI application are available for download at <http://mwi2007.com> > downloads > documentation package.

Note: Before attempting to install Geomant MWI, be aware of the installation prerequisites, as described by the following:

- **Exchange Auto Discovery Feature must be configured on the domain. Please refer to the Setting up E12 Autodiscover () document present in the downloaded documentation package.**
- **As part of Exchange Auto Discovery configuration, a Certificate Authority Server must be configured in the domain. For installation instructions, please refer to <http://www.tacteam.net/isaserverorg/vpnkitbeta2/installenterprise.htm>.**
- **On the Active Directory used to start the MWI service, a user must be configured with permissions similar to that of the Administrator.**

Installation of Multiple MWI applications

It is possible to install and configure multiple instances of the MWI application on the same network, to accommodate a larger number of users. Users configured on the Exchange Server are distributed between the available instances of the MWI application to provide effective MWI notification.

Note: Due to a limitation of the Geomant MWI application, a user cannot be configured to receive MWI notifications from more than one MWI application. A document describing the steps for a manual installation of the MWI application software can be found in the documentation package downloaded at <http://mwi2007.com> > downloads > documentation package.

Configure Geomant Message Waiting Indicator (MWI) application

Following the successful installation of the MWI application, you are able to configure the MWI application by means of the Geomant MWI Service Web page.

The Geomant MWI Service Web page can be opened on the local server using the link <https://localhost/MWISrvAdmin/>.

Note: The Geomant MWI Service Web page can also be accessed from a different (non-local) system by replacing **localhost** with the IP Address of the server on which the MWI application has been installed.

The Geomant MWI Service Web page appears as shown in the following figure:

Figure 5
Geomant MWI Service Web page



To configure MWI licenses for each SIP gateway through which MWI notifications will be sent, click on the **SIP Gateway** option of the Geomant MWI Service Web page (as shown in the preceding figure). Enter the appropriate values for each SIP gateway to be used. The SIP Gateway configuration screen appears as shown by the following:

Figure 6
SIP Gateway configuration screen

Display Name	Transport	Gateway Port	MWI Ports	Subscription	Local Port
AREA_TORONTO_IP_GW	TCP	5060	0	<input type="checkbox"/>	5060
AREA_RICHARDSON_IP_GW	TCP	5060	0	<input type="checkbox"/>	5060
AREA_GALWAY_IP_GW	TCP	5060	0	<input type="checkbox"/>	5060

The installed MWI service can be enabled and configured on a per-user basis with the SIP gateway to which the associated MWI notifications are to be sent. To configure MWI for each user, click the **MWI Users** option on the Geomant MWI Service Web page, which causes the Unified Messaging User Properties screen to display, as shown by the following:

Figure 7
Unified Messaging User Properties screen

UNIFIED MESSAGING USER PROPERTIES

Distinguished Name	CN=User 2005,CN=USERS,DC=UM2007R,DC=CORP,DC=NORTEL,DC=COM
Display Name	User 2005
Logon Name	User2005
Email Address	User2005@UM2007R.CORP.NORTEL.COM
Email WebDAV Access	HTTPS://KQVZP46.UM2007R.CORP.NORTEL.COM/EXCHANGE/USER2005
Email WebService Access	HTTPS://KQVZP46.UM2007R.CORP.NORTEL.COM/ews/exchange.asmx
Extension	2005
GSM Number	[UNSPECIFIED]
Gateway Port	0
Messages Timestamp	4/17/2007 8:25:52 PM
Voice Messages	2
Last Known Voicemail	4/16/2007 8:35:33 PM
Lamp Status	ON
Lamp Status Timestamp	4/17/2007 8:25:15 PM
Last Event Timestamp	4/17/2007 8:10:02 PM
Subscription Id	A2c9092e-d111-4569-8ecd-ae0402c5ed27
Event watermark	AQAAAEMLGE+EGNSJSFOQSCURWA/MMGAAAAAAAAAAE=
SIP Gateway	node_1220
MWI Service Enabled	<input checked="" type="checkbox"/>
SMS on Voicemails	<input type="checkbox"/>
<div style="background-color: #f4a460; padding: 5px; display: inline-block; border: 1px solid black;">Update Settings</div>	

Additional notes on configuring CS1000 for MWI

- The SIP DCH should be configured with MWI for the RCAP value (LD 17).
- User telephones should be configured with MWA (Message Waiting Allowed) Class of Service to receive MWI Lamp notification.
- The Node configuration page (in Element Manager) needs to be configured with information for both the **MWI Application DN** and the **MWI Dialing Plan**. The configured MWI DN and MWI Dialing plan should be administered as a valid DN on the Call Server to ensure routing back to the SIP gateway; this is required if the ISDN Facility Response is to be sent back to the SIP gateway. For more information on configuring the MWI DN and MWI Dial Plan, see [“Configure information for the MWI Application DN” \(page 43\)](#) and [“Configure the Microsoft Exchange Unified Messaging Dial Plan” \(page 25\)](#).

Configure Microsoft Exchange Unified Messaging in CS 1000 Element Manager

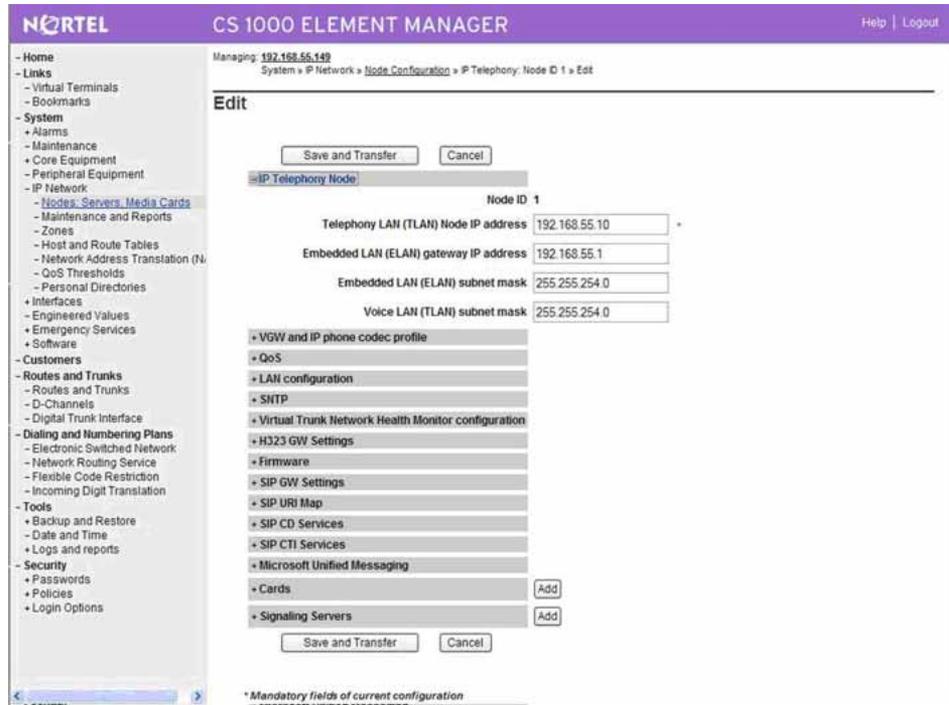
The following sections detail the use of Element Manager in configuring Microsoft Exchange Unified Messaging services on the CS 1000.

The **Edit** page of the Element Manager **Nodes: Servers, Media Cards** configuration page has a new configuration tab – **Microsoft Unified Messaging**. The Microsoft Unified Messaging tab is used to add Microsoft Exchange Unified Messaging numbers that have been defined for use with Subscriber Access and Auto Attendant and also to configure MWI DNs and Dialing Plans. Up to five Subscriber numbers and five Auto Attendant numbers can be configured. These numbers can be added, modified or deleted using the functions of the Microsoft Unified Messaging tab.

Configure a Node in Element Manager for use with Microsoft Exchange Unified Messaging

Access to all parameters for configuration of a node for interaction with Microsoft Exchange Unified Messaging are found under IP Telephony Node section of Edit page for **Nodes: Servers, Media Cards**, as shown in the following figure:

Figure 8
Configuring a Node for use with Microsoft Exchange Unified Messaging: IP Telephony Node



A Node can be imported and its parameters edited to interact specifically with Microsoft Exchange Unified Messaging.

Import and edit a Node for Microsoft Exchange Unified Messaging interaction

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Nodes: Servers, Media Cards page.
3	Launch the Import Node Files page and import the node to be configured for use with Microsoft Exchange Unified Messaging and edit the imported node by navigating to the Edit page of that node.
4	Configure the Unified Messaging parameters for the node by expanding the Microsoft Unified Messaging section and saving the changes. For more information, see “Configure Subscriber Access, Auto Attendant, and MWI DN information” (page 40).

--End--

Configure Subscriber Access, Auto Attendant, and MWI DN information

Opening the **Microsoft Unified Messaging** tab of the Edit page for **Nodes: Servers, Media Cards** allows the Subscriber Access, Auto Attendant, and MWI DN information to be configured. These configuration parameters, once expanded, appear as shown in the following image:

Figure 9
Subscriber Access, Auto Attendant, MWI DN and Voice mail softkeys configuration parameters

The screenshot displays the Nortel CS 1000 Element Manager interface. The left sidebar contains a navigation tree with categories like Common Manager, Home, Links, System, Customers, Routes and Trunks, Dialing and Numbering Plans, Phones, Tools, and Security. The main area is titled '- IP Telephony Node' and shows configuration for Node ID 1111. Fields include Telephony LAN (TLAN) Node IP address (192.168.0.100), Embedded LAN (ELAN) gateway IP address (192.168.0.1), Embedded LAN (ELAN) subnet mask (255.255.255.0), and Voice LAN (TLAN) subnet mask (255.255.252.0). Below these are expandable sections for VGW and IP phone codec profile, OoS, LAN configuration, SNTP, Virtual Trunk Network Health Monitor configuration, H323 GW Settings, Firmware, SIP GW Settings, SIP URI Map, SIP CD Services, and SIP CTI Services. The Microsoft Unified Messaging section is expanded to show MWI Application DN (2201), MWI Dialing Plan (CDP), and a checked box for Unified Messaging Softkeys Enabled. Below this are sections for Subscriber Access (with an Add button), Auto Attendant (with an Add button), Cards (with an Add button), and Signaling Servers (with an Add button). At the bottom are Save and Transfer and Cancel buttons. The footer indicates Copyright © 2002-2008 Nortel Networks.

The acceptable data entries for the Subscriber Access, Auto Attendant, and MWI DN information fields are as follows:

- Subscriber Access Number: This is a numeric field for up to 32 digits.
- Auto Attendant Number: This is a numeric field for up to 32 digits.
- MWI Application DN: This is a numeric field for up to 32 digits.

Adding, modifying, or deleting Subscriber Access Numbers for a Microsoft Exchange Unified Messaging Node

The following procedures detail the steps to add, modify, or delete the Subscriber Access Number information for a Node interacting with Microsoft Exchange Unified Messaging.

Add new Subscriber Access Number information

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand the Microsoft Unified Messaging .
4	In the space provided, add information for up to five Subscriber Access Numbers by clicking Add and saving the configuration. The Add button becomes inactive after the fifth entry.
--End--	

Modify Subscriber Access Number information

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand the Microsoft Unified Messaging .
4	In the space provided, modify the configuration information as required for up to five Subscriber Access Numbers and save the configuration.
--End--	

Delete Subscriber Access Numbers

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand the Microsoft Unified Messaging .

- 4 Delete the required Subscriber Access Number(s) by clicking the **Remove** button and saving the configuration.

--End--

Adding, modifying, or deleting Auto Attendant numbers for a Microsoft Exchange Unified Messaging Node

The following procedures detail the steps to add, modify, or delete the Auto Attendant Number information for a Node interacting with Microsoft Exchange Unified Messaging.

Add new Auto Attendant number information

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand Microsoft Unified Messaging .
4	In the space provided, add information for up to five Auto Attendant Numbers by clicking Add and save the configuration. The Add button becomes inactive after the fifth entry.

--End--

Modify Auto Attendant Number information

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand Microsoft Unified Messaging .
4	In the space provided, modify the configuration information as required for up to five Auto Attendant Numbers and save the configuration.

--End--

Delete Auto Attendant Numbers

Step	Action
1	Log on to Element Manager with a valid User Account.

- 2 Navigate to the **Edit** page of the **Nodes: Servers, Media Cards** configuration page.
- 3 Expand **Microsoft Unified Messaging**.
- 4 Delete the required Auto Attendant Number(s) by clicking the **Remove** button and saving the configuration.

--End--

Configure information for the MWI Application DN

The following procedure details the steps to configure the MWI Application DN information for a Node interacting with Microsoft Exchange Unified Messaging.

Configure MWI Application DN information

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand Microsoft Unified Messaging .
4	Configure the proxy DN for the MWI application and save the configuration.

--End--

Select MWI Dial Plan type

The following procedure details the steps for selecting the desired MWI Dial Plan type for a Node interacting with Microsoft Exchange Unified Messaging.

Note: Currently, the available dial plan types are restricted to CDP and UDP only.

Select the desired MWI Dial Plan type

Step	Action
1	Log on to Element Manager with a valid User Account.
2	Navigate to the Edit page of the Nodes: Servers, Media Cards configuration page.
3	Expand the Microsoft Unified Messaging .

- 4 Select either **CDP** or **UDP** for the MWI Dial Plan type and save the configuration.

--End--

Voice mail softkeys configuration

The use of Exchange UM softkeys on IP phones (11XX, 12XX, 2007, 2004, 2002) is enabled through Element Manager by selecting the Unified Messaging Softkeys Enabled checkbox under Microsoft Unified Messaging. In addition, the Inbox key of each of the phones can be configured to access the Subscriber Access DN and MWK directly.

The key mapping for the softkeys is static and consists of the following options:

- Play
- Delete
- Call
- Stop
- Unread
- Reply
- Compose
- Forward
- Info

Allowing calling party numbers to update while leaving message

If a call is modified after reaching the Exchange 2007 UM Server, the calling party number is modified as well. To ensure that voice messages left will have the correct calling party information, calling party number information must be updated to the Exchange 2007 UM Server by generating a SIP INFO message with new content type header **text/source-party**. This SIP INFO message is then delivered to the Exchange 2007 UM Server, allowing any voice messages left there to reflect the correct calling party caller information.

To enable this functionality of the SIP INFO message, the following changes must be made on the Exchange 2007 UM Server:

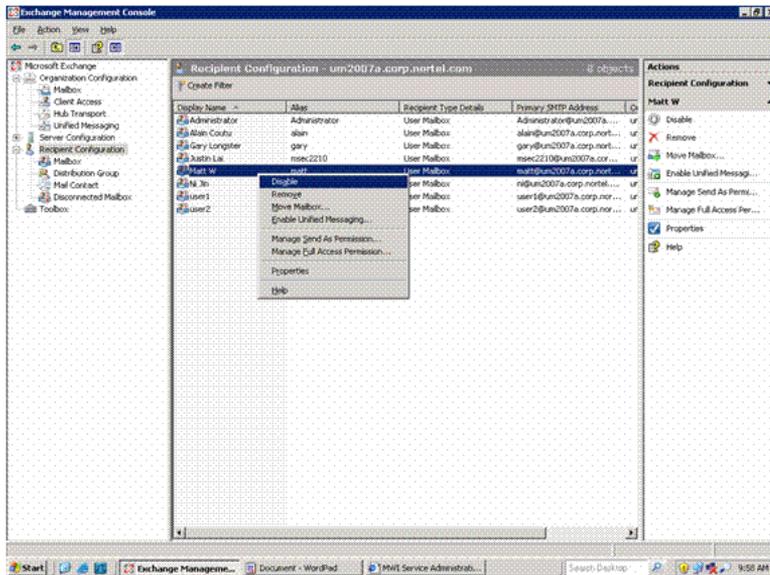
- In the **GlobCfg.XML** file, set the **SourcePartyInfoEnabled** flag to **true**.
- Both the **Microsoft Exchange Speech Engine** and the **Microsoft Unified Messaging** Services must be restarted.

Disable a user mailbox

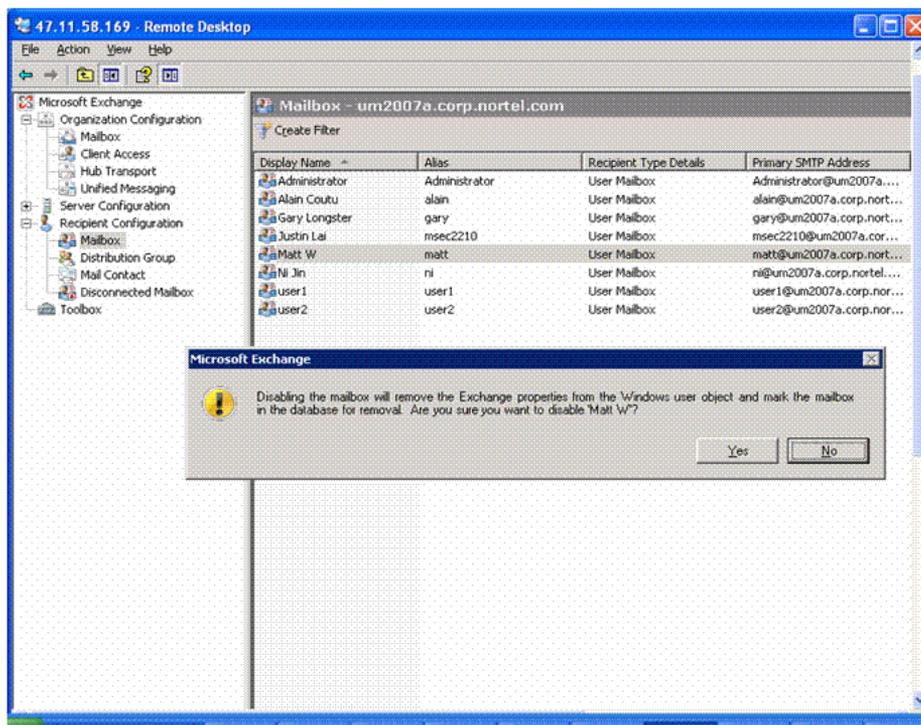
The following section details the required steps for removing all Exchange mailbox attributes from a user object in Active Directory without deleting the user object in Active Directory.

Disabling a user mailbox

- | Step | Action |
|------|---|
| 1 | In the Exchange Management Console, select Recipient Configuration > Mailbox . In the action pane, click Disable to disable the mailbox.
Optionally, you can right-click the selected mailbox, and choose Disable on the pop up menu as shown in the following figure: |



- | | |
|---|--|
| 2 | Click Yes to confirm the disabling of the user mailbox, as shown in the following figure: |
|---|--|



--End--

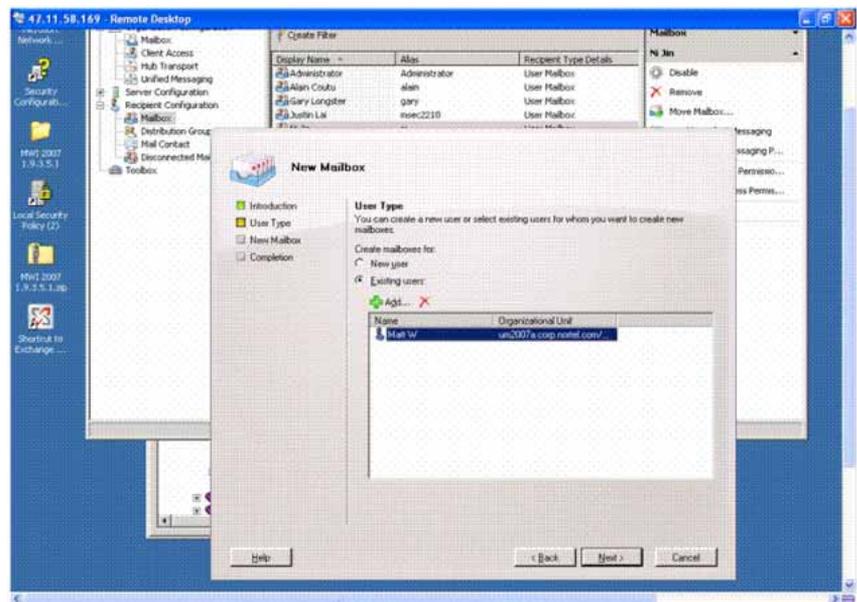
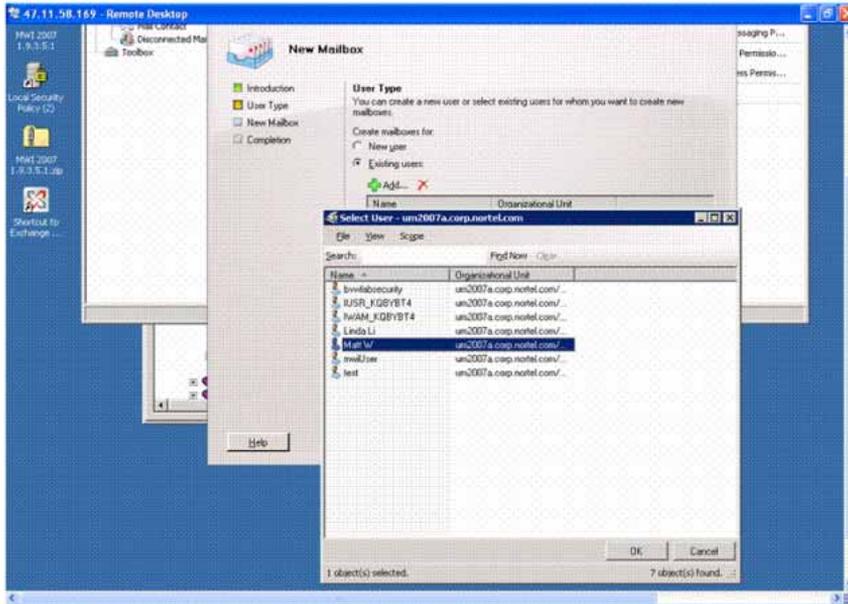
Enable the user mailbox after disabling

The user mailbox can be enabled after disabling it. The following section details the required steps to enable a disabled user mailbox.

Procedure 1 Enabling the user mailbox after disabling

- | Step | Action |
|------|---|
| 1 | Add a new mailbox using the New Mailbox Wizard , but select Existing users instead of New users when prompted for User Type .

For more information about using the New Mailbox Wizard, see “Configure a new user mailbox for Microsoft Exchange Unified Messaging” (page 18) . |
| 2 | Click Add . A window appears displaying all existing users in the active directory. |
| 3 | Select the disabled user mailbox as appropriate and click OK , as shown by the following: |



- 4 Click **Next** and follow the steps to add a new mailbox, without changing current user account information.

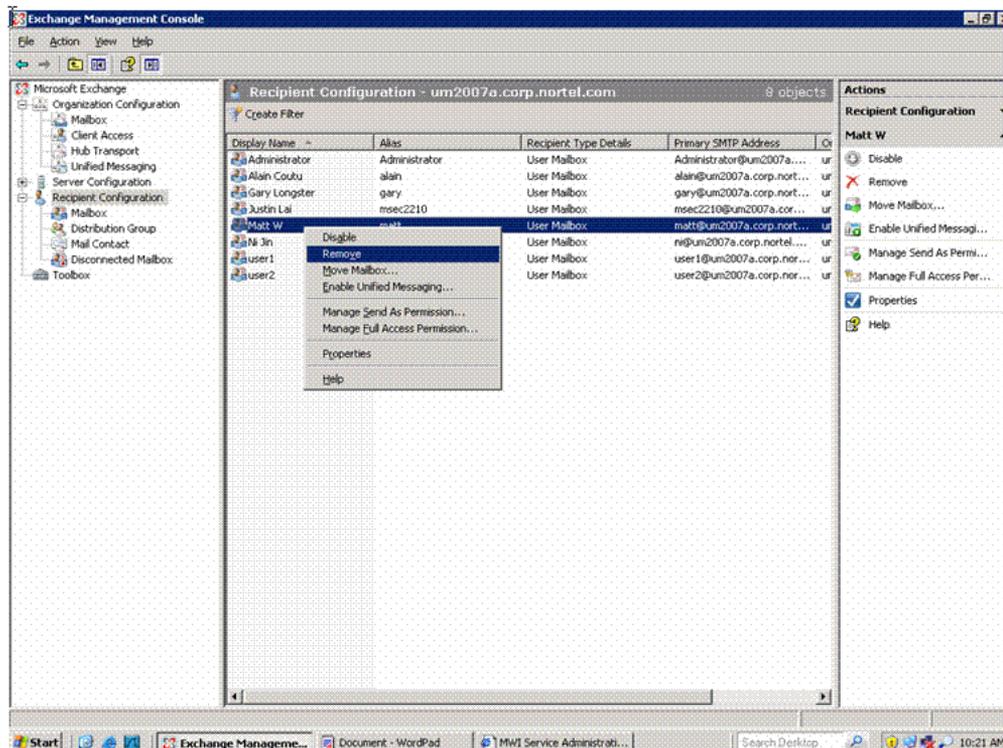
--End--

Remove a user mailbox

This procedure details the required steps for removing a user mailbox.

Procedure 2
Removing a user mailbox

Step	Action
1	In the Exchange Management Console, select Recipient Configuration > Mailbox .
2	In the action pane, click Remove to remove the mailbox, as shown by the following:



Optionally, you can right-click the selected user mailbox, and choose **Remove** from the list of menu options.

--End--

Note: When you remove a user mailbox, all associated user Exchange data is marked for deletion and the associated user account entry in the Active Directory is deleted.

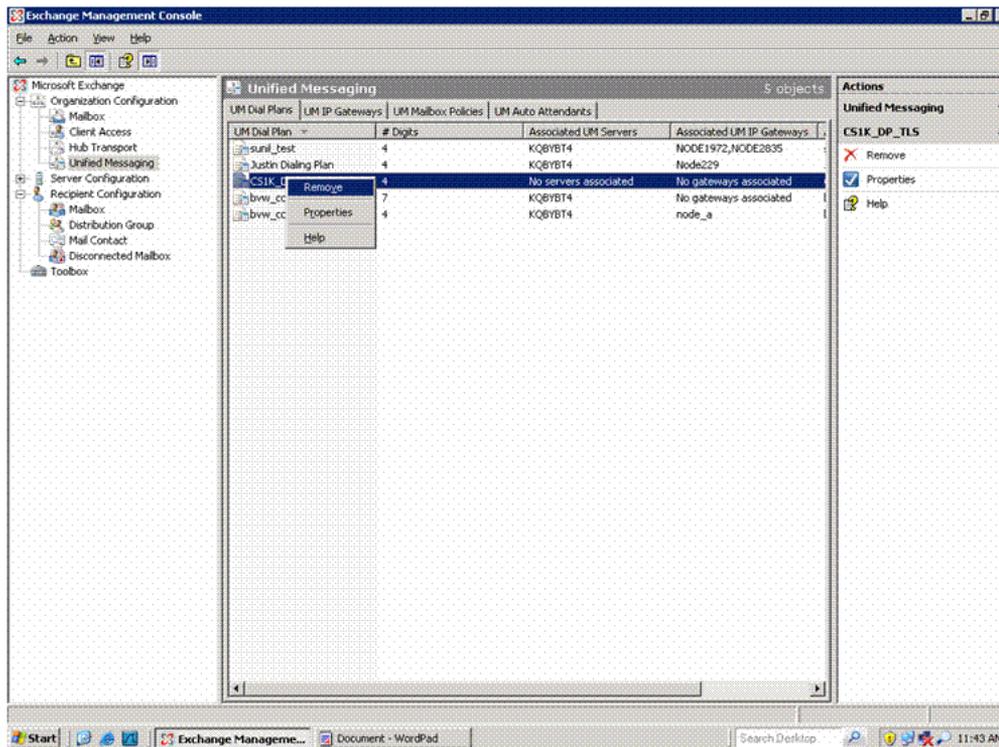
Remove a dial plan

This procedure details the required steps for removing a UM dial plan.

Note: Before you can remove a UM dial plan, you must remove any existing associations with other UM components such as UM mailbox policies, Unified Messaging servers, or UM IP gateways.

Procedure 3 Removing a dial plan

- | Step | Action |
|------|--|
| 1 | In the Exchange Management Console, select Organization Configuration > Unified Messaging . |
| 2 | Select the appropriate UM dial plan and click Remove on the action pane to remove the dial plan, as shown by the following: |



Optionally, you can right-click the UM dial plan and select **Remove** from the list of available options.

- 3 Click **Yes** to confirm the removal of the selected UM dial plan.



--End--

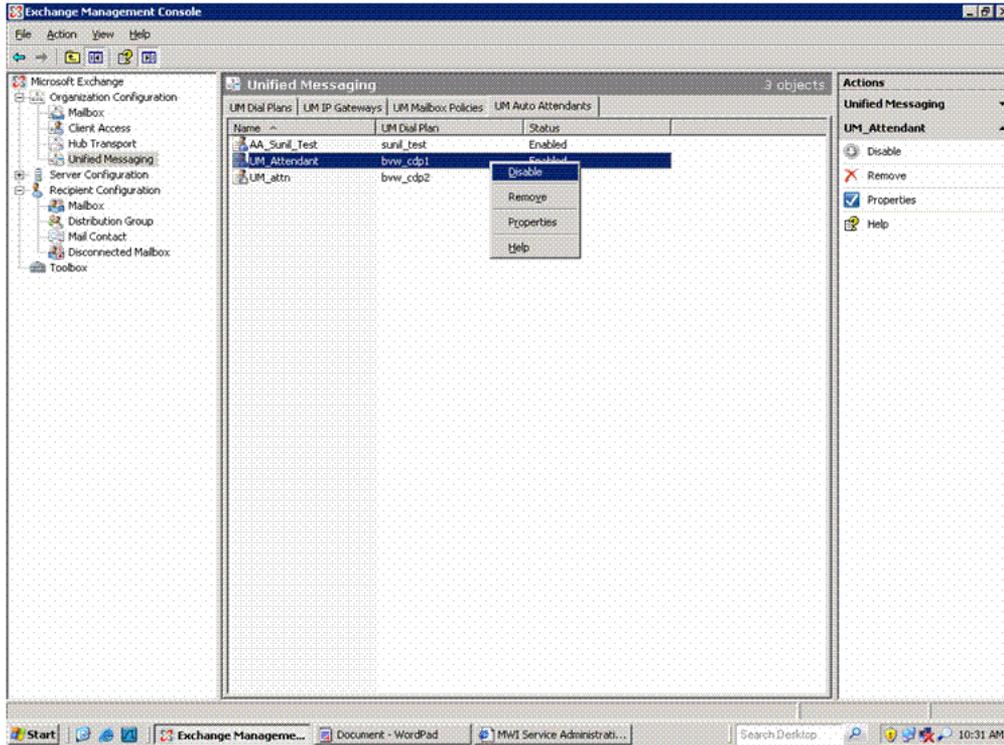
Disable Operator Assistance feature

This module details the required steps for disabling Operator Assistance feature functionality, provided by the UM Auto Attendant.

The UM Auto Attendant can be disabled: if an auto attendant is disabled, no incoming calls will be answered.

Procedure 4 Disabling the UM Auto Attendant

Step	Action
1	In the Exchange Management Console, select Organization Configuration > Unified Messaging .
2	Select the appropriate UM Auto Attendant and click Disable on the action pane to remove the dial plan, as shown by the following:



Optionally, you can right-click the UM Auto Attendant and select **Disable** from the list of available options.

--End--

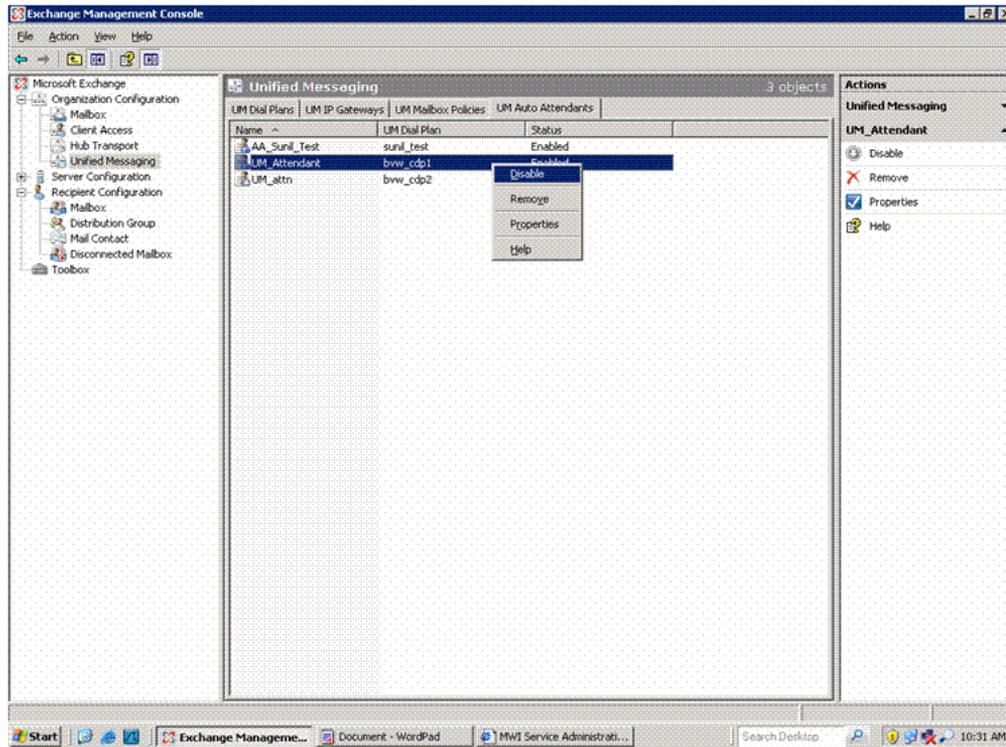
Remove Operator Assistance feature

This module details the required steps to follow for removing a configured UM Auto Attendant.

Procedure 5 Removing the UM Auto Attendant

Step	Action
1	In the Exchange Management Console, select Organization Configuration > Unified Messaging .
2	Select the appropriate UM Auto Attendant and click Remove on the action pane to remove the dial plan, as shown by the following:

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Optionally, you can right-click the UM Auto Attendant and select **Remove** from the list of available options.

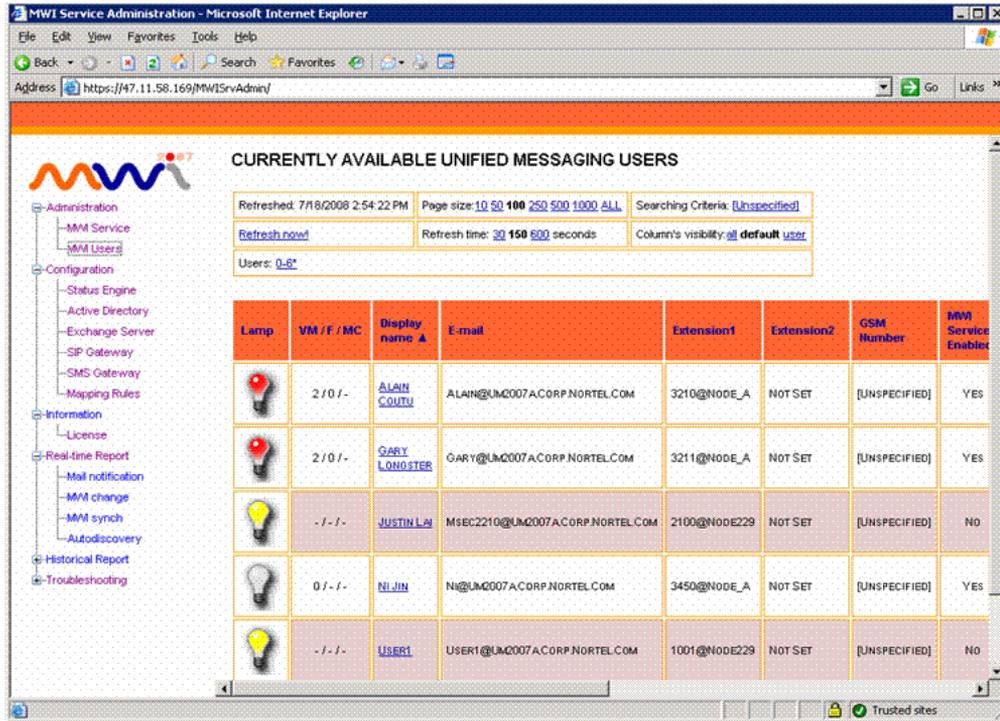
--End--

Disable MWI service for a user phone set

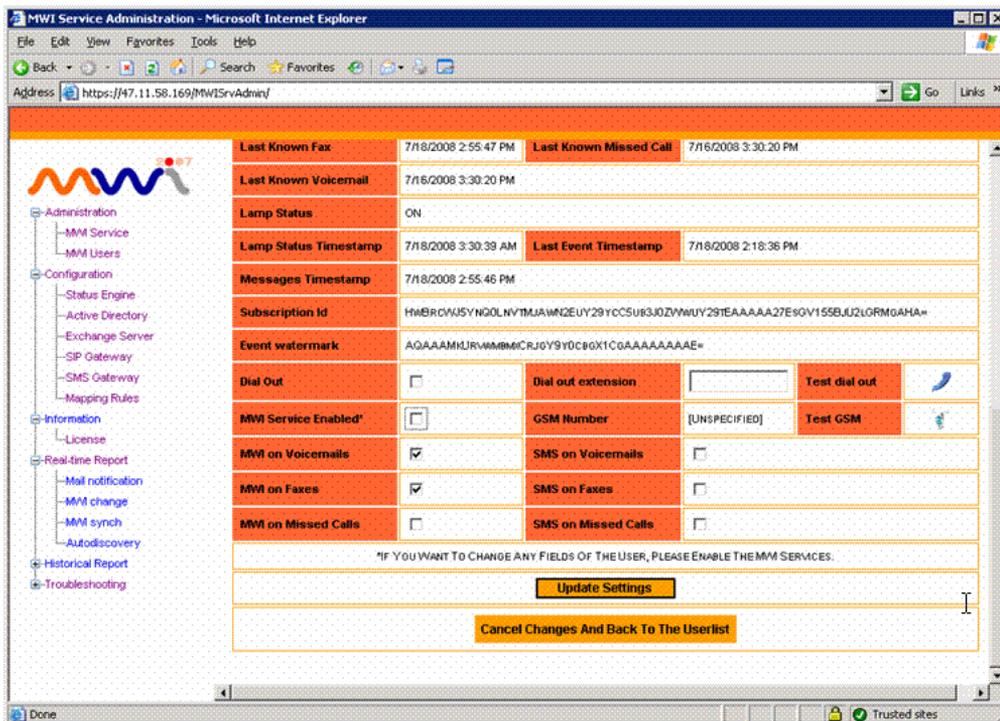
This module details the procedure for disabling MWI service access on a user phone set.

Procedure 6 Disabling MWI service for a user phone set

Step	Action
1	Access the Geomant MWI Service Web page . For more information about accessing the Geomant MWI Service Web page, see " Configure Geomant Message Waiting Indicator (MWI) application " (page 34)
2	Select Administration > MWI Users .



3 Select a user from the list. The **Unified Messaging User Properties** page appears.



- 4 On the **Unified Messaging User Properties** screen, uncheck **MWI Service Enabled** to disable MWI service for the user.

--End--

Nortel Communication Server 1000

Communication Server 1000 with Microsoft Exchange Server 2007 Unified Messaging Fundamentals

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