



**Avaya Modular Messaging
for the Avaya Message Storage
Server (MSS) Configuration**
Release 5.2
Installation and Upgrades

December 2012

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- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

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- System administration documents
- Security documents
- Hardware/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

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- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products

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About this book

This book, *Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades*, provides instructions for the installation and upgrade of the Avaya Modular Messaging software in an Avaya Message Storage Server (MSS) configuration.

In Release 5.2, new installations of the MSS reside on the Avaya-provided S8800 1U server hardware that runs on Linux Operating System (OS). All new installations of Messaging Application Server (MAS) software can either reside on Avaya-provided S8800 1U server or customer-provided equipment (CPE) server and runs on Microsoft Windows 2003 R2 Operating System. You can upgrade both MSS and MAS on S3500, S8730, HP DL360 G7 or customer-provided server to Release 5.2.

Customer-provided equipment (CPE) for a Modular Messaging install or upgrade must comply with the specifications described in *Avaya Modular Messaging Concepts and Planning Guide*.

Note:

Avaya does not support:

- Avaya S3400-family server hardware in Release 5.2. However, this book provides instructions to migrate to an Avaya S8800 1U-family server or the HP DL360 G7 server.
- Migrating from releases earlier than 3.0 to Release 5.2.

If you are running Modular Messaging software earlier than Release 3.0, you must first upgrade the Modular Messaging system to Release 3.0 and then migrate to Release 5.2 using the procedures provided in this book.

Information in this book includes:

- Instructions to install the software for Modular Messaging system that includes initial administration, and acceptance testing
- Instructions to upgrade the software from Modular Messaging Release 3.x, Release 4.0, Release 5.0 or Release 5.1 system to Release 5.2
- Instructions to migrate Modular Messaging system Release 3.x, Release 4.0, Release 5.0 or Release 5.1 from an Avaya S3400, S3500, S8730, S8800 1U server to HP DL360 G7 server.

Note:

- Use this document to install an Avaya Modular Messaging system. After the software installation, customers must modify the Modular Messaging system parameters for use at their site. For more information, see *Modular Messaging with Avaya MSS - MAS Administration Guide*. For instructions to download the documents, see [Downloading user documentation](#) on page 13.

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

About this book

- Use *Installing Avaya Modular Messaging on a Single Server Configuration* guide to install Modular Messaging on a Single Server configuration.

Intended audience

The book will be useful to designated experts who are responsible for:

- Installation and configuration of Modular Messaging software for the Avaya S8800 1U-family servers and customer-provided (CPE) MAS.
- Installation and configuration of Modular Messaging software for the HP DL360 G7 server and customer-provided (CPE) MAS.
- Upgrade from Modular Messaging Release 3.x, Release 4.0, Release 5.0 or Release 5.1 to Modular Messaging Release 5.2.
- Migration from the Modular Messaging system running on an S3400, S3500 or S8730 server to Modular Messaging Release 5.2 that runs on an S8800 1U-family server or the HP DL360 G7 server.

Avaya assumes that the users of this book have completed a relevant hardware installation training course. For more information about training, see [Related resources](#) on page 6.

Changes to this book

This book includes the following enhancements:

- New procedures to troubleshoot the frequently occurring installation issues. See [Appendix J: Troubleshooting the installation issues](#) on page 413.
- New procedure to obtain the license from Product Licensing and Delivery System (PLDS) to be applied on a Web License Manager (WebLM) server.
- New procedures to install and configure Modular Messaging License managed by Avaya Web License Manager (WebLM).
- Procedures to install and migrate to Release 5.2 to reflect support for SAL *only* for alarming and remote access. However, this book still contains references to alarming and remote access other than SAL. Use these procedures *only* when you are upgrading Modular Messaging to Release 5.2.
- Procedures to install and migrate to Release 5.2 to reflect support for SIP based switch integration *only*. However, this book still contains references to legacy port boards and H.323 integrations. Use these procedures *only* when you are upgrading Modular Messaging to Release 5.2.
- New procedures to migrate to S8800 1U hardware. For hardware specific information, see *Installing the Avaya S8800 1U Server for Modular Messaging*.

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

- New procedures to migrate to HP DL360 G7 server hardware. For hardware specific information, see *Installing the HP DL360 G7 server for Modular Messaging* guide.

Note:

This document **only** provides the information on software installation, upgrades and migration of the Avaya Modular Messaging system in an Avaya Message Storage Server (MSS) configuration. For more information on procedures to install and maintain the Avaya-provided hardware, see *Installing the Avaya S8800 1U Server for Modular Messaging* guide and *Installing the HP DL360 G7 Server* guide. For instructions to download the documents, see [Downloading user documentation](#) on page 13.

How to use this book

Review the appropriate section, depending on whether you are installing a new Avaya Modular Messaging system, upgrading or migrating a Modular Messaging system that is already in service.

Installing a new system

To install a Modular Messaging system:

1. A project planner must create an Avaya Modular Messaging Data Collection Tool (DCT) data file before the installation is started. Send the DCT data file to the technical support representative at the customer's site.
2. Print the checklist for a new installation from [Modular Messaging on Avaya MAS installation checklist](#) on page 302. Use it to track your progress.
3. Read [Chapter 1: Preinstallation requirements](#) on page 9. This chapter describes installation requirements and site preparation, including where to find required documentation, software, and tools that are required to install the Modular Messaging system.
4. Read and use each chapter in the order presented. Follow the procedures in the same sequence as given in the book.

Upgrading a system

To upgrade a Modular Messaging system from Release 3.x or Release 4.0:

1. Obtain the following before you start the upgrade:
 - a. The original DCT file for the system or planning forms for the system that runs on Release 3.x.
 - b. The latest analyzed DCT file for the system.
2. Print the upgrade checklist from [Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist](#) on page 312 to use as a guide.
3. Follow the instructions in [Upgrading to Modular Messaging Release 5.2](#) on page 151 to upgrade each server.

To upgrade a Modular Messaging system from Release 5.0 or Release 5.1:

Note:

Do not use the media to complete the upgrade.

1. Obtain the following from the Avaya Support Web site (<http://www.avaya.com/support>):
 - The latest Modular Messaging Release 5.2 Upgrade application.
 - The latest release notes for the Modular Messaging Release 5.2 Upgrade application.
2. Follow the instructions provided in the user documentation to perform the upgrade.

Migrating a system

To migrate a Modular Messaging system from Release 3.x, Release 4.0, Release 5.0 or Release 5.1:

1. Obtain the following before you start the migration:
 - a. The original DCT file for the system or planning forms for the system that runs on Release 3.x.
 - b. The latest analyzed DCT file for the system
2. Print the migration checklist from [Modular Messaging Release 5.2 system migration checklist](#) on page 316 to use as a guide.
3. Follow the instructions in [Migrating to Modular Messaging Release 5.2 on S8800 1U-family server](#) on page 209 to migrate each server.
4. Follow the instructions in [Migrating to Modular Messaging Release 5.2 on HP DL360 G7 server](#) on page 255 to migrate each server.

Using links in this document

The PDF version of the guide provides links to other files or pages. Links are shown in blue text and operate as follows:

- Internal links within this document always work when you use the PDF version of this guide. Internal links include links to tables, figures, or other sections of the book.
- You can use the PDF version of the guide on a system that is connected to the Internet. If you do, you can click the link to any Web site address, such as <http://www.avaya.com>, to go directly to the site.

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Related resources

This section describes additional documentation and training available to you.

User Documentation

Always use the appropriate user documentation to obtain specific information to plan, to install, to administer, or to maintain an Avaya Modular Messaging system. To view or download the user documentation, see [Downloading user documentation](#) on page 13.

Technical assistance

The following technical assistance is available if needed.

Remote support center

Your project manager or systems consultant provides you the telephone number of the appropriate remote support center.

Use the following numbers for technical assistance with Avaya products and services:

- Within the United States and Canada: call 1-800-242-2121
- Any other country, call your local distributor

Help on the system

Online help is available as follows:

- *MAS*: Use the Help menu, press **F1**, or click the **Help** button (if available) from the application or the wizard for which you need help.
- *MSS*: On the Web-interface pages, click the **Help** button.

Note:

To close the help window, click **Close** situated at the bottom of the page. If you use the browser button to close the help window, you might leave a hidden help window open. You must close all open Help windows before you can close the browser.

Training

For information about product training, go to the Avaya Web site at <http://www.avaya.com> and click **Support > Training and Certifications**.

How to comment on this book

Avaya is interested in your suggestions for improving this information. Use infodev@avaya.com to communicate with us.

Be sure to include the name, issue number, and date of this book:

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades, Issue 1.2, December 2012.

About this book

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

Chapter 1: Preinstallation requirements

This chapter describes the prerequisites for installing an Avaya Modular Messaging system that uses Avaya S8800 1U-family message servers or HP DL360 G7 server.

Topics in this chapter include:

- [Software shipped with the system](#) on page 10
- [Obtaining the DCT data file](#) on page 11
- [Downloading required software and documentation](#) on page 11
- [Security considerations](#) on page 15
- [Test equipment recommendations](#) on page 16
- [Initial switch and LAN administration](#) on page 17
- [Private Windows domain consideration with MM Fax Sender service](#) on page 18
- [Corporate Windows domain requirements](#) on page 18

For information on specifications, site requirements, switch and LAN demarcation points for Avaya-provided server, see *Installing the Avaya S8800 1U Server for Modular Messaging* guide or *Installing the HP DL360 G7 Server* guide.

Software shipped with the system

Avaya ships the following software with each Modular Messaging system:

Table 1: Required Modular Messaging software

Media	Purpose
Avaya Modular Messaging R5.2 MAS Application—two DVDs	Use this software to: <ul style="list-style-type: none"> ● Install the Modular Messaging software and optional application programs running on Avaya-provided servers and CPE servers ● Upgrade to Release 5.2 from Release 3.x or 4.0.
Avaya Modular Messaging R5.2—MSS Application disk and MSS OS disk	Use this software to upgrade to Release 5.2 from Release 3.x or 4.0 or to reload the software.
For HP DL360 G7: Modular Messaging R5.2 MAS for Avaya Store Model DL360G7 Boot Recovery Disk 1 and Modular Messaging R5.2 MAS for Avaya Store Model DL360G7 Boot Recovery Disk 2	Use this software to reinstall the boot-image software to recover from a hard-disk failure.
For S8800 1U: Avaya MODULAR MESSAGING R5.2 MAS for Avaya Store Model S8800 Boot disk	
For S8730: Avaya MODULAR MESSAGING R5.2 MAS for Avaya Store Model S8730 Boot disk	
For S3500: Avaya MODULAR MESSAGING R5.2 MAS for Avaya Store Model S3500 Boot disk	

Obtaining the DCT data file

A DCT data file is used to configure the MSS and each MAS. A person responsible for planning the installation creates the file using the Modular Messaging Data Collection Tool (DCT) before the Modular Messaging system is installed. The project manager, customer representative, or any responsible person creates this file. The DCT data file has an extension **mmdct**, such as *sitefile.mmdct*.

1. Obtain the DCT data file from the appropriate person.
2. Copy the DCT data file to a CD-ROM, DVD or USB storage device that you carry with you to the customer site.

 **CAUTION:**

The USB drive *must* be formatted only as a FAT16 or a FAT32 file system and *not* as an NTFS file system.

Note:

For more information about the DCT, obtain the *Avaya Modular Messaging Data Collection Tool Online Help*; see [Downloading user documentation](#) on page 13.

Downloading required software and documentation

You must download and use the software and documentation described in this section to install or upgrade an Avaya Modular Messaging system. You can obtain this information only from the Avaya Support Web site. Download the information before you visit the customer site. Some of the sites, where Modular Messaging system is installed might not have access to Internet.

 **Important:**

Always check the Avaya Support Web site at <http://www.avaya.com/support> for any latest updates and information before you install or upgrade. Note that links and paths on the Avaya Support Web site might change.

The following topics explain how to download or print the required software and documentation from the Web:

- [Downloading software updates](#) on page 12
- [Downloading configuration notes](#) on page 12
- [Downloading the installation and upgrade checklists](#) on page 13
- [Downloading user documentation](#) on page 13

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Downloading software updates

You must update the Avaya Modular Messaging software for each installation or upgrade to bring it up to date with the latest changes. To obtain the latest Avaya Service Pack (SP) and software patches for the system:

1. Go to Avaya Support Web site at <http://www.avaya.com/support>.
2. Download any files needed for the Release 5.2 system. Ensure that you download any instructions required to install the service pack or software update.
3. In addition to any other files, download the following:
 - **Avaya Modular Messaging 5.2 Outlook Client**
 - **Avaya Modular Messaging 5.2 DCT Tool**. You will use this file to update the DCT data file.
 - For Release 3.x or Release 4.0 upgrades to Release 5.2, **Avaya Modular Messaging 5.2 MSS Pre-upgrade and Backup Verification Tool**
 - The latest Modular Messaging Release 5.2 service pack and software patch.
 - The latest Modular Messaging Release 3.x, 4.0, 5.0 or 5.1 service pack, for the Modular Messaging Release running on your system.
 - The latest Modular Messaging Release 3.x, 4.0, 5.0 or 5.1 software patch, for the Modular Messaging Release running on your system.
4. Copy the downloaded files to a storage device.
5. Take the storage device with you to the installation site.

Downloading configuration notes

Obtain the configuration notes required to integrate the MAS with the PBX or telephony switch at this site. To obtain the recent copy, complete the following:

1. Go to the Avaya Support Web site at <http://www.avaya.com/support>.
2. Download or print the configuration notes for the switch integration.

For AudioCodes gateway configuration notes, see <http://www.audiocodes.com/avaya>.

Downloading the installation and upgrade checklists

Access the PDF version of the checklists for installation and upgrade from the Avaya Support Web site. You can also find the checklists in [Appendix A: Installation, upgrade and migration checklists](#) on page 301. To download the checklists:

1. See the Avaya Support Web site at <http://www.avaya.com/support>.
2. From the **File Download** dialog box, open or save the checklists file.

Downloading user documentation

User documentation needed for installing a new system is on the Avaya Support Web site:

1. Go to Avaya Support Web site at <http://www.avaya.com/support>.
2. Click **Documentation** for a list of downloadable documents.
3. Either click to view or print files, or right-click to download the files you need:

Table 2: Modular Messaging documentation

Document Title
<i>Avaya Modular Messaging Client Microsoft Outlook User Guide</i>
<i>Avaya Modular Messaging Concepts and Planning Guide</i>
<i>Modular Messaging MultiSite Guide</i>
<i>Avaya Modular Messaging Data Collection Tool Help</i>
<i>Avaya Modular Messaging Documentation</i>
<i>Modular Messaging with Avaya MSS - MAS Administration Guide</i>
<i>Avaya Modular Messaging Subscriber Options User Guide</i>
<i>Installing the HP DL360 G7 Server</i>
<i>Installing the Avaya S8800 1U Server for Modular Messaging</i>
<i>Installing the Avaya S8730 Server for Modular Messaging</i>
<i>Maintaining and Troubleshooting the HP ProLiant DL360 G7 Server</i>
<i>Maintaining the Avaya S8800 1U Server for Modular Messaging</i>
<i>Maintaining the Avaya S8730 Server for Modular Messaging</i>
<i>Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions</i>

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Table 2: Modular Messaging documentation — <Emphasis>Continued

Document Title
<i>Avaya Modular Messaging Web Subscriber Options Server Installation</i>
<i>Dialogic port board guides (to access, use the Quick Install Cards Search Tool on the Intel Telecom Boards Web site)</i>
<i>AudioCodes gateway configuration notes. For configuration notes, see http://www.audiocodes.com/avaya.</i>
<i>Installing and configuring Avaya WebLM server</i>
<i>Getting Started with Avaya PLDS</i>
<i>Secure Access Link 1.5 Gateway Implementation Guide</i>

Security considerations

The following security-related considerations apply to all Modular Messaging installations.

On-site security considerations

On-site installers must take precautions to protect passwords and restrict access to the system.

Password security protection

To protect password security:

- Do not leave written passwords lying out or allow anyone to see the passwords.
- At the first opportunity, give the passwords directly to the designated customer representative.
- If you suspect that the security of the system was compromised, notify the project manager or the system administrator.

System security protection during installation

To protect system security during the installation:

- Remove all test subscribers and test mailboxes from the system when the procedures instruct you.
- Do not configure any unassigned mailboxes. Unassigned mailboxes are mailboxes that have an extension, but no subscriber assignment.
- Always log off or lock the server if you leave it unattended, even for a short period.

Ongoing system security considerations

Customers must obtain and install the anti-virus software on any Microsoft Windows computer that is to run Avaya Modular Messaging software. Customers must also routinely install updates for Microsoft Windows systems to protect the system from known security weaknesses. Updates include operating system updates and security patches. For more information, obtain **Modular Messaging and security**; see [Downloading user documentation](#) on page 13.

Note:

Avaya technical support representatives must follow the specified internal procedures to verify the installed software. If required, the technician must update the software with the latest patches as instructed.

Test equipment recommendations

Recommended test equipment for a successful installation includes:

- At least two telephones connected through the switch or private branch exchange (PBX). The telephones must be of the same type as the majority of telephones the customer plans to use on the system.
 - Preferably the test telephones have a data display for testing the PBX integration and the Find Me and Call Me features.
 - If the system uses the lamp as the message waiting indicator (MWI), the test telephone must have a lamp. If the system uses a stutter tone as MWI, the telephone must provide the stutter notification.
 - Arrange the test telephones so that you can easily see the monitor while using the telephones.
- Access to a fax machine, if you plan to install MM Fax functionality.

Initial switch and LAN administration

This section describes the initial switch or Private Branch Exchange (PBX) and local area network (LAN) administration required for the installation. Customers must complete this administration before or during a new Avaya Modular Messaging installation.

 **CAUTION:**

It is crucial to coordinate the IP addresses that are to be used with the Avaya Modular Messaging system with those on the corporate LAN. If you specify an IP address for a message server that conflicts with another Ethernet endpoint, the resulting traffic problems on the local area network can be difficult to diagnose and solve.

Initial switch or PBX administration

 **Important:**

New installations of Modular Messaging support SIP based switch integration *only*.

Initial switch or PBX administration might or might not be complete when you arrive on site, depending on the contract or customer agreements. When you install a new server, the switch administration must support:

- Testing the system with at least one test subscriber.
- Cut to service procedures that provide the subscribers with an active coverage path.
- For configurations that use analog and DSE port boards, the ability for testers to call each channel individually. The appropriate party must test each channel to be connected to the system before assigning the channels to the server or another application.

Verify that initial switch administration and testing is complete before you start.

Initial LAN administration

The LAN administrator must administer the corporate LAN for the messaging system. Some LANs might be administered before the on-site installation starts. Other LANs require that the administration for a new server be done at the time of installation.

Note:

Avaya is not responsible for the installation, administration, or test of communications between customer computers and the LAN.

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Private Windows domain consideration with MM Fax Sender service

When you configure the MM Fax Sender server, an account with the credentials to create a trust relationship between the private and corporate Windows domains must be available or a person from customer's corporate IT group who has details for an account with the credentials is available. If the IT representative cannot provide the account information during installation, skip the MM Fax Sender configuration and complete the rest of the Modular Messaging installation. Return to [Configuring the MM Fax Sender server](#) on page 70 and complete the configuration of the one-way trust when the account information is available.

Corporate Windows domain requirements

Note:

If the Modular Messaging system uses the private Windows domain, you can skip these requirements.

Before installing a system that uses a corporate Windows domain, the administrator of the corporate Windows domain must create the user and computer accounts in the corporate Windows domain:

- [Creating user accounts in the corporate Windows domain](#) on page 19.
- [Creating computer accounts in the corporate Windows domain](#) on page 20.
- [Adding RAS and IAS permissions to the technical support account](#) on page 21

Creating user accounts in the corporate Windows domain

Important:

Perform this procedure *only* if you plan to join the Modular Messaging system to the corporate Windows domain.

The administrator of the corporate Windows domain creates the technical support account, which is the user account name used for remote access, and the customer administration account in the corporate Windows domain:

1. The corporate Windows domain administrator logs into the Active Directory server using a logon that has privileges to add a user account to the corporate Windows domain.
2. Click **Start > Programs > Administrative Tools > Active Directory Users and Computers**. The system opens the **Active Directory Users and Computers** window.
3. Expand the directory for the corporate Windows domain.
4. Right-click **Users** and from the pop-up menu, select **New > User**.
5. In the **New Object** window, type the user account name, such as *techacct* or *custacct*, in both the Full Name and the User logon name fields.
6. Click **Next**.
7. Type the user account password in both the **Password** and **Confirm Password** fields.
8. Select the **Password never expires** check box.

Note:

If you need to change the password for a Modular Messaging customer account, contact technical support for the procedure to change the password.

9. Click **Next**.
10. Click **Finish**.
11. Repeat this process as needed to make sure you create both technical support and the customer administration support accounts.

Creating computer accounts in the corporate Windows domain

 **Important:**

Perform this procedure *only* if you plan to join the Modular Messaging system to the corporate Windows domain.

The corporate Windows domain administrator creates computer accounts in the corporate Windows domain for all servers in the VMD. This includes the MSS, all MASs, and, if present, the Supplementary server and optional servers, such as the Modular Messaging Web Client:

1. The corporate Windows domain administrator logs into the Active Directory server using a log in that has privileges to add a computer account to the corporate Windows domain.
2. Click **Start > Programs > Administrative Tools > Active Directory Users and Computers**. The system opens **Active Directory Users and Computers** dialog box.
3. Expand the directory for the corporate Windows domain.
4. Right-click **Computers** and from the pop-up menu, select **New > Computer**.
5. In the **New Object** window, in the Computer name field, type the server name you want to create, such as *mymss* or *mymas1*.
6. Click **Change**. This specifies that a different user or group can add this computer to the corporate Windows domain.
7. In the **Select User or Group** window, enter the customer administration account, such as *custacct*, that you created previously; see [Creating user accounts in the corporate Windows domain](#) on page 19.
8. Click **Check Names**.
9. Click **OK**.
10. Click **Next**.
11. Make sure that **This is a managed computer** check box is NOT selected.
12. Click **Next**.
13. Click **Finish**.
14. Repeat this process for each MAS and Supplementary server (if present) in the VMD.

Adding RAS and IAS permissions to the technical support account

If you are performing new installations, **do not** perform this procedure.

You must add RAS and IAS permissions to the technical support account:

1. The corporate Windows domain administrator logs into the Active Directory server using a logon that has privileges to add a user account to the corporate Windows domain.
2. Click **Start > Programs > Administrative Tools > Active Directory Users and Computers**. The system opens the **Active Directory Users and Computers** window.
3. Expand the directory for the corporate Windows domain.
4. Click **Users**.
5. In the right pane of the window, double-click **RAS and IAS Servers** to open the Properties window.
6. In the **RAS and IAS Servers Properties** window, click the **Members** tab.
7. Click **Add**. The system opens the **Add** window.
8. Make sure that **Select These Object Types** includes **Computers** in the list. If not, click **Object Types** and select the **Computers** check box, then click **OK**.
9. In the Object Name field, type the server name, such as *MYMAS1*, and click **Check Names**.
10. Verify that the correct computer name is shown underlined in the list box.
11. Repeat the last two steps to add all Modular Messaging servers to this list.
12. Click **OK** to close this window.
13. Click **OK** to close the RAS and IAS Servers Properties window.
14. In the right pane, double-click the technical support account.
15. In the Properties window for the remote access account, click the **Dial-in** tab.
16. Under Remote Access Permission (Dial-in or VPN), select **Allow access**.
17. Leave Callback Options set at **No Callback**.
18. Click **OK** on each open window until they are closed.

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Preinstallation requirements

Chapter 2: Performing initial MSS administration

This chapter describes how to perform initial administration on the Message Storage Server (MSS).

Note:

Ensure that you have completed the tasks described in *Installing the Avaya S8800 1U Server for Modular Messaging* guide or *Installing the HP DL360 G7 Server* guide.

Installing a Modular Messaging system involves many steps, therefore, use the system installation checklist in [Appendix A: Installation, upgrade and migration checklists](#) on page 301. Check off the step as you complete it, to track your progress.

Topics in this chapter include:

- [Logging on to the MSS](#) on page 24
- [Starting the MSS configuration using a DCT data file](#) on page 26
- [Configuring the MSS manually](#) on page 28
- [Setting the time and date](#) on page 31. You can configure the MSS automatically or manually, however, you *must* set the time and date manually.

Logging on to the MSS

After you turn on the hardware, log on to the Message Storage Server (MSS). As you have not yet administered the system, you can access the MSS only from the console that is connected to the KVM switch.

To log on to the MSS from the console:

1. If the Message Storage Server (MSS) is not turned on, press the power button to turn on the server now.
2. Verify that the monitor shows the MSS.
 - For a 2-port KVM switch, the MSS is connected to one of the computer ports.
 - For an 8-port Belkin KVM switch, the MSS usually is connected to the first computer port on the switch. The port is labeled **VGA 01**.
3. If the monitor displays a different server, toggle the port to show the MSS.
 - To have a 2-port Belkin KVM switch show a different server:
 - a. Press **Scroll Lock** twice.
The LED on top of the Belkin KVM switch starts to blink.
 - b. Type the port number. For example, type **1** for port 1.
 - To have an 8-port Belkin KVM switch show a different server:
 - a. Press **Scroll Lock** twice within 2 seconds.
 - b. Select the server that you want to be displayed on the monitor using *one* of the following methods:
 - Press the up (or down) arrow key to change to the server connected to a higher (or lower) port number.
 - Type the port number using the keyboard. For example, type **1** for port 1.

For complete user and troubleshooting instructions on KVM switch, see the KVM switch documentation.
4. When the boot is complete, you see the message **Press Enter to return to prompt...**
Press **Enter**.
5. At the **localhost login:** prompt, log on to the MSS as **craft**.
The server displays the Messaging Administration web interface.

Adjusting the display settings, if needed

Check the display quality of the monitor screen.

- If the display is poor, correct the display quality using the steps in this section.
- If the monitor displays system information well enough for an initial administration, continue with [Setting the time and date](#) on page 31.

To adjust the monitor display settings:

1. Click **Log Off**.

If the display is so poor that you cannot see the mouse pointer, exit by press **Ctrl+Alt+Backspace** to exit.

2. Log on to the console as **monitor**. Use the password of **monitor**.
3. In the Display Settings window:
 - a. Click **Settings** to adjust the resolution of the screen or the depth of the color.
 - b. Click **Hardware** to change the type of the monitor or the video board.
 1. To change the type of the monitor or the video board, click **Configure**.
 2. Select the required hardware type, and click **OK**.
4. Click **OK** to close the Display Settings window.
5. If the system prompts you to confirm, click **OK**.
6. At the localhost login prompt, log on to the system as **craft**. Check if the display quality has improved.
7. If the display quality is still poor, return to Step 2 and change the settings.
8. If the changed settings do not improve the display, the customer must use a different monitor.

Starting the MSS configuration using a DCT data file

This section explains how to start the automatic configuration of the MSS using a DCT data file. *Do not use* a DCT data file prepared from a system analysis or from an earlier release of the system. For more information, see [Obtaining the DCT data file](#) on page 11.

The MSS configuration happens in two phases. This procedure explains the first phase. You must then configure each MAS and Supplementary server, as outlined in [Configuring the Avaya MAS](#) on page 41 for Avaya MAS or [Configuring a customer-provided MAS](#) on page 87 for a CPE MAS and proceed with the second phase of the MSS configuration as outlined in [Completing initial MSS administration](#) on page 105.

Use the following steps to configure the MSS using a DCT data file:

1. Log on to the MSS as **craft**. See [Logging on to the MSS](#) on page 24.
2. Insert the storage device that contains the DCT data file into the MSS.
3. If you want to change the time, manually set the time and date of your system, even if you plan to use an NTP server. See [Setting the time and date](#) on page 31. You cannot set up the NTP server now.
4. From the Server Administration menu on the Messaging Administration web interface, click **Configure Using DCT**. The system opens Configure MSS using DCT page.

Note:

Not applicable for new installations: If the DCT file is configured for INADS alarming, ensure that the modem is connected or the configuration fails.

5. Select the DCT data file from the storage device and click **Fresh Configuration**.
6. On the page that displays the configuration information from the DCT data file, click ONE of the following:
 - If the configuration information is correct, click **Continue Configuration** to continue with the next step.
 - If the configuration information is incorrect, you must change the information in DCT file using the following steps:
 - a. Click **Cancel Configuration**
 - b. Return to the Windows computer and change the information
 - c. Save the data file on the storage device. For information about changing the DCT data file, see *Avaya Modular Messaging Data Collection Tool Online Help*.
 - d. If you are able to correct the DCT data file, repeat tasks from step 1, using the updated DCT data file. However, if you cannot make the corrections, contact technical support.
7. On the pop-up screen that appears, click **OK** to continue with the configuration.

The page displays the status of the configuration, automatically refreshing the information until this part of the configuration is complete.

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8. If this part of the MSS configuration is successful, the page displays '**Finish MAS installation before continuing MSS configuration.**' message at the bottom of the page. Do *one* of the following:
- If you are installing a Supplementary server with this Modular Messaging system, modify the Supplementary server trusted server entry that was created by the MSS automatic configuration tool:
 - a. Under the **Messaging Administration** of the Messaging Administration Web interface, click **Trusted Servers**. The system displays **Manage Trusted Servers** page.
 - b. Highlight the Trusted Server with a service name of **Supplementary Server**. Click **Edit the Selected Trusted Server**.
The server displays the **Edit Trusted Server** page.
 - c. In the **Special Type** field, click **Messaging Application Server** from the drop-down list.
 - d. Click **Save**.
 - Start MAS configuration using the procedures outlined in [Configuring the Avaya MAS](#) on page 41 for an Avaya-provided MAS or [Configuring a customer-provided MAS](#) for a customer-provided MAS. You may now set up an NTP server, if one is available as instructed in [Setting the time and date](#) on page 31.

Note:

- Do not click **Continue Configuration** at this time. You must proceed with phase two of the MSS installation as described in [Completing initial MSS administration](#) on page 105 *only* after you complete MAS configuration.
- If you see **FAILURE** on the status display, contact Avaya technical support. When you make the corrections, return to Step 4, except that the button on the **Configure MSS using DCT** page now displays **Continue Configuration**.

Configuring the MSS manually

You do not need to configure the MSS manually. You can use the DCT data file to configure the MSS. Use the following procedures if you choose not to use the DCT data file or if you choose to change any configuration while the installation is underway.

Use the following procedures to configure the MSS manually:

- [Setting up network addressing](#) on page 28
- [Setting the time and date](#) on page 31
- [Setting up the MSS local machine](#) on page 32
- [Setting up the trusted servers](#) on page 33
- [Rebooting the MSS](#) on page 39

Setting up network addressing

You must configure the MSS to work on both the corporate LAN and the private LAN.

 **CAUTION:**

Do *not* use the examples shown in this book!

To set up the MSS to work on the corporate and private LANs:

1. Log on to the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
2. From the **Server Administration** menu on the Messaging Administration web interface, click **TCP/IP Network Configuration**.
3. Complete the following information on the Configure Network Addressing page (for more information about each field, click **Help** or the field name):
 - a. For **Host Name**, enter the MSS NetBIOS machine name, such as *mymss*.

Note:

Do not use the underscore character (`_`) in a MSS Host Name. The Aria TUI voice mail searches fail if you use the underscore (`_`) character. The IMAP RFC does not allow the underscore character (`_`) in host names.

- b. For **Default Gateway Address**, enter the corporate default gateway IP address for the MSS.
4. To administer Corporate LAN settings (you will verify Private LAN settings later in this section):
 - a. For **Primary Name + Domain**, enter the full corporate computer name for the MSS, such as *mymss.loc.avaya.com*.

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Note:

The **Primary Name + Domain** name is a combination of the **Host Name** and the **Domain Name** fields on this page. However, the **Primary Name** might be different from the host name, depending on the corporate setup. For example, *primname.loc.avaya.com*.

- b. For **IP Address**, enter the corporate IP address for the MSS.
- c. If the system prompts you that changing the IP address will cause a momentary loss of service, click **OK**.

 **Important:**

Remember when you verify the corporate subnet mask, the private IP address and the corporate IP address *must* not use the same subnet. If same subnet is in use, change the private subnet mask; see step c on page 29. For example in the following table, ensure that the IP address part (in bold) of both the corporate and private network are different.

Table 3: Example for valid private and corporate IP addresses

Example	Corporate IP address	Corporate subnet mask	Private IP address	Private subnet mask
Valid	135.9.83.107	255.255.255.0	192.168.1.1	255.255.255.0
Invalid	192.168.1 .100	255.255.255.0	192.168.1 .1	255.255.255.0

- d. For **Subnet Mask**, type the corporate subnet mask for the MSS.
 - e. *Optional:* For **Aliases**, type any required aliases for this interface. All aliases must be unique and cannot duplicate any other computer names or aliases, either on the Modular Messaging system or on the corporate network. To enter multiple aliases, separate the names with a space.

If you leave the field blank, the system automatically provides an alias for the corporate full computer name of the MSS. The alias is the corporate NetBIOS name for the MSS, which is the primary name for the MSS full computer name up to the first period. For example, the system provides the alias *mymss* for the full computer name *mymss.loc.avaya.com*.
 - f. For **Network Media Type**, use the default **auto detect** option unless you have a problem connecting to the network switch. Some routers do not automatically detect the correct settings. For more information about media types, click **Help**.
5. Verify the Private LAN settings and update only if necessary:
- a. For **Primary Name + Domain**, the system displays the predefined private system name for the MSS, **mss1**.

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- b. For **IP Address**, use the correct MSS private IP address from the range of IP addresses that the private network uses at this site.

 **CAUTION:**

You must use the same private IP address range for the MSS that you use for each MAS. Ensure that the private network settings in the Modular Messaging Data Collection Tool (DCT) match the settings on this page. For more information, see [Configuring MASs using an existing DCT data file](#) on page 45.

The private IP address of the MSS *must* use the subnet that you have chosen for the private LAN. If the system prompts you that changing the IP address will cause a momentary loss of service, click **OK**.

 **Important:**

Remember when you verify the private subnet mask, the private IP address, and the corporate IP addresses must not use the same subnet. If the same subnet is in use, change the private subnet mask. See [Example for valid private and corporate IP addresses](#) on page 29.

- c. For **Subnet Mask**, verify the private subnet mask for the MSS.
 - d. Leave **Aliases** for the private network blank.
 - e. For **Network Media Type**, verify if you have selected the correct type. The type is usually *auto detect*. For more information about media types, click **Help**.
6. Administer the DNS (Domain Name Service) server as appropriate:
- If you do *not* use a corporate DNS, set the **Enable DNS** field to **No**. Continue with Step 7.
 - To use a corporate DNS, set **Enable DNS** to **Yes**. Continue with the following steps:
 - a. For **Domain Name**, type the corporate domain name.
 - b. For **Name Server**, add any IP addresses listed for corporate DNS servers that the MSS uses. Press **Enter** after each IP address.

Note:

The MSS accepts only IP addresses in this field, even if the system uses Dynamic Host Configuration Protocol (DHCP) to assign most IP addresses.

- c. You must specify a **Search Order** only if the system must search across multiple domains. If a **Search Order** is required:
 1. Always enter the name of the corporate domain shown in the **Domain Name** field *first*. Press **Enter**.
 2. Add any other domain names listed for the MSS Search order of DNS domains. Press **Enter** after each domain name.
7. Click **Save**.
8. Close any Help windows that are open in the background, or they prevent the browser from closing. To close a Help window, click **Close** at the bottom of the Help page.

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9. When the system displays the Network Addressing status, click **Log Off** that appears in the menu at the top left of the page.

If you do not log off, the system times out and logs off automatically. The system displays the prompt:

hostname login:

Note:

Avaya recommends that you wait for at least 1 minute before you log into the system again.

10. Verify that *hostname* in the login prompt is the same as that you entered in Step 3-a under [Setting up network addressing](#) on page 28. If the hostname is not the same:
- Log on and return to the Network Addressing page using the **craft** account. See Steps 2 and 3 under [Setting up network addressing](#) on page 28.
 - Type the host name correctly. Verify all your network configuration settings.
 - Click **Save**.
 - Log off from the MSS.

Setting the time and date

 **Important:**

Set the time and date the first time you log on to a new MSS and BEFORE you configure any MAS.

This topic explains how to set the time and date on the MSS:

- Log on to the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
- From the Server Administration menu, click **Date/Time/NTP Server**.
The server displays the **Administer Linux Date and Time** page.
- If the time zone is incorrect, from the **Time Zone** drop-down menu select the correct time zone (changing Time Zone requires a reboot).
- Do *one* of the following to manually set the time or connect to an NTP server:
 - For manual entry, click **Manual**:
 - For **Date**, select the month and day. Type the current year, for example *2008*.
 - For **AM/PM**, select the type of time you use: AM, PM, or 24-hour clock.
 - For **Time**, select the hours and minutes.
 - To connect to an NTP server, click **NTP Time Server**:
 - Enter the name of the NTP server or the IP address.

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- b. Click **Add NTP Server**.

The server will automatically update and maintain your system's time and date.

5. If you made any changes to the page, click **Save**.
6. If you see a security warning about unencrypted information, click **Continue**.
7. If the system prompts you to run the *time.bat* file to synchronize the time with all MASs, click **OK**.

The **Date and Time** page displays the new settings.

8. Click **Log Off**.
9. If the system again prompts you to run the time.bat file on all MASs, click **OK**.
10. Log on to the MSS as **craft** once again, see [Logging on to the MSS](#) on page 24.
11. If you are manually configuring the MSS, continue with [Setting up the MSS local machine](#) on page 32.

Setting up the MSS local machine

To set up a profile for the local machine for MSS:

1. If not already logged in, log on to the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
2. From the Messaging Administration menu on the Messaging Administration web interface, click **Networked Machines**. The system opens Manage Networked Machines page.
3. Highlight the MSS that you are administering.
4. Click **Edit the Selected Networked Machine**.
5. On the **Edit Networked Machine** page, complete *only* the following fields:
 - a. For **Machine Name**, verify the customer-specified MSS host name. If no corporate LAN is available, the Machine Name remains as LocalHost (with an IP of 127.0.0.1).

Note:

Do not use the underscore character (`_`) in a MSS Host Name. The Aria TUI voice mail searches fail if you use the underscore (`_`) character. The IMAP RFC does not allow the underscore character (`_`) in host names.

- b. For **Mailbox Number Length**, select a number from the list.
- c. For **Password**, type the password to use for LDAP directory updates. This password enables networking with other messaging servers, such as other MSS or Message Networking servers. Type the same password in the **Confirm Password** field.
- d. Under **Mailbox Number Ranges**, you might require the **Prefix** field.

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- e. In the field **Starting Mailbox Number** field, type the appropriate starting mailbox extension number for the address range. For example, for a five-digit dial plan, you might type *55000*.
- f. In the **Ending Mailbox Number** field, type the appropriate ending mailbox extension number for the address range. For example, for a five-digit dial plan, you might type *55999*. To enter multiple address ranges, repeat Steps e and f.

Note:

If you are enabling MultiSite feature, you do not have to set the start and end mailbox number. Ignore step 5e and step 5f.

6. Scroll down, and click **Save**.
7. At the confirmation message, click **OK**.

Setting up the trusted servers

You must add a trusted server for each MAS and Supplementary server, if present, that is to run Avaya Messaging Application Server (MAS) software. You must also set up all other required servers that are in this voice mail domain.

Note:

You can have a maximum of six MASs that includes a Supplementary server (if present) in the system. However, only five of the MASs can handle calls. The sixth MAS can be an Avaya-provided or customer-provided *Supplementary server*. The Supplementary server can provide all other services except handling calls. This section describes how to set up an MAS or Supplementary server as a trusted server.

See the following tasks for setting up trusted servers:

- [Adding each MAS as a trusted server](#) on page 33
- [Adding the MWI trusted server, if used](#) on page 35
- [Adding optional trusted servers](#) on page 36
- [Updating the IMAP4 password and the system protocols](#) on page 37

Adding each MAS as a trusted server

To set up each MAS or Supplementary server in the system as a trusted server:

1. Log on to the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
2. On the Messaging Administration web interface, under **Messaging Administration**, click **Trusted Servers**.

The system opens the **Manage Trusted Servers** page.

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3. Click **Add a New Trusted Server**.

The system opens the **Add Trusted Server** page.

4. Complete the following fields:

- a. In the **Trusted Server Name** field, type the customer-specified NetBIOS name for this MAS, such as *mymas1*.
- b. In the **Password** field, type the LDAP password used for all MASs in this Modular Messaging system. Type the password again in the **Confirm Password** field.
- c. In the **Machine Name / IP Address** field, enter the correct private IP address for this MAS. To find the correct private IP address for this MAS, see [Table 4: Private IP addresses for each MAS by IP address range](#) on page 34. Use the IP address that matches the MAS you are currently entering and the IP address range that is used for this site.

Note:

You must enter *only* the private IP address in the **Machine Name / IP Address** field. You must not enter the Fully Qualified Domain Name in this field.



CAUTION:

You must use the same private IP address range on the MSS that you use on each MAS. Ensure that the private network settings in the Modular Messaging Data Collection Tool match the settings on this page. For more information, see [Configuring MASs using an existing DCT data file](#) on page 45.

Table 4: Private IP addresses for each MAS by IP address range

Private network IP address range	MAS#1 IP address	MAS#2 IP address	MAS#3 IP address	MAS#4 IP address	MAS#5 IP address	MAS#6 IP address
10.0.0.1 to 10.255.255.254	10.255.1.250	10.255.1.249	10.255.1.248	10.255.1.247	10.255.1.246	10.255.1.245
172.16.0.1 to 172.31.255.254	172.31.1.250	172.31.1.249	172.31.1.248	172.31.1.247	172.31.1.246	172.31.1.245
192.168.0.1 to 192.168.255.254	192.168.1.250	192.168.1.249	192.168.1.248	192.168.1.247	192.168.1.246	192.168.1.245

- d. In the **Special Type** field, click **Messaging Application Server**, when you add a trusted server for an MAS or a Supplementary server.

The **Special Type** selection populates the other fields with the required values.

5. After you verify or update the information, click **Save**.
6. At the confirmation message, click **OK**.
7. To add a subsequent MAS or a Supplementary server, if any, repeat steps 3 through 6 for each MAS in the system.

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Adding the MWI trusted server, if used

If the Message Waiting Indicator (MWI) Server is to be installed on any MAS, add a trusted server for it now.

To add a Message Waiting Indicator (MWI) trusted server:

1. On the Messaging Administration menu of the Messaging Administration web interface, click **Trusted Servers**. The system displays **Manage Trusted Servers** page.
2. Click **Add a New Trusted Server**.

The server displays the **Add Trusted Server** page.

3. Complete the following fields on the **Add Trusted Server** page:
 - a. For **Password** and **Confirm Password**, type a password that identifies the MWI server to all messaging servers in this Modular Messaging system.
 - b. For **Machine Name / IP Address**, type the private IP address of the MAS or Supplementary server on which you want to install the MWI Server feature.

Note:

You must enter *only* the private IP address in the **Machine Name / IP Address** field. You must *not* enter the Fully Qualified Domain Name in this field.



CAUTION:

You must use the same private IP address range on the MSS that you use on the MAS. Ensure that the private network settings in the Data Collection Tool match with the settings on this page. For more information, see [Configuring MASs using an existing DCT data file](#) on page 45.

- c. For **Special Type**, select **MWI Server** from the drop-down list.

The **Special Type** selection populates the other fields with the required values. Do not change the value **VVSTS** in the **Server Name** field.
4. Click **Save**.
 5. At the confirmation message, click **OK**.
 6. Continue as appropriate:
 - If you have to install a Supplementary server at this site, continue with [Adding each MAS as a trusted server](#) on page 33.
 - If you have added all trusted servers for this site, continue with [Updating the IMAP4 password and the system protocols](#) on page 37.

Adding optional trusted servers

You use the **Add Trusted Server** page to add other trusted servers to the messaging network. Servers might include a Unimax 2nd Nature (R) server, a Provision server, or a Site Administration (ASA) server. Often, the customer administrator adds these servers after initial installation.

Note:

When you set up the MWI server, VVSTS or Supplementary server as trusted server, in the **Machine Name / IP Address** field, you must enter *only* the IP address. For all other trusted servers you can enter either the IP address or Fully Qualified Domain Name.

If directed, you can add one or more optional trusted servers as follows:

1. On the Messaging Administration menu of the Messaging Administration web interface, click **Trusted Servers**. The system displays **Manage Trusted Servers** page.
2. Click **Add a New Trusted Server**.

The server displays the **Add Trusted Server** page.

3. Complete the following fields on the **Add Trusted Server** page:
 - a. In **Trusted Server Name** field, type the customer-specified NetBIOS name for this server, such as *mymas6*.
 - b. In **Password** field, type the LDAP password to be used for all MASs in this Modular Messaging system. Type the password again in the **Confirm Password** field.
 - c. In **Machine Name / IP Address** field, continue as appropriate:
 - For a corporate setup that uses DHCP addressing, type the full corporate computer name using all lowercase letters. For example, type *provision.loc.avaya.com*.
 - For a corporate setup that uses static IP addresses, type the corporate IP address for this server.
 - For Supplementary server, type the private network IP address for this server. To enter the correct private IP address for this server, see [Table 4: Private IP addresses for each MAS by IP address range](#) on page 34.

Note:

You must enter *only* the private IP address in the **Machine Name / IP Address** field. You must *not* enter the Fully Qualified Domain Name in this field.

- d. Enter any other information required for this type of server and connection.
- e. In the **Special Type** field, click **Messaging Application Server** to add a trusted server for an MAS or for a Supplementary server.

The **Special Type** selection populates the other fields with the required values.

Note:

For more information, use the help or obtain "Administering trusted servers on the MSS;" see [Downloading user documentation](#) on page 13.

4. Click **Save**. At the confirmation message, click **OK**.

Updating the IMAP4 password and the system protocols

On all systems, you must update the password for the IMAP trusted server as follows:

1. From the Messaging Administration web interface, click **System Administration**.
The server displays the Administer System Attributes and Ports page.
2. Under **SYSTEM ATTRIBUTES**, enter the password for Internet Message Access Protocol (IMAP) in this messaging network:
 - a. Type the **IMAP4 TUI Password**.
 - b. Type the same password in the **Confirm IMAP4 TUI Password** field.
3. Scroll down to the **SYSTEM TCP/IP PORTS** section. Enable any required protocols and access permissions for desktop clients, web applications, or other required services at this site. For a list of protocols required for various applications, see [Table 5: TCP ports to enable for Modular Messaging client applications](#).

For example, to enable Microsoft Outlook client access:

- a. Next to **LDAP Port 389**, select **Enabled**.
- b. Next to **IMAP4 Port 143** and **SMTP Port 25**, select **Enabled**.

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Table 5: TCP ports to enable for Modular Messaging client applications

Client	LDAP Port 389	LDAP Dir Update Port 56389	IMAP4 Port 143	IMAP4 SSL Port 993	POP3 Port 110	POP3 SSL Port 995	SMTP Port 25	SMTP SSL Port 465
IBM Lotus Notes client	X		X				X	
Microsoft Outlook client	X		X				X	
Modular Messaging Web client	X		X				X	
Standard IMAP client	Optional		X				X	
Standard IMAP client with SSL	Optional			X			X	Optional
Standard POP3 client	Optional				X		X	
Standard POP3 client with SSL	Optional					X	X	Optional
UCC server for Speech Access	X		X				X	
Networked Modular Messaging or Message Networking		X					X	
Avaya Multi-site or Site Administration	X							
Unimax 2nd Nature(R)	X							
Provision	X							

Note:

To provide desktop client access, you must also set the options for MAS Privacy as appropriate and **Restrict Client Access** for the appropriate class of service. For more information, see [Administering classes of service](#) on page 114.

4. Click **Save**.

Rebooting the MSS

To reboot the MSS, complete the following:

1. From the Utilities menu, click **Reboot Server**.

The server displays the Reboot Server page.

2. Click **Reboot**.

3. At the reboot warning message, click **OK** to continue.

The system displays status messages as the server shuts down the messaging software. The software shutdown can take several minutes.

Note:

You do *not* have to wait for the reboot process to complete to continue with the installation.

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Chapter 3: Configuring the Avaya MAS

This chapter applies only to an Avaya-provided Messaging Application Server (Avaya MAS) and Supplementary server installation. This chapter describes how to configure an Avaya Messaging Application Server (MAS) and a Supplementary server, if any. You must configure each Avaya Messaging Application Server (MAS) and Supplementary server in the VMD beginning with the first MAS. The servers must be connected to both the corporate local area network (LAN) and on the private LAN used for the Modular Messaging system.

 **Important:**

New installations of Modular Messaging support:

- SAL alarming and remote access *only*.
- SIP based switch integration *only*.

If you are using customer-provided MAS, use the procedures described in [Configuring a customer-provided MAS](#) on page 87 to configure the CPE MAS.

Topics in this chapter include:

- [Displaying an MAS from the console](#) on page 42
- [Completing MAS configuration prerequisites](#) on page 44
- [Configuring MASs using an existing DCT data file](#) on page 45
- [Preparing the new server](#) on page 48
- [Configuring MAS port boards](#) on page 53
- [Configuring the voice mail system](#) on page 54
- [Continuing the installation](#) on page 85

Displaying an MAS from the console

Since you have not logged on as an administrator to the system, you cannot access the server from the console (monitor) that is connected to another server through the KVM switch.

1. Turn on the HP DL360 G7 server.
 - a. Connect one end of the power cord into the back of the power supply and the other end into a UPS or nonswitched outlet.
 - b. When the power-on LED begins to blink slowly, press the power button on the front of the server.

For more information, see *Installing the HP DL360 G7 Server* guide.

2. Turn on the S8800 1U-family server:
 - a. Connect one end of the power cord into the back of the power supply and the other end into a UPS or nonswitched outlet.
 - b. When the power-on LED begins to blink slowly, press the power button on the front of the server.

For more information, see *Installing the Avaya S8800 1U Server for Modular Messaging* guide.

3. Verify that the monitor is showing the correct server:
 - For a 2-port Belkin KVM switch, you must connect the MAS to one of the two computer ports.
 - For an 8-port Belkin KVM switch, the first MAS port is labeled **VGA 02**. You must connect the subsequent MASs to the computer ports **VGA 03**, **VGA 04**, and so on.
4. If the monitor displays a different server, toggle the ports to show the correct server:
 - To have a 2-port Belkin KVM switch show a different server:
 - a. Gently press **Scroll Lock** twice.

The LED on top of the Belkin KVM switch starts to blink.
 - b. Type the port number on the keyboard. For example, type **2** for port 2.
 - To have an 8-port Belkin KVM switch show a different server:
 - a. Gently press **Scroll Lock** twice within 2 seconds.
 - b. Select the server to display using one of the following methods:
 - Press the up (or down) arrow key to change to the server connected to a higher (or lower) port number.
 - Type the port number on the keyboard. For example, type **2** for port 2.
 - You might see **System Event Log Full** message when the system boots. You can ignore this error message. Modular Messaging does not use this log.

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For complete user and troubleshooting instructions, see the KVM switch documentation.

Completing MAS configuration prerequisites

Ensure that you complete these requirements before you begin the MAS configuration:

- Obtain the required software and documentation; see [Downloading required software and documentation](#) on page 11.
- Obtain the latest DCT executable file (**MMDCT.exe**) from the Avaya support Web site (do NOT use the DCT on the applications DVD); see [Downloading software updates](#) on page 12.
- **For systems that join the corporate Windows domain**, create the user and the computer accounts in the corporate Windows domain; see [Creating user accounts in the corporate Windows domain](#) on page 19 and [Creating computer accounts in the corporate Windows domain](#) on page 20.
- Install the required system hardware; see *Installing the HP DL360 G7 Server* guide.
- Install the required system hardware; see *Installing the Avaya S8800 1U Server for Modular Messaging* guide.
- Complete the initial MSS administration; see [Chapter 2: Performing initial MSS administration](#) on page 23.
- Install the WebLM server, if you choose to install the WebLM on a standalone server. Use the instructions provided in *Installing and configuring Avaya WebLM server* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.
- Obtain the new license file to apply on the WebLM server. For instructions, see [Obtaining the license file](#) on page 63.
- Continue to use the "New Modular Messaging installation" checklist in [Appendix A: Installation, upgrade and migration checklists](#) on page 301.

Configuring MASs using an existing DCT data file

Use the Avaya Modular Messaging Configuration wizard to access the DCT data file to configure most of the MAS information automatically.

 **CAUTION:**

Configure each Avaya Messaging Application Server (MAS) beginning with MAS#1. If you are configuring additional MASs or Supplementary server, use the same data file that you used for MAS#1. *Do not* create a new DCT data file for each MAS or Supplementary server.

1. Verify that you completed the prerequisites before you configure MAS. For more information, see [Completing MAS configuration prerequisites](#) on page 44.
2. Ensure that the MSS is running.
3. Boot the MAS you want to configure and display it using the console; see [Displaying an MAS from the console](#) on page 42.
When an MAS server boots at this stage of an installation, the Avaya Modular Messaging Configuration wizard runs automatically.
4. Insert the storage device that contains the DCT data file into the server.
5. On the Welcome screen of the **Avaya Modular Messaging Configuration** wizard, click **Next**.
6. On the **Locate Configuration Data** screen, select the appropriate DCT data file for the site. If the required DCT data file is not populated, click **Browse** and complete the following:
 - a. In the **Open** window, click the drop-down list next to **Look in**.
 - b. Select the storage device.
 - c. Navigate to the appropriate folder on the storage device and double-click the appropriate data file, such as *sitefile.mmdct*.

7. Click **Next**.

8. When the system prompts you to confirm the data file, click **Yes**.

The wizard opens the Avaya Modular Messaging Data Collection Tool. The DCT executable file (*MMDCT.exe*) launches with the DCT data file that you selected. Review and make any necessary changes to the file.

9. On each DCT window you must:

- a. Verify the data on each screen and click **Next**.

Note:

For more information about completing or verifying the data on each screen, see the DCT online help.

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Configuring the Avaya MAS

- b. Under **MM servers**, select **Message store**. The system displays the **Message store screen**.
- c. For an Avaya-provided server, select **MSS with Avaya MAS servers**.
- d. Click **Complete** to continue the configuration process.

The system prompts you to save the file.

- e. You *must* **Save the file** even if no changes were made.

The system returns you to the Avaya Modular Messaging Configuration Wizard.

Note:

Do not click **Cancel**, as this may result in a need for a re-install of the system.

10. On the Messaging Application Server Number screen, verify that the **MAS number** field shows the correct number for this server.

- You *must* configure MAS#1 first.
- Configure each server in order, including the Supplementary server, if present.
- If required, change the **MAS number** field to show the correct number for this server.

11. Click **Next**.

The Configuring System screen shows the progress information of the MAS configuration. The Sysprep window opens. The server then reboots. After the reboot, the system runs the Windows Setup wizard.

12. Do the following to complete the wizard:

- a. On the **License Agreement** screen, select **I accept this agreement**. Click **Next**.

- b. On the **Your Product Key** screen, type the Windows product key for this server.

- Each Windows computer has a unique product key for the Windows 2003 R2 operating system. Enter the exact number.
- On an Avaya S8800 1U server or HP DL360 G7 server, the product key sticker is located on top of the server chassis.

- c. Click **Next**.

The Avaya Modular Messaging Configuration Wizard displays the configuration status on the Configuring System screen. The server reboots several times. However, you do not need to log on manually. The entire process takes about 30 minutes.

Note:

If the system displays a Configuration Credential LDAP failure, verify that the MSS is running. The MSS must be available during the MAS configuration process. If the MSS is running, do the following:

- Verify that LDAP password in the DCT data file match with that of MSS. See [Setting up the MSS local machine](#) on page 32.

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- Verify that you have properly connected the private network LAN cable.

When the server configuration is complete, the progress bar stretches across the screen and the **Next** button becomes active.

13. Click **Next**.
14. On the Avaya Modular Messaging Wizard Completed screen, click **Finish**.
15. Complete all tasks outlined in [Preparing the new server](#) on page 48 applicable for the server before you run the Avaya Modular Messaging Configuration Wizard on the subsequent MAS.

Preparing the new server

This section describes how to update and protect the new server. See the following:

- [Updating Windows Internet Explorer 7 security](#) on page 48
- [Installing and administering anti-virus software](#) on page 49
- [Updating Microsoft Windows](#) on page 50
- [Entering RAS IP addresses on each MAS](#) on page 51

Updating Windows Internet Explorer 7 security

Note:

Use this procedure if you have to install any third-party software from a network drive. If you install the third-party software from a disk or other removable media, such as a USB storage device, skip this procedure and continue with [Installing and administering anti-virus software](#) on page 49.

Before you install any third-party software, such as anti-virus software, you need to update Windows Internet Explorer 7 security. If you do not make this update and use a domain account, such as *custacct*, to install third-party software, you cannot install the software.

1. Launch the Windows Internet Explorer 7 browser.

The system displays a window that states Windows Internet Explorer Enhanced Security is enabled.

2. Click **OK**.
3. From the browser, select **Tools > Internet Options**.
4. From the Internet Options window, select the **Security** tab.
5. In the **Select a zone to view or change security settings** box, click **Local intranet**.
6. Click **Sites**.

The system displays the **Local intranet** window.

7. Click **Advanced**.
8. In the **Add this web site to the zone** field, enter one of the following:
 - *<drive letter>:*, if you are using a mapped drive
 - *\\<computername>\<share>*, if you are using a fully qualified domain name (FQDN) in the uniform naming convention (UNC) path
 - the IP address, if you are specifying IP address in the UNC path
9. Click **Add**.

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10. Click **OK** to close the Local intranet window.
11. Click **OK** to close the Internet Options window.

Installing and administering anti-virus software

Avaya strongly recommends that you install anti-virus software on any Microsoft Windows computer that runs Avaya Modular Messaging software. The anti-virus software used and the method of installation depends on customer requirements and the local implementation.

1. You might need to install the anti-virus software using the local administrator account. If you cannot install the required files using the customer account login, log off and then log in using the local administration account name.
2. Install the anti-virus software using the installation method that is appropriate for this site.
3. Configure the anti-virus software to work correctly with Avaya Modular Messaging software.

 **CAUTION:**

Some anti-virus software such as McAfee VirusScan Enterprise 8.0i blocks the port 25 by default. The Modular Messaging system uses TCP/IP port 25 to send messages from the MAS to the MSS. To enable port 25, open the anti-virus program. Change the access protection properties to unblock port 25.

Guidelines for using anti-virus software on an Avaya Modular Messaging server include:

- Avoid using a message-scanning method that can greatly impact the performance of the Avaya servers. Avaya recommends to use "on-demand" scanning, where scans run at scheduled intervals. Do *not* use "on access" scanning that runs when the system access a file. This reduces the performance of the server. Some anti-virus software applications, by default, sets to on-access scanning at system startup. To disable this feature, you must change the on-access scan properties.
- Avaya recommends you administer the anti-virus software as follows:
 - Scan the hard disk at least once in a week during off peak hours. Avaya recommends a daily scan. You can run scans on multiple Modular Messaging servers simultaneously. However, do not schedule the anti-virus scan when the system saves the backup data on the MAS. By default, the MAS backups start between 9:00 PM and 11:00 PM every night, depending on the number of MASs in the system.
 - Schedule virus definition updates to occur automatically at least once per week. Have the updates occur before the next scheduled scan time to ensure that the scan uses the latest data (DAT) files. However, do not schedule updates to occur *during* a virus scan. For example, you might implement a virus definition update at 8:45 PM, and schedule the anti-virus scan for midnight, after the MAS backup completes.
 - If the anti-virus software identifies a virus, the program takes a backup of the detected files before they are cleaned or deleted by the scanner. You can configure to

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automatically delete the infected files after a specified number of days and manage the files.

For more information about anti-virus software, obtain "Modular Messaging and security;" see [Downloading user documentation](#) on page 13.

Updating Microsoft Windows

A new Avaya MAS contains the most current Microsoft Windows software at the time it is shipped. After installation, you must install the latest updates for Microsoft Windows, including operating system updates and security patches. These software updates protect the system from known security weaknesses. Check with the appropriate Windows administrator for the software update procedures to use at this site.

Note:

Avaya technical support representatives must follow the specified internal procedures to verify the software that is installed. If required, the support representative must update the software with the latest patches as instructed.

Entering RAS IP addresses on each MAS

Important:

New installations support SAL alarming only.

The Avaya Modular Messaging Configuration Wizard automatically sets up inbound remote access to each MAS modem. You must edit the preprogrammed RAS IP addresses to use the addresses required by the technical support organization.

CAUTION:


If Avaya is to support this system, you must enter the RAS IP addresses that the Avaya Automatic Registration Tool (ART) provides. Otherwise, remote access for Avaya technical support will not work. For more information, see [Registering the system in ART](#) on page 134.

Complete the following steps for each MAS to set up the IP addresses on MAS to allow remote access:

1. Double-click **Configure** icon on the desktop.
2. In the left pane of the **Configure** window, expand **Routing and Remote Access**.
3. Expand the server name, such as *MYMAS1*.
4. Verify authentication:
 - a. Highlight **Remote Access Policies**.
 - b. On the right-pane, double-click **Connections to Microsoft routing and remote access**.
 - c. Click **Edit Profile...**
 - d. On the window that appears, select the **Authentication** tab.
 - e. Make sure that all check boxes (except for the **Unauthenticated access**) are selected. If necessary, clear the **Unauthenticated access** check box.
 - f. Click **OK**.
 - g. If a dialog box appears, click **No**.
 - h. Click **OK** again.
5. Right-click the server name, such as *MYMAS1* and from the pop-up menu, select **Properties**.
6. Set up authentication methods:
 - a. In the local Properties window for the server, click the **Security** tab.
 - b. Click **Authentication Methods...**
 - c. On the window that appears, select the **Microsoft encrypted authentication version 2 (MS-CHAP v2)** and the **Microsoft encrypted authentication (MS-CHAP)** check boxes.

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- d. Make sure all other check boxes are clear. If necessary, clear the check boxes.
 - e. Click **OK**.
7. Set up a static IP address pool as follows:
- a. In the **local Properties** window for the server, click the **IP** tab.
 - b. Under **IP address assignment**, select **Static address pool**.
 - c. Add or edit the address range as follows:
 - If the window shows an incorrect IP address range, select the displayed range and click **Edit**. For example, the range might show all zeroes or start with *192.168.2*.
-  **CAUTION:**
If Avaya supports this server, do *not* use the preprogrammed IP addresses, such as *192.168.2.200*. You must **Edit** or **Remove** these addresses for remote access to work.
- If no address range is already entered, click **Add**.
- d. In the **Address Range** dialog box, enter the correct start and end IP addresses for this server. To get the start and end IP addresses, you *must* register your system.
 - e. Verify that the number of addresses is **2**.
 - f. Click **OK**.
 - g. In the **Adapter** field, select **Allow RAS to select adapter**.
 - h. Click **OK** to close the properties window.
 - i. If a dialog box appears, click **No**.
8. Close the **Configure** window.

Configuring MAS port boards

 **Important:**

If you are performing new installation of Modular Messaging Release 5.2 or if the MAS you configure does not contain Dialogic port boards, skip this section and continue with [Configuring the voice mail system](#) on page 54.

The Avaya Modular Messaging Configuration Wizard automatically configures the dialogic port boards for the following switch integrations.

- Avaya (QSIG)
- Cisco (QSIG)
- Nortel NT M-1 (QSIG)
- Siemens Hipath (QSIG)

If this MAS does *not* use one of the automatic-configuration switch integrations, you must configure the Dialogic port boards manually.

1. Continue with [Appendix B: Configuring and testing port boards](#) on page 323.
2. After you configure and test the Dialogic port boards, continue with [Configuring the voice mail system](#) on page 54.

Configuring the voice mail system

Voice mail system configuration falls into three areas:

- Domain-wide administration that must be done once for each new installation. You usually configure these settings on MAS#1.
- Domain-wide features, such as Call Me or Message Waiting Indicator (MWI) that can be enabled on any MAS.
- Configuration information specific to an MAS, such as SAL alarming.

This section describes how to configure the key parameters to make the new system operational. Complete the tasks in this section to obtain the Modular Messaging system up and running with the basic required features. After the installation is complete, Avaya encourages customers to tailor the Voice Mail System Configuration (VMSC) parameters for their site. For more information, see [Downloading user documentation](#) on page 13.

Note:

The system prompts you to restart the MAS Voice Server service several times during this procedure. However, you must restart the service only as directed in this guide. Restart the service before you enter the modem extension numbers as instructed in [Configuring MAS-specific parameters](#) on page 76. Restart the service when you complete the configuration.



CAUTION:

You can complete some procedures in this section only if you use the required configuration notes for a specific PBX. For instructions to obtain the configuration notes, see [Downloading configuration notes](#) on page 12.

Topics in this section include:

- [Configuring required domain-wide features](#) on page 55
- [Installing and configuring the WebLM server on an MAS](#) on page 61
- [Obtaining the license file](#) on page 63
- [Applying license file on the WebLM server](#) on page 63
- [Entering Product ID for current MAS](#) on page 65
- [Configuring specific features as needed](#) on page 66
- [Configuring MAS-specific parameters](#) on page 76
- [Restarting the messaging services](#) on page 79
- [Verifying basic operation of the MAS](#) on page 82
- [Continuing the installation](#) on page 85

Configuring required domain-wide features

Note:

Do the following tasks *only* for MAS#1. For additional MASs, go to [Configuring specific features as needed](#) on page 66.

This section describes how to configure domain-wide features that are required for each Modular Messaging system. The required features include:

- [Specifying languages](#) on page 55
- [Verifying that Modular Messaging service has started on MAS#1](#) on page 56
- [Configuring TUI and audio settings on MAS#1](#) on page 57
- [Configuring the PBX type on MAS#1](#) on page 58
- [Configuring serviceability settings on MAS#1](#) on page 59

For a new installation, do these tasks on MAS#1.

For information on MultiSite concepts and requirements, see *Modular Messaging MultiSite Guide*. For MultiSite specific configuration, see the **Voice Mail System Configuration** section in *Modular Messaging with Avaya MSS - MAS Administration Guide*.

Specifying languages

 **Important:**

If you change the language settings of the Modular Messaging system, the change only affects the display language for applications and tools on the Modular Messaging system, and does not impact TUI prompting languages. To configure the TUI languages, see *Modular Messaging with Avaya MSS - MAS Administration Guide*.

Specify the preferred Modular Messaging language:

1. Click **Start > Programs > Avaya Modular Messaging > Languages**.
2. In the Modular Messaging User Properties window, select the **Preferred language** from the drop-down list.
3. Click **OK**.

Verifying that Modular Messaging service has started on MAS#1

Verify if Modular Messaging service has started before you configure the voice mail system.

1. Double-click **Monitor** icon on the desktop.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. In the right pane, scroll down to **MM Messaging Application Server**.
4. Check the **Status** column, and if the status is **Started**, close **Monitor** and proceed with the steps in [Configuring TUI and audio settings on MAS#1](#) on page 57.
5. If the Modular Messaging service has *not* started, right-click **MM Messaging Application Server** and select **Start**.

The system starts the messaging service. When you restart the messaging service, the **Monitor** window immediately displays status as **Started**. However, the service might actually take several minutes to start.

6. Expand the **Event Viewer (Local)** in the left pane to track the progress in startup. Click **Application**.
7. Refresh the **Monitor** window until you see Telephony User Interface event 1241, **TUI service has been enabled**.
8. Verify if MM Service Connector service has also started:
 - a. Repeat steps 3 and 4.
 - b. Right-click **MM Service Connector** and select **Start**
9. Minimize **Monitor** window. You will use it later.
10. Proceed with the next task.

Configuring TUI and audio settings on MAS#1

You must configure the settings in this section once for each Modular Messaging system. For a new installation, do these procedures on MAS#1.

To configure settings that are required for all Modular Messaging setups:

1. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.

The Voice Mail System Configuration window opens. You can see a list of MASs that are present in the messaging system.

Note:

Perform the steps in this section for entries under the voice mail domain, such as *vmdom*. Do *not* click the similar entries for a specific MAS under **Message Application Servers** at this time.

2. Under the voice mail domain, such as *vmdom*, double-click **Telephone User Interface**.
 - a. On the **General** tab, set **Number of Digits in a Mailbox** to match the length of Mailbox numbers required for this system. If MultiSite is enabled, the **Number of Digits in a Mailbox** field is unavailable.
 - b. Click **OK** to close this window.
 - c. If the system notifies you that the changes to mailbox number invalidates all previous mailboxes, click **Yes** to continue.
3. Double-click **Audio Encoding**.
 - a. In the Audio Encoding window, change the **Default Audio Encoding Format** to:
 - **G.711 μ -Law** (mu-Law) for the United States and Japan
 - **G.711 A-Law** for most other countries, especially those in Europe

Note:

The default Microsoft GSM encoding produces smaller files but poorer voice quality. For better sound quality, set the audio encoding to G.711 μ -Law for SIP integration. G.711 encoding is required to support TTY/TDD devices.

- b. Click **OK** to close this window.
- c. If you changed the audio encoding, a "restart" box appears. Click **OK**, but you do not have to restart now.

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Configuring the PBX type on MAS#1

 **Important:**

New installations of Modular Messaging support SIP based switch integration only.

You must configure the PBX service settings for each Modular Messaging system using the appropriate configuration notes for the type of PBX or switch integration you use. Obtain the configuration notes as instructed in [Downloading configuration notes](#) on page 12. For a new installation, do this procedure on MAS#1.

Use the following steps to configure the switch integration in the **Voice Mail System Configuration** window:

1. The Avaya Modular Messaging Configuration Wizard automatically configures many settings for some switch integrations. Proceed as appropriate:
 - If you are using one of the automatically configured switch types, the appropriate entry is already listed under **PBXs**. Continue with step 3.
 - If no PBX type is listed, continue with step 2.
2. If no PBXs are available for the Modular Messaging system, right-click **PBXs** and select **Add New PBX Type**.
 - a. For **Telephony Type**, select the type of port board that is installed in this MAS, such as *Dialogic Set Emulation*.
 - b. In the **PBXs** list box, select the type of switch integration that you have, such as *Avaya G3 Set Emulation*.
 - c. Click **OK** to close the window.
 - d. In the Voice Mail System Configuration window, expand **PBXs**.
 - e. If PBXs are already available, expand the **PBXs** item under the voice mail domain, such as *vmdom*.
3. Double-click the PBX entry under **PBXs**.
4. Use the configuration notes to set up or verify the specific PBX parameters required for the type of switch integration you use. Obtain the configuration notes as instructed in [Downloading configuration notes](#) on page 12.

Obtain the configuration notes for the switch that is connected through AudioCodes gateway as instructed in [Downloading configuration notes](#) on page 12.

Configuring serviceability settings on MAS#1

You must setup domain wide serviceability (alarming) settings once for each Modular Messaging system.

Important:

New installations of Modular Messaging supports *only* SAL. For upgrades to Release 5.2, you can select SNMP, Modem Dialout or Internet alarming. For more information, see [Upgrading to Modular Messaging Release 5.2](#) on page 151.

For a new installation, perform these procedures on MAS#1.

To set up serviceability settings for the system on a new installation you must select SAL:

1. In the Voice Mail System Configuration window, double-click **Serviceability**.

The system displays the **Serviceability - Voice Mail Domain** window.

2. On the **General** tab, click **SAL** to send alarms to an NMS using an agent gateway. If you select Inactive, Modular Messaging system does not send any alarm notification.
3. On the **SAL destinations** tab, complete the following:
 - For **IP Address/Host**, enter the IP address or FQDN for the SAL gateway.
 - For **Community**, select a community name. This name is used as security validation in communication between the SAL client and the SAL server.
 - For **Port**, enter the port number.
4. Click **OK** to close the Serviceability - Voice Mail Domain window.
5. Proceed with [Obtaining the license file](#) on page 63.

Use the following procedure to set up the serviceability settings on a Modular Messaging system that is upgraded to Release 5.2 on which you are performing the disaster recovery.

1. In the Voice Mail System Configuration window, double-click **Serviceability**.
2. In the **Serviceability - Voice Mail Domain** window, on the **General** tab, select the type of alarming to be used for the Modular Messaging system:
 - Inactive — No alarm notification sent
 - SNMP — Send alarm traps to an NMS using SNMP
 - SAL (Default for new installations) — Use SAL to send alarms to an NMS using an agent gateway.
 - Modem dialout — Use the modem dialout to send alarm notifications to an alarm collection server for analysis and corrective actions.
 - Internet — Relay alarm information through the internet capabilities of the Avaya SPIRIT Agent.
3. Unless directed otherwise, you must accept the default values for the following parameters:

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- The conditions for sending an alarm notification
 - The alarm level at which notification is to be sent: minor or major
 - The system behavior for stopping Modular Messaging service
4. If you selected SNMP alarming, you may need to set your community. To set the community, click the **Communities** tab, select **Add** and complete the following:
- For **Community**, click the field and enter a community name. This name is used as validation in communications between the SNMP client and the SNMP server.
 - For **Apply To**, from the drop-down menu, select either **Traps** or **Both** (do not select Queries).
5. If you selected SNMP alarming, click the **SNMP Trap Destinations** tab.

Note:

During an upgrade, enter the SNMP trap destination and community details that you recorded from the Release 3.x, Release 4.0, Release 5.0 or Release 5.1 system.

6. To set, click **Add** and complete the following:
- For **IP Address/Host**, enter the IP address or host name for the trap destination.
 - For **Community**, select a community name from the drop-down menu. This name is used as security validation in communications between the SNMP client and the SNMP server. The drop-down menu list is populated from the Communities tab.
 - For **Type**:
 - Select **INADS** to send alarms back to Avaya through older Service Selection Gateway (SSG) devices.
 - Select **OAM** (Operations, Administration, and Maintenance) for use with customer NMSs.
 - For **Port**, usually accept the default value (162); otherwise, specify a port.
7. If you selected Internet alarming, click the **Internet Proxies** tab. To set, click **Add**:
- For **Avaya/Business Partner Primary Destination**, enter the Avaya proxy primary IP address or fully qualified domain name (FQDN).
 - For **Avaya/Business Partner Secondary Destination** enter the Avaya proxy secondary IP address or FQDN.
 - For **Enable Customer Proxy Servers**, if the enterprise network configuration does not pass HTTP, then set Internal alarming to use proxy servers by clicking this selection to enable. The following fields become active:
 - For **Customer Primary Proxy Server**, enter the customer proxy primary IP address or FQDN.
 - For **Customer Secondary Proxy Server**, enter the customer proxy secondary IP address or FQDN.

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8. If you selected SAL alarming, on the **SAL destinations** tab, complete the following:
 - For **IP Address/Host**, enter the IP address or FQDN for the SAL gateway.
 - For **Community**, select a community name. This name is used as security validation in communication between the SAL client and the SAL server.
 - For **Port**, enter the port number.
9. Click **OK** to close the Serviceability - Voice Mail Domain window.

Installing and configuring the WebLM server on an MAS

Modular Messaging uses Avaya Web License Manager (WebLM) as its standard licensing mechanism. Modular Messaging features are tied to the WebLM server, and any clients of that server can acquire and use a licensed feature.

WebLM is a Web-based licensing solution that facilitates license management. Using WebLM, an administrator can track and manage licenses of multiple Avaya software products installed in an organization from a single location. To do this, WebLM requires a license file for the product. The file contains information about the product, major release, the licensed features of the product, and the licensed capacities of each feature bought by your organization. For more information about using PLDS, see *Getting Started with Avaya PLDS* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.

The following three WebLM configurations are possible:

- **Existing WebLM server:** If you already have a WebLM server that you are using for licensing other Avaya products, proceed with [Obtaining the license file](#) on page 63.
- **WebLM server on an MAS or Supplementary server:**
 - For upgrades, proceed with [Installing WebLM server on an MAS](#) on page 62.
 - For new installations, the system automatically installs the WebLM server on the MAS that you select on the **WebLM Server** screen of the DCT data file. Proceed with [Obtaining the license file](#) on page 63.
- **WebLM server on a standalone server:** If you choose to install the WebLM on a standalone server, follow the instructions provided in *Installing and configuring Avaya WebLM server* guide available on the Avaya Support Web site at <http://www.avaya.com/support>. Once you have set up and configured the WebLM server, proceed with [Obtaining the license file](#) on page 63.

For more information on WebLM configurations, see *Avaya Modular Messaging Concepts and Planning Guide*.

Configuring the Avaya MAS

Use this procedure to install and configure the WebLM server on an MAS or a supplementary server.

- [Installing WebLM server on an MAS](#) on page 62
- [Obtaining the license file](#) on page 63
- [Applying license file on the WebLM server](#) on page 63
- [Importing certificates from license](#) on page 64
- [Configuring the WebLM URL in VMSC](#) on page 64

Installing WebLM server on an MAS

Complete the following steps to install the WebLM server on an MAS:

1. Log on to the MAS, on which you want to install the WebLM server, using the customer account.
2. Complete one of the following steps to obtain the WebLM installer as appropriate:
 - Insert the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk into the DVD drive of the MAS and navigate to the **Install\WebLM** directory.
 - Download the WebLM application (**WebLM_Install_Product.exe**) from the Avaya Support Web site at <http://www.avaya.com/support> and copy it to the MAS.
3. Double-click **WebLM_Install_Product.exe**.
The system runs the Web License Manager setup wizard.

Note:

If you are unable to install the WebLM server on the MAS, log on to the MAS using local administration credentials and continue with the installation.

4. Click **Next**.
5. Accept the default values and click **Next**.
6. In the **SSL Port** field, enter 52233.
7. Click **Next**.
8. Click **Install**.
9. Click **Finish**.
The system displays the **WebLM Configuration** wizard.
10. Click **Next** until the configuration is complete.
11. Start the Apache Tomcat service:
 - a. Select **Services (Local)** in the left pane.
 - b. Right-click **Apache Tomcat** service.
The system opens the **Properties** window.

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- c. Set the **Startup type** to **Automatic**.
- d. Click **OK**.
- e. Click **Start** to start the service.

Obtaining the license file

Obtain a new license file from Product Licensing and Delivery System (PLDS) to be applied on a Web License Manager (WebLM) server.

CAUTION:

Do not change your license file after you receive it from Avaya. WebLM does not accept a modified license file.

Use one of the following methods to obtain the license file:

- If you (or registered owner of your site) receive a License Activation Code (LAC) e-mail from PLDS, use this LAC to obtain the Modular Messaging license from the PLDS Web site at <https://plds.avaya.com>.
- An Avaya Partner or an Avaya Associate who has permissions in PLDS for your site or sales order can access PLDS and generate a new license file for you. You must provide the MAC address of the WebLM server and the number of Modular Messaging subscribers, to generate the license file.

For more information about using PLDS, see *Getting Started with Avaya PLDS* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.

To find the MAC address of the WebLM server:

1. Run the command ***ipconfig /all*** on the server where you installed the WebLM server.
2. Copy the physical address of the corporate LAN network adapter.

Applying license file on the WebLM server

Use the following steps to apply the license file on the WebLM server:

1. In the Web browser, enter the URL for the WebLM server in the format, ***https://<ip-address>:<WebLM_port>/WebLM/LicenseServer***.

where *ip-address* is the IP address or fully qualified domain name of the server that hosts the WebLM server. For example, ***https://10.32.55.33:52233/WebLM/LicenseServer***. The URL for the WebLM is case-sensitive. The system displays the WebLM Administration page.

2. In the **Username** field, enter *admin*.
3. In the **Password** field, enter *weblmadmin*.

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Configuring the Avaya MAS

Note:

When you log on to the WebLM server for the first time after the installation, the system prompts you to change the password. You *must* change the WebLM server password to help prevent unauthorized access to the WebLM server.

4. When the system prompts you, log on to the WebLM server using the new password.
5. Click **Install License**.
6. In the **Install License Path** field, enter the path to the license file or click **Browse** to select the license file.
7. Click **Install**.

If the installation is successful, WebLM displays a confirmation page. If you install an incorrect license file, or if WebLM cannot access the location of the license file on your network, WebLM displays an error message.

Importing certificates from license

Import the license file in VMSC to apply the certificates to your VMD.

Note:

To import the certificates, you must copy the license file to the MAS on which you use VMSC to import the certificates.

1. In the Voice Mail System Configuration window, navigate to **Licensing**.
2. Right-click **Licensing** and select **Import Certificates from License**.
The system opens the **License Import Wizard**.
3. Complete the wizard.
4. Restart the Messaging Application Server service on all MASs.

Configuring the WebLM URL in VMSC

Configure the URL for the WebLM server in VMSC on the MAS:

1. In the Voice Mail System Configuration window, double-click **Licensing**.
The system displays the **Licensing - Voice Mail Domain** window.
2. On the **Licensing** tab, complete the following:
 - a. In the **WebLM URL** field, verify that the system displays the correct URL, if required modify the IP Address or fully qualified domain name for WebLM server. For example, ***https://10.32.55.33:52233/WebLM/LicenseServer***.
 - b. Click **OK**.
3. Restart the Apache Tomcat service for the changes to take effect.

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4. Restart the Messaging Application Server service on all MASs as outlined in [Restarting the messaging services](#) on page 79.
5. On the **Licensing** tab, in the **License Mode** field, verify that the system displays the status as Normal.

For more information on licensing, see *Avaya Modular Messaging Concepts and Planning Guide*.

Entering Product ID for current MAS

New installations or migrations to Modular Messaging Release 5.2 support SAL remote access mechanism *only*.

If Avaya is to support this system, you must enter the MAS product ID that ART (Automatic Registration Tool) provides. You can view the product IDs using Maestro. For more information, see [Registering the system in ART](#) on page 134.

1. From the VMSC (**Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**), double-click **Message Application Servers**.
2. Double-click the MAS you are currently configuring and select **Serviceability**.
3. On the **Serviceability** window, type the product ID for the MAS in the **Product Identifier** field.
4. Click **OK**.

Configuring specific features as needed

During installation, MMCW enables services and TTS languages specified in the DCT. However, you need to configure features such as Call Me, MWI, Fax, and Offline message store after the installation. Use the procedures in this section to manually configure the other features and TTS, if necessary. Unless otherwise specified, you can configure these features on any MAS in the VMD or on a remote computer running the VMSC application.

Note:

Some of the important notes to be considered while configuring these features:

- In a multiple-MAS system, configure specific features only after you complete basic configuration of all MASs in the system. Some features, such as MWI and offline access to messages, require all MASs in the VMD to be working.
- You must have the relevant permissions to configure screens in the VMSC application. For more information about security roles required for VMSC configuration, see the **Voice Mail System Configuration** section in *Modular Messaging with Avaya MSS - MAS Administration Guide*.
- If any of these features were enabled improperly or on the wrong server by the MMCW, manually configure the affected feature. For more information on moving the services to another server, see [Moving Modular Messaging services among servers](#) on page 377.
- If you are enabling the MultiSite feature, see *Avaya Modular Messaging MultiSite Feature Description Guide* to configure the MultiSite specific features. For information on MultiSite specific configuration, see the **Voice Mail System Configuration** section in *Modular Messaging with Avaya MSS - MAS Administration Guide*.

To configure specific features on an MAS:

1. Use the Voice Mail System Configuration (VMSC) program.

If this window is not already open, click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.

2. Configure the features that are required for this MAS:

- [Configuring Call Me service](#) on page 67
- [Configuring Notify Me](#) on page 67
- [Configuring MWI service](#) on page 68
- [Configuring MM Audit Service](#) on page 69
- [Configuring the MM Fax Sender server](#) on page 70
- [Configuring languages and multi-lingual TTS](#) on page 74
- [Configuring offline access to messages](#) on page 74

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Configuring Call Me service

To configure the Call Me service for the VMD:

1. In the **Voice Mail System Configuration** window, under the VMD, such as *vmdom*, double-click **Call Me**.
2. In the Call Me - Voice Mail Domain window, on the **General** tab, click the **Enable Call Me** check box.
3. For **MAS Call Me Server**, specify the name of the server on which the Call Me service will be enabled, such as *MYMAS2*. If this field is blank:
 - a. Click ... next to the field.
 - b. In the **Select Computer** window, enter the name of the MAS you chose as your MAS Call Me server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.
4. Click **OK** to close this window.

Note:

Because Call Me service and Message Waiting Indicator (MWI) service use the Mailbox Monitor Server, you must enable both services on the same server.

Configuring Notify Me

The Notify Me feature is configured by default. To configure the Notify Me for the VMD:

1. In the **Voice Mail System Configuration** window, under the VMD, double-click **Notify Me**.
2. On the **General** tab, select the **Enable Notify Me** check box.
3. Click **OK**.

Configuring MWI service

To configure the Message Waiting Indicator (MWI) service for the VMD:

1. In the **Voice Mail System Configuration** window, under the VMD, such as *vmdom*, double-click **Message Waiting Indicator**.
2. In the Message Waiting Indicator - Voice Mail Domain window, on the **General** tab, select the **Enable Message Waiting Indicator (MWI)** check box.
3. For **MAS MWI server**, specify the name of the server on which to enable the MWI service, such as *MYMAS2*. If this field is blank:
 - a. Click ... next to the field.
 - b. In the Select Computer window, enter the name of the MAS you chose as your MAS MWI server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.
4. For the **Limit requests** and **Maximum requests per minute** fields, use the values specified in the configuration notes for your PBX integration type.
5. In the **Messaging Application Servers that support MWI** box, list all MASs that have a port group set up to support MWI. To add a server name:
 - a. Click the **Add** button at the top of the list box. The **Add** button looks like a dashed box.
 - b. The list box displays a data entry field and a ... button. Click ...
 - c. In the Select Computer window, double-click the name of each MAS that has ports allocated to support MWI, such as *MYMAS2*.
 - d. Repeat Steps b and c to add any other MASs that support MWI, such as *MYMAS1*.
 - e. Click **OK** to close the Select Computer window.

The arrow icons move the selected MAS up or down the list. MWI requests start with the first MAS in the list, and continue to each additional MAS if needed.
6. Click **OK** to close this window.

Note:

Because Call Me service and Message Waiting Indicator (MWI) service use the Mailbox Monitor Server, you must enable both services on the same server.

Configuring MM Audit Service

To configure the MM Audit service for the VMD:

1. In the **Voice Mail System Configuration** window, under the VMD, double-click **Auditing**.
2. On the **General** tab, select the **Enable Auditing** check box.
3. In the **Audit server** field, enter the name of the server that hosts the MM Audit server, or click ... to select the server name:
 - a. In the Select Computer window, enter the name of the MAS you chose as your Audit server.
 - b. Click **Check Names**.
 - c. Click **OK** to accept the MAS name and close the window.

MM Audit service is installed and running on each MAS and Supplementary servers in the VMD. The name that you enter here is the name of the server, MAS or supplementary, that you select and configure as the MM Audit Server.

4. In the **Audit event retention (days)** field, enter the number of days before events are purged from the audit database.
5. In the **Database server** field, enter the name of the server where the Audit database resides or click ... to select the server.
6. In the **Database name** field, enter the name of the Audit Server SQL database.
7. In the **Database instance** field, enter the name of the Audit Server SQLDatabase instance containing audit events.
8. Click **OK** to close this window.

Audit service can be configured to use the syslog protocol to allow third-party system administration tools to be used with Modular Messaging. For more information, see the *Modular Messaging with Avaya MSS - MAS Administration Guide*.

Configuring the MM Fax Sender server

IP H.323 switch integration does not support fax.

Complete the following steps on the MAS in your VMD that runs the Modular Messaging Fax Sender service.

Note:

To configure the Fax dialog box in VMSC, you must be a member of a security role that is assigned the Fax-Administer task.

To configure the MM Fax Sender server:

- Configure the MM Fax Sender server in VMSC
- Configure one-way trust in a private Windows domain
- Share the MM Fax Printer
- Assign permissions to the Fax Service Manager
- Create a dialing rule

To configure MM Fax Sender server, complete the following steps:

1. In the **Voice Mail System Configuration** window, under VMD, such as *vmdom*, double-click **Fax**.
2. In the Fax - Voice Mail Domain window, on the **General** tab:
 - a. Select the **Fax Enable** check box.
 - b. Next to **MM Fax Sender server**, click **Browse**.
 - c. In the Select Computer window, enter the name of the MAS you chose as your MM Fax Sender server.
 - d. Click **Check Names**.
 - e. Click **OK** to accept the MAS name and close the window.
 - f. For **Fax Mailbox**, enter the mailbox number that is used for outgoing faxes on the MSS.

Note:

The mailbox number must match the number configured in the **Fax Mailbox Number** field of **Configure Subscriber Management** page in **Messaging Administration > Messaging Attributes** of the Messaging Administration web interface. For more information, see [Administering special mailboxes](#) on page 116.

- g. For **Company Fax Number**, enter the number of the customer's central fax machine.

3. Click the **Advanced** button.
 - a. In the Advanced Fax window, change the value of the **Max Concurrent Outgoing Calls** to the customer-specified number.
 - b. Change other options if required.
 - c. Click **OK** to close the window.
4. Click **OK** to close the Fax - Voice Mail Domain window.

The system displays a "restart" window.
5. Click **OK**.
6. In the Voice Mail System Configuration window, expand **Security**.
7. Double-click **Messaging Servers Administration**.
8. In the Message Servers - Voice Mail Domain window, on the **Message Servers** tab:
 - a. Note that the Credentials list shows entries for LDAP, IMAPI, and IMAP4.
 - b. Click the key button above the list to add a new entry for fax.

The system displays **FAX** in the box.
 - c. Click in the Password column next to the new Fax entry.
 - d. Type the password for the fax mailbox and press **Enter**. This value must be numeric.
9. Click **OK** to close this window.

Note:

The Application Event Viewer displays an error stating that the fax mailbox could not be opened. This is because the fax mailbox is not yet created. The fax mailbox is created in phase 2 of MSS administration as described in [Completing initial MSS administration](#) on page 105. The fax feature does not work until the MSS administration is complete.

Use the following steps to configure one-way trust between the private Windows domain and the customer's corporate Windows domain.

Use the following steps only for systems that run in the private Windows domain:

 **Important:**

When you configure the MM Fax Sender server, an account with the credentials to create a trust relationship between the private and corporate Windows domains must be available or a representative from customer's corporate IT group who has an account with the credentials is available.

If the IT representative cannot provide the account information during installation, skip the MM Fax Sender server configuration and complete the rest of the Modular Messaging installation. Proceed with [Configuring the MM Fax Sender server](#) on page 70 and complete the configuration of the one-way trust when the account information is available.

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Configuring the Avaya MAS

1. Log into the Active Directory server (MAS#1).
2. Click **Start > Programs > Administrative Tools > Active Directory Domains and Trusts**.
3. In the Active Directory Domains and Trusts window, right-click the private Windows domain and then left-click **Properties**.
4. Click the **Trusts** tab.
5. On the **Trusts** tab, click **New Trust** and then click **Next**.
6. Enter the name of the corporate Windows domain you want the private Windows domain to trust and then click **Next**.
7. Click **One-Way: Outgoing** and then click **Next**.
8. Click **Both this Domain and the Specified Domain** and then click **Next**.
9. The customer's corporate I/T person types the account name and password for an account in the corporate Windows domain that has privileges to create a trust relationship and then click **Next**.
10. Click **Validate the Trust** and then click **Next**.
11. Click **Finish**.

To share the MM Fax Printer, perform this procedure on the same MAS that runs the MM Fax Sender service:

1. Verify that Windows Fax Service is **Started** and set to **Automatic**.
2. Click **Start > Settings > Printers and Faxes**.
3. In the **Printers and Faxes** window, right-click the **Fax** and select **Properties**.
4. Click the **Security** tab.
5. Add the Network Service user and assign that user **Print, Manage Printers, and Manage Documents** permissions.
6. Click the **Sharing** tab.
7. Select the **Share this printer** check box. Leave the share name as **Fax**.
8. Select the **List in the directory** check box.
9. Click **Additional Drivers**. The system opens the **Additional Drivers** dialog box.
10. Select the client operating systems installed on the network that can use the Fax Printer. The Fax Printer drivers are downloaded when you first connect the system to the Fax Printer.
11. Click **OK**.
12. Click the **Security** tab.
13. Verify that **Everyone** is assigned Fax permissions on the share.

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Note:

If you want to limit the access to the Fax printer share, remove the Everyone group and add Fax permission to the Active Directory Users or Groups you want to provide access to print faxes using the MM Fax Printer.

To assign permissions to the Fax Service Manager, use the following steps:

1. Click the **Configuration** tab.
2. Select **Fax Service Manager**.
3. Right-click **Fax (local)** and select **Properties**.
4. Click the **Security** tab.
5. Add the Network Service Account to the list of users and groups with access.
6. Assign **Fax**, **Manage Fax Configuration** and **Manage Fax Documents** permissions to the Network Service Account.
7. Assign **Everyone** the **Fax** permissions for the Fax Service Manager.

Note:

If you want to limit the access to the Fax printer share, make the same permission changes to the Fax Service Manager as that of the Fax printer share.

8. Exit all windows.

To create a dialing rule for the Phone and Modem, complete the following:

1. Click **Start > Settings > Control Panel > Phone and Modem Options**.
2. If a dialing rule is not already created, click **New** in the Dialing Rules tab to create a dialing rule.
3. Specify the location details and the dialing rules for the MAS.
4. Click **OK** to save the dialing rule and close the New Location window.
5. Click **OK**.

Configuring languages and multi-lingual TTS

Enable Multi-Lingual TTS only if it is required at the site. To configure multiple languages or Text-to-Speech (TTS) feature:

1. In the **Voice Mail System Configuration** window, under the VMD, such as *vmdom*, double-click **Languages**.
2. In the Languages - Voice Mail Domain window:
 - a. For **Primary Language**, select the primary announcement language (prompt set) that is to be used at this site.
 - b. *If multi-lingual Text-to-Speech (TTS) is used at this site:*
 1. Select the **Enable Multilingual Text to Speech** check box.
 2. In the list box, select all the languages to be used for TTS at this site.
3. Click **OK** to close this window.

Configuring offline access to messages

 **CAUTION:**

Set up offline access only after all MASs in the system are configured, including the Supplementary server, if present.

To configure offline access to subscriber messages:

1. In the **Voice Mail System Configuration** window, under VMD, such as *vmdom*, double-click **Messaging**.
2. In the Messaging - Voice Mail Domain window, click the **Offline Access** tab.
3. Select the **Enable offline access to messages** check box.
4. If this system has multiple MASs:
 - a. Select the **Synchronize offline messages with remote store** check box.
 - b. Click **Browse** to select an existing, shared directory in the domain for the remote offline message store. If the directory does not exist, create it first, then browse to the directory. The name *must* use one of the following formats:
 - In the private Windows domain: `\\computername.privdom.local\sharename`, such as:
`\\mymas2.privdom.local\RemoteOfflineStore`
 - In the corporate Windows domain: `\\computername.corpdom.com\sharename`, such as:
`\\mymas2.corpdom.com\RemoteOfflineStore`

5. Change any other parameters in this window as needed. For more information, see *Modular Messaging with Avaya MSS - MAS Administration Guide*; see [Downloading user documentation](#) on page 13.
6. Click **OK** to close the window.
7. Restart the MAS service on all MASs in the VMD:
 - a. Double-click **Monitor** icon on the desktop.
 - b. Select **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, select **MM Messaging Application Server** from the available services.
 - d. Right-click **MM Messaging Application Server** and select **Restart**.

Configuring MAS-specific parameters

After you configure the domain-wide parameters, complete the configuration of this specific MAS in the VMSC. Do the procedures in this section under the specific entry for this MAS, and not under the voice mail domain.

Complete the following tasks for each MAS as required:

- [Configuring Modem Dialout alarming](#) on page 76
- [Configuring port boards and switch integration](#) on page 77

Configuring Modem Dialout alarming

 **Important:**

New installations of Modular Messaging support SAL *only*. If you are performing new installations, skip this procedure.

If the MAS uses Modem Dialout alarming, configure the service now. You must administer Modem Dialout alarming individually for each server that uses it. The server requires a modem and the Messaging Application Server service to be enabled for Modem Dialout alarming to work.

To set up Modem Dialout alarming on this MAS:

1. In the Voice Mail System Configuration window, expand **Message Application Servers**.
2. Expand the entry for the MAS, such as *MYMAS1*.
3. Double-click **Serviceability** to set up dial-out information for this MAS.
4. In the Serviceability window on the Modem Dialout tab:
 - a. For **COM port**, select the communications port that the modem is to use to make calls for alarm notification. Avaya recommends COM3 for the recommended USB port on the MAS. For more information, see *Installing the Avaya S8730 Server for Modular Messaging* guide.
 - b. For **Phone number**, enter the complete telephone number that the modem must dial to place an alarm notification with the remote service center. Include any special characters needed. For example, to access an outside line, insert pauses, and so on.
 - c. For **Modem setup**, enter the modem initialization (setup) string if one is required for the modem to make alarm notification calls.
5. Click **OK** to close this window.
6. When prompted restart service.

Configuring port boards and switch integration

Important:

New installations of Modular Messaging support SIP *only*. If you are performing new installations, skip this procedure.

Note:

You must restart service at the end of the previous procedure before continuing.

The Modular Messaging Configuration Wizard automatically configures many of the port board and PBX settings for the MAS. However, you must always verify the configuration settings against the most current configuration notes.

Note:

The configuration notes for the PBX or switch might include some of these steps. However, read through this section to get an overview of the configuration procedure. You can repeat steps to verify the setup. You can also modify this information later if required.

Automatic configuration

The Modular Messaging Configuration Wizard automatically configures many of the MAS settings for the following switch integrations:

- Avaya SIP
- Avaya (IP H323)
- Avaya (QSIG)
- Cisco (QSIG)
- Nortel NT M-1 (QSIG)
- Siemens Hipath (QSIG)

If you use any of these switch types:

1. Use the MM configuration notes to complete and verify the MAS settings.
2. Administer all required settings on the switch and PBX on the MAS.

Manual configuration

If you specified **Other** for the switch integration type, you must always configure both the MAS settings and the PBX settings for each MAS.

To set up the basic PBX integration details for each MAS in this domain:

1. In the Voice Mail System Configuration window, expand **Message Application Servers**.
2. Expand the entry for this MAS, such as *MYMAS1*.
3. Right-click the server name, select **Telephony Configuration Wizard**.

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Configuring the Avaya MAS

4. Complete all steps in the wizard, as prompted. Use the configuration notes as required.
5. After you complete the configuration wizard, you must restart messaging service to configure the voice ports:
 - a. Restore the Monitor window if you minimized it, or double-click **Monitor** icon on the desktop.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane of the Monitor window, select **MM Messaging Application Server**. Right-click and select **Stop**. Do *not* use Restart.
 - d. When service is stopped, right-click **MM Messaging Application Server** again and select **Start**.

The system restarts the messaging service.

Note:

When you restart messaging service, the Monitor window immediately shows the status as **Started**. However, service might actually take several minutes to start, depending on the number of port boards installed and the integration method.

- e. Track the startup progress as follows:
 1. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 2. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
 3. Ignore error event 1807. This error is normal until you configure the postmaster mailbox.
 - f. When service is restarted, minimize the Monitor window.
6. In the Voice Mail System Configuration window, expand **Message Application Servers**. Some values might already be set. Use the configuration notes for this PBX integration.
 - a. Expand the entry for this MAS, such as *MYMAS1*.
 - b. Double-click **Telephony Interface**. Configure the port boards in this MAS. Use the configuration notes; see [Downloading configuration notes](#) on page 12.
 - c. Double-click **PBX Type**. Select the same type of PBX service as you did in [Configuring the PBX type on MAS#1](#) on page 58. Verify that the entry in the **PBXs** box is highlighted, and click **OK**.
 - d. *If multiple port groups are used*, double-click **Port Groups**. For example, you might use a unique group to support MWI.
 - e. Double-click **PBX Integration** and configure the integration for this system. Use the configuration notes to specify or confirm the settings that this switch integration requires.
 - f. Determine the maximum number of MWI sessions to specify at one time.

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Restarting the messaging services

When you complete configuring the server, restart the messaging services:

1. Restore the **Monitor** window if you minimized it, or double-click the **Monitor** icon on the desktop.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. Restart messaging service to enable any changes you made in the VMSC:
 - a. In the right pane of the Monitor window, select **MM Messaging Application Server**.
 - b. Right-click and select **Stop**.
 - c. When service is stopped, right-click **MM Messaging Application Server** again and select **Start**. The system restarts the messaging service.

When you restart the messaging service, the Monitor window immediately shows the status as **Started**. However, the service might actually take several minutes to start. The time it takes depends on the number of port boards installed and the integration method. Track the status as follows:

- d. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 - e. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
4. Verify that the Modular Messaging services required for the MAS are started:
 - a. In the **Monitor** window, select **Services (Local)** in the left pane.
 - b. In the right pane, scroll down to the list of Modular Messaging services. These services start with the abbreviation **MM**. Verify that the **Status** column shows the correct state for each messaging service:
 - Services that are required for this server must show **Started** and a startup type as **Automatic**.
 - Services that are *not* required on this server must show a blank status and a startup type as **Disabled**. For more information, see [Table 6: Enabling Modular Messaging services in a VMD](#).

Table 6: Enabling Modular Messaging services in a VMD

Modular Messaging service name	Condition for enabling service
MM Messaging Application Server MM Service Connector Apache Tomcat ¹ Avaya Diagnostic Tools Avaya SPIRIT MM Alarming Server MM Audit Service MM Event Monitor Server MM Fault Monitor MM Performance Monitor Server MM Process Monitor Server	Enable on each MAS and the Supplementary server.
MM Call Me ² MM Fax Sender ³ MM Mailbox Monitor ² MM MWI ² MM Tracing Service	Enable on <i>only one server</i> in each VMD, either on an MAS or the Supplementary server. See the <i>Avaya Modular Messaging Concepts and Planning Guide</i> for the recommended load balancing of services between multiple servers.

1. Apache Tomcat service must be enabled on the server on which WebLM server is installed. Apache Tomcat is not a Modular Messaging service.
2. The Call Me, MWI, and Mailbox Monitor services must always be enabled on the same server.
3. IP H.323 switch integration does not support MM Fax Sender functionary.

- If the **Startup Type** for any **MM** service that is *not* required for this server is **Manual**:
 1. Double-click the service to open the Properties window.
 2. Set the **Startup Type** to **Disabled**.
 3. Click **OK**.
 4. Refresh the screen to verify that all **MM** services that are *not* required for this server are **Disabled**. Repeat for each service as needed.



CAUTION:

All **MM** services that are *not* required for this server must be set to **Disabled** before you perform the next step (4 c). Serious problems occur if you activate a service on multiple servers when it is supposed to run on only one server in the VMD.

- c. If the **Status** for any **MM** service that is required for this server is **Stopped** or blank:
 1. Click **Start > Run** to open the Run window.
 2. In the **Open** field, type the following and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
The script takes a few seconds to run. The program sets up all **MM** services correctly.
 3. Refresh the screen to verify that all **MM** services required for this server are **Started** and set to **Automatic**.
 4. If any required **MM** services are not set up correctly, repeat Step c.
5. When configuration is complete, close all open windows.
6. *For a multiple-MAS system*, after you configure the last MAS, you must restart service on all servers in the VMD. The following properties require a restart of all servers in the voice mail domain:
 - Audio Encoding
 - Fax
 - Languages
 - Licensing
 - Messaging
 - Offline Access
 - PBXs

Note:

Any feature that you alter in the VMSC that produces a prompt to restart voice service requires a restart of all servers in the VMD. For convenience, you can restart all the MASs in the VMD once at the end of the installation.

To restart the Modular Messaging services on all MASs in the voice mail domain, switch the console to each MAS and repeat this procedure, [Restarting the messaging services](#) on page 79.

Verifying basic operation of the MAS

Before continuing, verify the basic functionality of the MAS. Continue with:

- [Verifying call-handling capability](#) on page 82
- [Verifying alarming setup](#) on page 82
- [Verifying Tracing Service operation](#) on page 84
- [Verifying Audit service](#) on page 85
- [Continuing the installation](#) on page 85

Verifying call-handling capability

Perform this task on each MAS that is set up to handle calls.

This test confirms basic connectivity between the MAS and the switch:

1. If the MAS is in a multiple-MAS system, display the port monitor to ensure that the test call comes in on this MAS. For this procedure, see [Setting up the port monitor](#) on page 123.
2. From a telephone on the system, dial the message retrieval number for the Modular Messaging system.
3. Listen for the Modular Messaging system to answer.
4. Hang up.

Verifying alarming setup

 **Important:**

New installations of Modular Messaging support SAL *only*.

This test requires the receiving computer, to be set up and ready to receive alarms.

- For information about setting up SAL alarming, see *Secure Access Link 1.5 Gateway Implementation Guide*. To obtain this guide, see [Downloading user documentation](#) on page 13.
- For information about setting up SNMP alarming, obtain "Administering SNMP on the MSS;" see [Downloading user documentation](#) on page 13. Avaya recommends that you do any additional SNMP administration after the Modular Messaging system is set up and running.
- For a Modem Dialout setup, the USB modem must be connected and configured for the MAS to send or receive alarming information. The MAS must be set up with a valid product ID; see [Entering Product ID for current MAS](#) on page 65.

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Run the following test to verify that alarm notification is working:

1. Click **Start > Run**.
2. In the Run window **Open** field, type **cmd** and press **Enter**.
3. In the command prompt window, type the following and press **Enter**:

testaom -v

The test shows alarm setup details such as the type of alarm that is set up, the product ID for the MAS. The test takes about 1 minute to run.

4. Verify that the last line of the test reads:

Alarm origination test successful

Continue with Step 6.

5. *If the alarm test fails*, the last line of the test reads:

Negative acknowledgement of transmission

If the test fails, check your alarm settings, and then run the test again:

- For all systems, see [Configuring serviceability settings on MAS#1](#) on page 59.
- For systems that use *Modem Dialout*, also check [Configuring Modem Dialout alarming](#) on page 76.

6. Type **exit** and press **Enter** to close this window.

Note:

For instructions on accessing the MAS alarm or error logs, obtain *Modular Messaging with Avaya MSS - MAS Administration Guide*; see [Downloading user documentation](#) on page 13.

Verifying Tracing Service operation

If you have enabled the Tracing Service software on an MAS or Supplementary server, test the Tracing Service operation as follows:

1. Click **Start > Programs > Avaya Modular Messaging > Operation History Viewer**.
2. Set up a live mode session for all MASs in the voice mail domain (VMD):
 - a. In the **Operation History Viewer** window, click **File > New**.
 - b. In the Session Properties window, verify that **Message Application Server** shows **All Servers**.
 - c. Select the **Live Mode** check box.
 - d. Verify that all the **Select Types** check boxes are selected.
 - e. Under **Selection Activities**, verify that the **All Activities** check box is selected.
 - f. Click **OK**.
3. Confirm that the Tracing Service can connect to all MASs in the VMD.
4. Confirm that the Operation History (OPH) viewer displays the collected OPH events.
5. Close the OPH Viewer. If the system prompts you to save the session, click **No**.

Note:

Without additional configuration, the Operation History Viewer will only function properly on the server with the Tracing Service running. For more information about using the Operation History Viewer, obtain the *Modular Messaging with Avaya MSS - MAS Administration Guide*; see [Downloading user documentation](#) on page 13.

Verifying Audit service

Use the MM Audit Log Viewer to view the information captured by the MM Audit Service:

1. Click **Start > Programs > Avaya Modular Messaging > MM Audit Log Viewer**.
2. To connect to the database on the Audit server (use this if you are running the viewer on an MAS that is not the Audit server):
 - a. On the **MM Audit Log Viewer** window, in the left-hand pane, right-click **All Events**.
 - b. Click **Connect to Database**.
 - c. From the dialog box, in the Server field, enter the name of the MAS you set up as the Audit server.
 - d. Click **Connect**.
3. On the **MM Audit Log Viewer** window, in the left-hand pane, click **All Events**.
4. In the right-hand pane, verify that events appear in the Audit Log.
5. Close the **MM Audit Log Viewer** window.

For more information, see the *Modular Messaging with Avaya MSS - MAS Administration Guide*.

Continuing the installation

Continue the installation as appropriate:

- If you have additional MASs to configure, repeat the tasks in this chapter for the next MAS. Return to [Configuring MASs using an existing DCT data file](#) on page 45.
- If all MASs are now configured, continue with [Chapter 5: Completing initial MSS administration](#) on page 105.

Chapter 4: Configuring a customer-provided MAS

This chapter applies only to a customer-provided equipment (CPE) MAS installation. The chapter describes how to set up a Messaging Application Server (MAS) or a Supplementary Server that is provided by the customer to support Avaya Modular Messaging software. The CPE MAS must have two network interface cards (NICs), one to connect to the corporate LAN and the other to connect to the private LAN.

If you are installing an Avaya-provided MAS, do not use the procedures described in this chapter. See [Configuring the Avaya MAS](#) on page 41.

 **Important:**

Customer-provided equipment (CPE) for a Modular Messaging install or upgrade must match the specifications described in *Avaya Modular Messaging Concepts and Planning Guide*.

Obtain the current DCT data file for this site before you configure the customer-provided equipment (CPE) MAS. A person responsible for planning the installation creates the file using the Modular Messaging Data Collection Tool (DCT) before the Modular Messaging system is installed. The DCT data file has an extension **mmdct**, such as *sitfile.mmdct*. For more information, see *Data Collection Tool* guide.

Topics in this chapter include:

- [CPE MAS configuration prerequisites](#) on page 88
- [Preparing the CPE MAS](#) on page 89
- [Configuring the CPE MAS](#) on page 97
- [Completing the CPE MAS configuration](#) on page 101

CPE MAS configuration prerequisites

Ensure that you complete these requirements before you start the CPE MAS configuration:

- Obtain the required software and documentation; see [Downloading required software and documentation](#) on page 11.
- Obtain the current DCT executable file (MMDCT.exe) from the Avaya support Web site (do NOT use the DCT on the applications DVD); see [Downloading software updates](#) on page 12.
- Install WebLM server if you choose to install it on a standalone server. Use the instructions provided in *Installing and configuring Avaya WebLM server* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.
- Obtain a new license file and apply it on the WebLM server. For instructions, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.
- **For systems that join the corporate Windows domain**, create the user and the computer accounts in the corporate Windows domain; see [Creating user accounts in the corporate Windows domain](#) on page 19 and [Creating computer accounts in the corporate Windows domain](#) on page 20.
- Complete the relevant pre-installation requirements, as described in [Preinstallation requirements](#) on page 9.
- Complete the initial MSS administration as described in [Performing initial MSS administration](#) on page 23.
- Continue to use the "New Modular Messaging installation" checklist in [Modular Messaging on a customer-provided MAS installation checklist](#) on page 308.

Preparing the CPE MAS

Complete the following procedures to set up each CPE MAS server to support Avaya Modular Messaging services.

- [Installing Microsoft Windows 2003 R2 operating system](#) on page 89
- [Setting a computer name](#) on page 89
- [Running recommended disk checks](#) on page 89
- [Installing and enabling Microsoft Windows services on CPE MAS](#) on page 90
- [Installing Microsoft Windows 2003 SP2](#) on page 92
- [Installing Microsoft Windows updates and security patches](#) on page 92
- [Adjusting system values](#) on page 92
- [Configure network connections](#) on page 94
- [Verifying network adapters and bindings](#) on page 95
- [Changing the Power Management settings](#) on page 96

Installing Microsoft Windows 2003 R2 operating system

Avaya recommends that you complete a new installation of Windows 2003 R2, when you perform new installations of Modular Messaging with CPE hardware. While installing Windows 2003 R2, ensure that you *only* install the Windows services listed in [Installing and enabling Microsoft Windows services on CPE MAS](#) on page 90.

Setting a computer name

When installing Windows 2003 R2 on the server, provide a name to the computer.

When you run the Modular Messaging Configuration Wizard, the system does not automatically change the name of the computer as in Avaya-provided MAS. You must manually provide the name of the computer before you run the Modular Messaging Configuration wizard.

Running recommended disk checks

Perform this procedure only for a supplementary server.

Avaya recommends that the hard disk drive in the server be maintained to prevent possible problems. The system administrator must run the following tools periodically:

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- disk Defragmenter system tool
- **chkdsk** command

If this server is in service and is not maintained, run the two recommended procedures.

Installing and enabling Microsoft Windows services on CPE MAS

You must install and enable the Microsoft Windows services on each CPE MAS that handles voice calls as described in this section.

Installing Microsoft Windows services

Complete the following steps to install the required Windows services:

1. Log on to the CPE MAS using an account that has permissions to install software on this computer, such as the local administrator account.
2. Insert the Microsoft Windows Operating System disk 1 in the CPE MAS drive.
3. Open **Control Panel**, and then double-click **Add or Remove Programs**.
4. On the left pane, click **Add/Remove Windows Components**.
5. Install Microsoft Windows services:
 - a. In the **Windows Components Wizard** window, highlight **Application Server**, and click **Details**.
 - b. In the **Application Server** window, ensure that you select the following items:
 - Application Server Console
 - ASP.NET
 - Internet information Services (IIS)
 - Message Queuing
 - c. In the **Application Server** window, highlight **Internet Information Services (IIS)**, select if the check box is clear.
 - d. Click **Details**.
 - e. Ensure that you select the following services:
 - NNTP Service
 - SMTP Service
 - World Wide Web Service
 - f. Click **OK**.
 - g. In the same window, highlight **World Wide Web Server** and click **Details**. Ensure that the **World Wide Web Service** check box is selected.

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- h. Click **OK**. The system closes the **World Wide Web Service** window.
- i. Click **OK**. The system closes the **Internet Information Services (IIS)** window.
- j. Click **OK**. The system closes the **Application Server** window.
6. In the **Windows Components Wizard** window, highlight **Management and Monitoring Tools** and click **Details**.
 - a. Select **Simple Network Management Protocol** check box and click **OK**. The system closes the **Management and Monitoring Tools** window.
7. In the **Windows Components Wizard** window, select the **Microsoft .NET Framework 2.0** check box.
8. In the **Windows Components Wizard** window, highlight **Networking Services** and click **Details**.
 - a. Select **Domain Name System (DNS)** and click **OK**. The system closes the **Networking Services** window.
9. In the **Windows Components Wizard** window, select the **Fax Services** check box.
10. Click **Next**.
 - a. Select **Do Not Share Fax Printer**.
 - b. Click **OK**.
11. Complete the wizard to install the selected services.
12. When the installation is complete, close the **Add or Remove Programs** window.

Enabling Microsoft Windows services

After you have installed the software, use the following steps to enable each installed service:

1. Right-click **My Computer** and select **Manage**.
2. In the **Computer Management** window, in the left pane, expand **Services and Applications**, and then click **Services**.
3. In the right pane, scroll down to the first new service that you installed and double-click the service. The system opens the **Properties** window.
 - a. On the **General** tab, set the **Startup type** to **Automatic**.
 - b. Click **Apply**.
 - c. Under **Service status**, click **Start**.
 - d. Wait for the service to start, and then click **OK** to close this window.
4. Repeat steps 2 and 3 to enable each service you installed. Note that only a subset of these services might be present on a MAS.
5. When you have enabled the services, close all open windows.

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Installing Microsoft Windows 2003 SP2

Verify the Windows service pack version on each customer provided MAS, install Windows 2003 SP2 if it is not installed.

Complete the following to verify the version of the service pack installed:

1. Right-click **My Computer** and select **Explore**.
 - a. In Windows Explorer, click **Help > About Windows**.
 - b. In the version description, verify that Microsoft Windows Service Pack 2 is installed.
 - c. Click **OK** to close this window.
 - d. Close Windows Explorer window.
2. If needed, install Microsoft Windows Service Pack 2 on this MAS.

Installing Microsoft Windows updates and security patches

You must install the latest Microsoft Windows software, including operating system updates and security patches. These software updates protect the system from known security weaknesses. Check with the appropriate Windows administrator for the software update procedures to use at this site.

Avaya technical support representatives must follow the specified internal procedures to verify the software that is installed. If required, the support representative must update the software with the latest patches as instructed.

Adjusting system values

You must set some default values on the server to support Modular Messaging. Verify the following settings, and adjust them if needed:

Note:

Modular Messaging Release 5.2 configures the server to use a 3GB address space. If you want to revert back to the Windows default value, then contact Avaya support.

1. Adjust the values for the Event Viewer:
 - a. Right-click **My Computer** and select **Manage**.
 - b. In the **Computer Management** window, in the left pane, expand **Event Viewer**.
 - c. Adjust the application log values:

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1. Right-click **Application** and select **Properties**.
2. On the **General** tab of the **Application Properties** window, under **Log size**, adjust the following values:
 - Avaya recommends that you set **Maximum log size** to at least 102400 KB.
 - Select **Overwrite events as needed**.
3. Click **OK** to close this window.
- d. Adjust the system log values:
 1. In the right pane, right-click **System** and select **Properties**.
 2. On the **General** tab of the **System Properties** window, under **Log size**, adjust the following values:
 - Set **Maximum log size** to at least 4032 KB.
 - Select **Overwrite events as needed**.
 3. Click **OK** to close this window.
- e. Close the **Computer Management** window.
2. Right-click **Start** and select **Explore**. Adjust File and Printer Sharing properties:
 - a. Right-click **My Network Places** and select **Properties**.
 - b. Right-click **Local Area Connection** and click **Properties**.
 - c. Select **File and Printer Sharing for Microsoft Networks** in the list box and click **Properties**.
 - d. On the **Server Optimization** tab, select **Maximize data throughput for network applications**.
 - e. Click **OK** to close this window.
 - f. Close the **Local Area Connection Properties** and **Network Connections** windows.
3. Adjust the values for Windows 2003 R2:
 - a. Right-click **My Computer** and select **Properties**.
 - b. Click the **Advanced** tab.
 - c. Under **Performance**, click **Settings**.
 - d. In the **Performance Options** window, click the **Advanced** tab.
 1. In **Processor Scheduling**, select **Background services**.
 2. In **Virtual memory**, click **Change**.
 3. The **Initial size** and **Maximum size** fields for the **Paging file size for selected drive** value vary by machine. Tailor these fields by adding 11 to the default value that is displayed as follows:

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- In **Paging file size for selected drive**, set both the **Initial size** and **Maximum size** to the default value plus 11 MB.
 - Click **Set**.
 - Click **OK** to close this window.
4. Click **OK** to close the **Performance Options** window.
 - e. On the **Advanced** tab, under **Startup and Recovery**, click **Settings**.
 - f. In the **Startup and Recovery** window, under **System failure**, verify that the **Automatically restart** is selected. Click **OK**.
 - g. Click **OK**. The system closes the **System Properties** window.
4. Restart the server.
 - If you are prompted to restart the server, click **Yes**.
 - If the system does not prompt you, manually restart the server now. Use one of the following steps:
 - a. Press **Ctrl+Alt+Del**, and then click **Shut Down**.
 - b. Select **Restart** from the drop-down list and click **OK**.
- The server restarts.

Configure network connections

For a CPE MAS install of Modular Messaging, the Modular Messaging Configuration Wizard assumes that any network connection, called **Local Area Connection**, is connected to the corporate LAN.

To ensure that the network connections are correctly set up, you *must* use the Network settings control panel. Use the following steps to set up the network connections:

1. From the **Start** menu, select **All Programs > Accessories > Communications and Network Connections**. Or from the control panel, double-click **Network Connections** or right-click on **Network Connection** icon in the notification area and select **Open Network Connections**.
2. Ensure that the **Network Connections** window is in **Details** mode.
 - On **View** menu, click **Details**.
3. Ensure that **Name** and **Status** columns are visible.
4. Disconnect all LAN cables from the server.
5. Insert the corporate LAN cable into one of the network adaptors. In the **Network Connections** window, observe which of the connection changes its state from **Unplugged** to **Connected**.

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- If the state of **Local Area Connection** changes to **Connected**, then the corporate LAN cable is inserted into the correct Network Adaptor for the Corporate LAN. Do *not* change the position of the network cable.
- If the state of **Local Area Connection** remains **Unplugged**, then move the corporate LAN cable to the other Network Adapter.

Note:

If you have installed a CPE MAS or a Supplementary server, which runs a non-English version of Windows 2003 R2 operating system, you *must* rename the display name of corporate local area connection to **Local Area Connection** and other connection to **Local Area Connection 2**.



Important:

The system *does not* support more than two network cards.

6. Connect the private LAN cable to the vacant Network Adapter.

Do *not* manually configure the IP addresses for the NICs. The Modular Messaging Configuration wizard configures the IP Addresses using the information in the DCT data file.

Verifying network adapters and bindings

You must complete the following steps to verify the search order in which private and corporate LANs are ordered on an CPE MAS.

1. On Windows desktop, select **My Network Places**.
2. Right-click and select **Properties**. The system opens the **Network Connections** window.
3. From the **Advanced** menu, click **Advanced Settings**.
4. In the **Adapters and Bindings** tab, from the list of connections, ensure that the connection to the private LAN appears above the connection to the corporate LAN. This is to ensure that MAS accesses private LAN before the corporate LAN.

Note:

If the Local Area Connection is *not* the first entry, select **Local Area Connection**. Use the up arrow key to move the item to the first position. Click **OK**.

5. Click **OK**.
6. Close all open Windows.

Changing the Power Management settings

Use the following steps to change the Power Management settings for the LAN connection:

1. Click **Start > Settings > Network Connections**.

The system opens the **Network Connections** window.

2. Select the LAN connection, right-click and select **Properties**.
 - a. Click **Configure** in the General tab.
 - b. Click the **Power Management** tab.
 - c. Clear the **Allow the computer to turn off this device to save power** check box.
3. Close the **Network Connections** window.

Configuring the CPE MAS

Before you use the updated DCT data file and run the Avaya Modular Messaging Configuration wizard to configure the server, you must complete the following procedures.

- Obtain the latest **MMDCT.exe** file. For details, see [Downloading software updates](#) on page 12.
- Obtain the required DCT data file (**.mmdct**).
- Ensure that the DCT file is accessible to the server that you install. Usually, this means inserting a storage device with the file into the server.

Though the Avaya Modular Messaging DCT allows you to specify a location other than the C:\ drive to install the Avaya Modular Messaging MAS software, the tool installs only on the C:\ drive. Regardless of the value you enter in the **Software installation path** field under **MM server > Voice Mail Domain**, the configuration wizard always installs the MAS software in the location *C:\Program Files\Avaya Modular Messaging*.

Running the Modular Messaging Configuration wizard

The Modular Messaging Configuration wizard (MMCW) uses the DCT data file to configure the CPE MAS. You must install the Modular Messaging Configuration wizard (MMCW) to configure each CPE MAS.

Complete the following to configure the CPE MAS server using Modular Messaging DCT:

1. Insert the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk into the DVD drive of the CPE MAS server.
2. Navigate to the **Install\MISC** directory and double-click **MMConfigurationWizard.msi**. Do not select the check box that launches the Modular Messaging configuration wizard.

The system installs the configuration wizard in the **C:\Program Files\Avaya Modular Messaging\Install\MISC** directory and launches the Modular Messaging configuration wizard.

3. Click **Finish**.
4. Copy the **MMDCT.exe** file from your storage device to **C:\Program Files\Avaya Modular Messaging\Install\MISC** directory.
5. Run **C:\Program Files\Avaya Modular Messaging\Install\MISC\MISC.exe**.

The system opens the **Modular Messaging DCT Tool** window.

6. On the **Modular Messaging Welcome** screen, click **Next**.
7. On the Locate Configuration Data screen, click **Browse**.

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- a. In the Open window, click the drop-down list next to **Look in**.
- b. Navigate to the storage device.

If the server fails to recognize the storage device, you can:

1. In the Open window, click **My Computer** in the left pane. After the **Look in** field shows **My Computer**, press **F5** to refresh the screen.
 2. If the system fails to display the storage device, unplug the device and insert the device again.
- c. Double-click the most current DCT data file.
8. On the **Locate Configuration Data** screen, click **Next**.
 9. When the system prompts you to confirm the data file, click **Yes**. The system opens Avaya Modular Messaging Data Collection Tool window.
 10. Click **Complete** and save the data file to the storage device, even if no changes were made.
The system returns you to the Avaya Modular Messaging Configuration Wizard.
 11. On the **Messaging Application Server Number** screen:
 - a. Change the **MAS number** field to show the correct number for this server.
 - b. Click **Next**.
 12. When the system prompts you to log in, log in to the CPE MAS using the customer account.
 13. When the configuration wizard prompts you to locate the Dialogic installation file, insert the 'Modular Messaging R5.2 MAS Application DVD 1 of 2' disk.

Note:

The configuration wizard prompts you for the Dialogic installation file **only** if you install the Dialogic port boards on the CPE MAS.



Important:

New installations support SIP based switch integration only.

14. Navigate to the DVD drive and double-click **Dialogic_Drivers\WMDialogicInstall.bat**. The system opens the Dialogic driver installation wizard.
 - a. Click **Next** and accept the licence agreement.
 - b. Click **Next**. Repeat this step until the system displays the **Choose Destination Location** screen.
 - c. Click **Browse**.
 - d. On the **Choose Folder** screen in the **Path:** field, change the drive letter to match the drive where Modular Messaging is being installed. This drive is set in the DCT file. Do not browse to find the new location. The path will read **<drive letter>:\Program Files\Dialogic**.
 - e. Click **Next** and continue to accept default values to complete the wizard.

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- f. The system launches the **Found New Hardware Wizard**. Complete the wizard to install the Dialogic driver software.
 - g. When the system prompts you to use Windows update, select **No, not at this time** and click **Next**.
 - h. When the system prompts you to choose the software, select **Install the software automatically** and click **Next**.
 - i. When the **Security Alert - Driver Installation** window opens, select **Yes** to install the driver.
 - j. Click **Finish**.
 - k. Repeat steps f to j for each Dialogic board on this MAS.
 - l. When the system prompts you, In the **Setup Complete** dialog box, select **No, I will restart my computer later**, and click **Finish**.
15. On the **Remote Shutdown** dialog box, click **Cancel**.
16. When the configuration wizard prompts you to locate the **InstallRSEngine** file, insert the 'Modular Messaging R5.2 MAS Application DVD 2 of 2' disk.
17. Navigate to the **<drive>\RealSpeak\InstallRSEngine.bat** file and double-click. The system opens the RealSpeak 4.0 InstallShield Wizard.
- a. On the RealSpeak 4.0 InstallShield Wizard, and click **Next**.
 - b. Select **I accept the terms in the license agreement**.
 - c. Click **Next**. Repeat this step until you see **Change Current Destination Folder** screen
 - d. On the **Change Current Destination Folder** screen, in the **Folder name:** field change the drive letter to match the drive where Modular Messaging is installed. This drive is set in the DCT file. Do not browse to find the new location. The path reads **<drive letter>:\Program Files\ScanSoft\RealSpeak 4.0**
 - e. Click **OK** and continue to accept default values to complete the wizard.
 - f. After the installation is complete, click **Finish**.
 - g. When the system prompts you, click **Yes** to restart the system.
 After the machine restarts, Modular Messaging Configuration Wizard launches automatically, the system starts the installation of the RealSpeak languages automatically and displays the status of installation of each language.
 - h. Remove the 'Modular Messaging R5.2 MAS Application DVD 2 of 2' disk.
18. When prompted for **Setup.exe**, insert the 'Modular Messaging R5.2 MAS Application DVD 1 of 2' disk and double-click **<drive>\Install\Setup.exe**.
- The configuration wizard continues the installation of the Modular Messaging MAS components. After the installation of the Modular Messaging components, the server reboots automatically and MM MISCM continues to run.

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19. If JRE is installed during the system upgrade, the system may display 'Revocation information for the security certificate for this site is not available'. Do you want to proceed?' message. Click **Yes** to continue.
20. On the WSO configuration wizard, click **Next** and click **Finish**.

These steps do not complete the configuration of the CPE MAS. To complete the configuration, you must proceed with the next sections.

Completing the CPE MAS configuration

Perform the following tasks to complete the configuration of the CPE MAS:

- [Entering the RAS IP addresses on CPE MAS](#) on page 101
- [Setting logging location](#) on page 101
- [Installing anti-virus software](#) on page 102

Entering the RAS IP addresses on CPE MAS

New installations of Modular Messaging support SAL only for alarming and remote access.

Remote access to the server allows the technical support staff to dial into a system to correct problems and perform routine maintenance. You must provide a method for remote services to access the system.

The Avaya Modular Messaging Configuration Wizard automatically sets up remote access to each MAS modem. You must edit the preprogrammed RAS IP addresses to use the correct addresses that the technical support organization requires. Perform the steps described in [Entering RAS IP addresses on each MAS](#) on page 51, to set up IP addresses on each MAS to allow remote access.

Setting logging location

 **CAUTION:**

Ensure that you have adequate space on the drive where your logs are located. If you do not have adequate space, your system may fail to operate correctly.

You may want to change the default location for recording logs when you:

- do not have adequate space on the default C: drive location.
- want to record logs in the same location where you installed Modular Messaging software.

To change the location for recording logs, complete the following steps:

1. Navigate to the following location on the drive where Modular Messaging was installed:
<drive letter>:\Avaya_Support\Tools
2. Double-click **MM_Logging.exe**.
The Modular Messaging **Verbose Logging** Window opens.
3. Complete the following steps for each type of log displayed at the top of the screen with the exception of the **Client**.

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- a. Click the log-type button.
 - b. In the **Folder for Log Files:** field, edit the drive letter to the drive where you want logs stored. If you have installed Modular Messaging to an alternate drive, edit the field to show the drive where Modular Messaging was installed.
 - c. Click **Apply** at the bottom of the screen.
4. When the log location is changed for all log types, click **Close** at the bottom of the screen.
- The MM Debug Log Viewer should be set up to open log files automatically after installation. If for some reason this association is not made or it becomes changed, do the following manual setup.

To manually set up MM Debug Log Viewer:

1. From the desktop, open **My Documents** (or any Windows Explorer window).
2. Click **Tools > Folder Options > File Types**.
3. Is LOG4 listed in the extensions list?
 - If YES, skip to step 7.
 - If NO, continue with step 4.
4. Click **New**.
5. In the **Create New Extension** box, type **log4**. Click **OK**.
6. In the extensions list, at the top, highlight **LOG4**. Click **Change**.
7. Click **Select the program from a list**.
8. In the **Open With** window, highlight **MM Debug Log Viewer**. If that selection is not present, click **Browse** and navigate to and select C:\AVAYA_Support\Tools\LogViewer\MMLogViewer.exe.
9. Click **OK**.
10. Close all windows.

Installing anti-virus software

You must install and administer the anti-virus software as described in [Installing and administering anti-virus software](#) on page 49.

Installing and configuring the WebLM server on an MAS

Use the procedure outlined in [Installing and configuring the WebLM server on an MAS](#) on page 61 to install and configure the WebLM server on the CPE MAS.

Alternatively,

- if you choose to install the WebLM on a standalone server, use the instructions provided in *Installing and configuring Avaya WebLM server* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.
- if you already have a WebLM server that you are using for licensing other Avaya products, proceed with [Obtaining the license file](#) on page 63.

Obtain and apply the license file on the WebLM server

Complete the following licensing procedures:

1. [Obtaining the license file](#) on page 63.
2. [Applying license file on the WebLM server](#) on page 63.
3. [Importing certificates from license](#) on page 64.
4. [Configuring the WebLM URL in VMSC](#) on page 64.

Continuing with CPE MAS configuration

To complete the configuration of the CPE MAS use the following steps:

1. Continue with [Configuring the voice mail system](#) on page 54 through [Verifying Audit service](#) on page 85.
2. Continue the installation as appropriate:
 - If you have additional MASs or the supplementary server to configure, repeat the tasks in this chapter for the next MAS through [Continuing with CPE MAS configuration](#) on page 103.
 - If all MASs and the supplementary server (if any) is now configured, continue with [Chapter 5: Completing initial MSS administration](#) on page 105.

Configuring a customer-provided MAS

Chapter 5: Completing initial MSS administration

This chapter describes how to complete initial administration on the Message Storage Server (MSS), and how to administer test subscribers for acceptance testing. After you configure all MASs in the Modular Messaging system, you must return to the MSS to complete the basic messaging administration. You can then set up test subscribers, either using a DCT data file or manually, for the system-wide acceptance tests. The amount of administration that you must do on the MSS depends on the optional features that the customer has chosen.

Note:

Before you can do the tasks described in this chapter, you must have completed the tasks in [Configuring the Avaya MAS](#) on page 41 for Avaya-provided MAS or [Configuring a customer-provided MAS](#) on page 87 for a CPE MAS.

Topics in this chapter include:

- [Continuing the MSS configuration using a DCT data file](#) on page 106
- [Continuing the MSS configuration manually](#) on page 107
- [Configuring the MSS modem](#) on page 119
- [Installing any software updates](#) on page 120
- [Verifying network adapters and bindings](#) on page 120

Continuing the MSS configuration using a DCT data file

This topic explains how to continue the automatic configuration of the MSS using a DCT data file:

1. Log onto the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
2. From the Server Administration menu on the Messaging Administration web interface, click **Configure Using DCT**.

The system displays the configuration information from the DCT data file.

3. Click ONE of the following:

- If the configuration information is correct, click **Continue Configuration** and continue with the next step.

 **Important:**

If you click **Fresh Configuration**, as explained below, you will also have to reconfigure each MAS.

- If the configuration information is incorrect, you must change the information using the DCT file (return to a Windows computer, change the information in the DCT file and copy the file to the storage device) and click **Fresh Configuration**. See the DCT online help for information about changing the DCT data file. If you have to change the DCT data file you must configure the MSS from the beginning; see [Starting the MSS configuration using a DCT data file](#) on page 26.

If you are unable to make the necessary corrections, contact support.

4. On the pop-up screen, click **OK** to continue the configuration.

The page displays the status of the configuration, automatically refreshing the information until the configuration is complete.

5. After the MSS configuration is successfully completed, complete the following:
 - a. Click **Reboot the system before proceeding**.
 - b. On the **Reboot Server** page, click **Reboot**.
 - c. On the pop-up screen that appears, click **OK**.
 - d. Proceed with [Configuring the MSS modem](#) on page 119.

Continuing the MSS configuration manually

If you chose to configure the MSS manually, this section explains how to complete the configuration. If you chose to configure the MSS using a DCT data file, see [Continuing the MSS configuration using a DCT data file](#) on page 106:

- [Updating MAS host information](#) on page 107
- [Placing the MSS in a Windows domain](#) on page 112
- [Administering classes of service](#) on page 114
- [Administering special mailboxes](#) on page 116
- [Adding test subscribers](#) on page 118

Updating MAS host information

Continue to do the appropriate procedures:

- If using a private Windows domain, proceed with [Updating MAS host information in a private Windows domain](#) on page 107.
- If using a corporate Windows domain, proceed with [Updating MAS host information in a corporate Windows domain](#) on page 110.

Updating MAS host information in a private Windows domain

If the Modular Messaging system uses the corporate Windows domain, see [Updating MAS host information in a corporate Windows domain](#) on page 110.

Updated MAS host information must be sent to each server in the Modular Messaging system:

1. On the Messaging Administration web interface, click **Server Administration > MAS Host Setup**.

The system displays the **Set Up MAS Host Information** page.

2. Select the MAS whose information you want to change, such as *MAS1*.
3. Click **Edit**.
4. Update the host information to identify this MAS on the corporate and private networks.

Completing initial MSS administration

CAUTION:

Complete the **Public** fields *only* if the corporate MAS network connection uses static IP addresses.

Continue as follows for the type of network connection used at this site:

- For corporate MAS connections that use DHCP addressing, continue with Step 5.
- For corporate MAS connections that use static IP addresses, complete the **Public** fields:
 - a. In the **Public System Name** field, enter the corporate full computer name for the MAS, such as *mymas1.loc.avaya.com*.
 - b. In the **Public IP Address** field, enter the corporate IP address of the MAS.

CAUTION:

Do not enter the MAS Windows NetBIOS (such as *mymas1*) in the Public Aliases field.

Do not enter same name in two fields. A name must be unique across a TCP/IP Network configuration, External hosts and MAS Host Setup web forms. For example, if a domain qualifier appears in a **Public Aliases** name, such as *mymas1.loc.avaya.com*, you must use a different name in **Private Aliases**, such as *mymas1.privdom1.local*.

- c. In the **Public Aliases** field, enter only aliases that the corporate network requires.

You can enter up to five aliases if required. Any names you enter must be unique on the Modular Messaging system and on the network. Separate each name with a space.

5. For all servers, verify the private LAN information:

CAUTION:

Do not change the **Private System Name** or **Address** fields for a new system. A change to the private name, or using a private IP address outside of the three allowable ranges, can prevent the system from working. If you must change the private name or use a unique private IP address, contact remote support for the special procedures required to change these values.

- a. Verify that the **Private IP Address** field shows the correct private IP address range for this site. If required, edit the private IP address for this server to use the right range.

b. In the **Private Aliases** field, enter the following:

- The private full computer name for this MAS on the private network, such as *mymas1.privdom1.local*.
- If the Public System Name entry includes a domain qualifier, such as *loc.avaya.com*, you *must* include the MAS Windows NetBIOS name in the **Private Aliases** field. For example, you must enter *mymas1* as an alias for the corporate computer name *mymas1.loc.avaya.com*.

For example, to complete the **Private Aliases** field, you would enter the following two names for MAS#1, separated by a space:

```
mymas1.privdom1.local mymas1
```

c. For **Administrator Login**, enter the domain administration account, such as *dom-admin*, and the **Administrator Password** for the account. The account enables the MAS to accept information updates.

6. Click **Save**.

7. Repeat the above process for each MAS and the Supplementary server.

8. On the Messaging Administration Web admin page, click **Server Administration > MAS Host Send**.

The system displays the **Send MAS Information** page.

9. Click **Send**.

- The system sends the host information to all MASs at the same time and reports whether the information was updated successfully. Verify that all servers in the network are updated. If so, continue with [Placing the MSS in the private Windows domain](#) on page 112.
- *If an update to a server failed*, check the network operation, using a ping test:
 - a. From the Diagnostics menu, click **Ping Another Server**.
 - b. On the ping test page, enter the IP address of the failed MAS.
 - c. Click **Ping Test** to establish connectivity.

Note:

You must ping by IP address to test the connectivity. The test fails if you ping by name and the MAS host file.

d. Repeat the test, as needed, to isolate the problem.

e. Once the problem is corrected, try to send the host information again.

10. Reboot the MSS; see [Rebooting the MSS](#) on page 39.

Updating MAS host information in a corporate Windows domain

If the Modular Messaging system uses the private Windows domain, see [Updating MAS host information in a private Windows domain](#) on page 107.

Each MAS server in the Modular Messaging system must receive updated host information.

To update the host information for each MAS:

1. From the Server Administration main menu, click **MAS Host Setup**.

The system displays the **Set Up MAS Host Information** page.

2. Select the MAS whose information you want to change, such as *MAS1*.
3. Click **Edit**.
4. On the **MAS Host Information Setup** page, update the host information to identify the MAS on the corporate and private networks.

 **CAUTION:**

Complete the **Public** fields *only* if the corporate network connection uses static IP addresses.

Continue as follows for the type of network connection used at this site:

- For corporate connections that use DHCP addressing, continue with Step 5.
- For corporate connections that use static IP addresses, complete the **Public** fields:
 - a. In the **Public System Name** field, enter the corporate full computer name for the MAS, such as *mymas1.loc.avaya.com*.
 - b. In the **Public IP Address** field, enter the corporate IP address of the MAS.

 **CAUTION:**

Do not enter the MAS Windows NetBIOS (such as *mymas1*) in the Public Aliases field.

Do not list the same name in two fields. For example, if a domain qualifier appears in a **Public Aliases** name, such as *mymas1.loc.avaya.com*, you would use a different name in **Private Aliases**, such as *mymas1.privdom1.local*.

- c. In the **Public Aliases** field, only enter aliases that the corporate network requires.

You can enter up to five aliases if required. that are unique on the Modular Messaging system and on the network. Separate each name with a space.

5. For all servers, verify the private LAN information:

 **CAUTION:**

Do not change the **Private System Name** or **Address** fields for a new system. Changing the private name, or using a private IP address outside of the three allowable ranges, can prevent the system from working. If you must change the private name or use a unique private IP address, contact remote support for the special procedures required to change these values.

- a. Verify that the **Private IP Address** field shows the correct private IP address range for this site. If required, edit the private IP address for this server to use the appropriate range.
- b. For **Private Aliases**, if the Public System Name entry includes a domain qualifier, such as *loc.avaya.com*, you must include the MAS Windows NetBIOS name in the **Private Aliases** field. For example, you must enter *mymas1* as an alias for the corporate computer name *mymas1.loc.avaya.com*.
- c. For **Administrator Login**, enter the customer account, such as *custacct*, and the **Administrator Password** for this account. This account enables the MAS to accept information updates.

6. Click **Save**.

7. Repeat the above process for each MAS.

8. From the **Server Administration** menu, click **MAS Host Send**.

The system displays the **Send MAS Information** page.

9. Click **Send**.

- The system sends the host information to all MASs at the same time and reports if the information was updated successfully. Verify that all servers that are currently in the network are updated. If so, continue with [Placing the MSS in the corporate Windows domain](#) on page 113.
- *If an update to a server failed*, check the network operation, using a ping test:
 - a. From the **Diagnostics** menu, click **Ping Another Server**.
 - b. On the ping test page, enter the IP address of the failed MAS.
 - c. Click **Ping Test** to establish connectivity.

Note:

You must ping by IP address to test connectivity. The test fails if you ping by name and the MAS host file.

- d. Repeat the test, as needed, to isolate the problem.
 - e. Once the problem is corrected, try to send the host information again.
10. Reboot the MSS; see [Rebooting the MSS](#) on page 39.

Placing the MSS in a Windows domain

Continue to the appropriate procedures:

- If using a private Windows domain, continue to [Placing the MSS in a Windows domain](#) on page 112.
- If using a corporate Windows domain, continue to [Placing the MSS in the corporate Windows domain](#) on page 113.

Placing the MSS in the private Windows domain

If the Modular Messaging system uses the corporate Windows domain, see [Placing the MSS in the corporate Windows domain](#) on page 113.

You must add the MSS to the private Windows domain that you set up on MAS#1. To do this task, you must have completed [Updating MAS host information in a private Windows domain](#) on page 107.

To add the MSS to the private Windows domain:

1. From the Server Administration menu, click **Windows Domain Setup**.
The system displays the Set Up Windows Domain page.
2. Ensure that you clear the **Use Corporate LAN?** check box.

Note:

The **Kerberos Realm** and **Authentication Method** fields are disabled for private Windows domain.

3. Enter the following information:
 - a. In the **MSS NetBIOS Name** field, type the MSS private system name, which is *mss1*.
 - b. In the **NetBIOS Domain Name** field, type the NetBIOS domain name for the private Windows domain that was created on MAS#1. For example, if the Fully Qualified Domain Controller name as shown in the DCT data file is *mymas1.privdom1.local*, enter *privdom1* in the **NetBIOS Domain Name** field.
 - c. In the **Fully Qualified Domain Controller Name** field, type the full computer name for MAS#1 on the private network, such as *mymas1.privdom1.local*.
 - d. For **Account for Joining The Domain** using a private Windows domain, enter the domain administrator login, such as *dom-admin*. This account enables the MAS to accept information updates.
 - e. In the **Password for Joining the Domain** field, type the password for the account to the domain you used in step 3d.
4. Click **Save**.
The page displays the Windows domain setup status.

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Placing the MSS in the corporate Windows domain

If the Modular Messaging system uses the private Windows domain, see [Placing the MSS in the private Windows domain](#) on page 112.

You must add the MSS to the corporate Windows domain. To do this task, you must have completed [Updating MAS host information in a corporate Windows domain](#) on page 110.

To add the MSS to the corporate Windows domain:

1. From the Server Administration menu, click **Windows Domain Setup**.

The system displays the Set Up Windows Domain page.

2. Ensure that the **Use Corporate LAN?** check box is checked.

3. Enter the following information in each field:

- a. For **Authentication Method**, select default, Winbind or Kerberos from the list as appropriate.

By default, the system uses Winbind access method.

- b. If you have selected Kerberos in step 3a, for **Kerberos Realm**, enter the fully qualified Kerberos Realm name.

- c. For **MSS NetBIOS Name**, type the Host Name.

Note:

Do not use the underscore character (_) in a MSS Host Name. The Aria TUI voice mail searches fail if you use the underscore (_) character. The IMAP RFC does not allow the underscore character (_) in host names.

- d. For **NetBIOS Domain Name**, type the NetBIOS corporate domain name for the corporate Windows network, such as *loc*.
- e. For **Fully Qualified Domain Controller Name**, type the full computer name of the corporate network.
- f. For **Account for Joining the Domain** using a corporate Windows domain, enter the customer account, such as *custacct*. This account enables the MAS to accept information updates.
- g. For **Password for Joining the Domain**, type the password for the account to the domain you used in step 3f.

4. Click **Save**.

The page displays the Windows domain setup status.

Administering classes of service

You must administer classes of service for the special mailboxes, such as postmaster or fax, and for all test subscribers.

- [Setting up a cos for required special mailboxes](#) on page 114
- [Setting up a cos for test subscribers](#) on page 115

Setting up a cos for required special mailboxes

Set up a unique class of service (cos) for the special mailboxes. Special mailboxes include the required postmaster mailbox and the optional fax mailbox, if the fax service is installed.

To set up a class of service for the special mailboxes:

1. From the Messaging Administration web interface, click **Classes-of-Service**.
The system displays the Manage Classes-of-Service page.
2. Select the class of service to modify, such as *class00*.
3. Click **Edit the Selected COS**.
4. On the Edit a Class-of-Service page, change the **Class of Service Name** to a descriptive name, such as *SpecialMailbox*.
5. In the **MAILBOX AND MESSAGE SIZES** section:
 - a. Change the units for **Maximum Mailbox Size** to **Mbytes**
 - b. Enter **64** to change **Maximum Mailbox Size** to **64 Mbytes**.
6. In the **SUBSCRIBER FEATURES AND SERVICES** section, activate the following features:

 **CAUTION:**

Set MWI for special mailboxes to **No**. Otherwise, system performance is affected.

- a. Set **Message Waiting Indication Allowed** to **no**.
 - b. Set all supported notification options to **yes**. For example, set Call Me, Find Me, and Notify Me to **Yes**.
 - c. *To access a mailbox using a desktop client*, set **Restrict Client Access** to **No**. Desktop clients include the Microsoft Outlook client and the IBM Lotus Notes client.
7. Click **Save**.

The system displays the Manage Classes-of-Service page.

Setting up a cos for test subscribers

Set up a unique class of service (cos) for each telephone user interface (TUI) that this Modular Messaging system supports. To set up classes of service for the test subscribers:

1. On the Manage Classes-of-Service page, select the class of service to modify, such as *class01*.
2. Click **Edit the Selected COS**.
3. On the Edit a Class-of-Service page, change the **Class of Service Name** to a descriptive name, such as *AriaTUI*.
4. Scroll down to the **SUBSCRIBER FEATURES AND SERVICES** section. Activate the following features:
 - a. Leave **Message Waiting Indication Allowed** set to **yes**.
 - b. Set all supported notification options to **yes**. For example, set Call Me, Find Me, and Notify Me to **yes**.
 - c. *If fax service is required*, set **Outbound Fax Calls** to **yes**.
 - d. Set **Record Mailbox Greetings** to **yes**.
 - e. *To access the mailbox*, set **Restrict Client Access** to **no**. Mailbox clients include the Microsoft Outlook client and the IBM Lotus Notes client.
 - f. For **Telephone User Interface**, select the interface required for this class of service. TUI interfaces include **MM Aria**, **MM AUDIX**, and **MM Serenade**.
5. Click **Save**.
6. *To set up another class of service*, repeat Steps 1 through 5. For example, you might set up a class of service for each type of telephone user interface, such as *AudixTUI* or *SerenadeTUI*.

Administering special mailboxes

You *must* set up a postmaster mailbox on each system, or the system will fail to work. If fax service is to be installed, you must also set up the required fax service mailbox.

To set up the required mailboxes:

1. Set up the required Postmaster Mailbox.

Note:

Usually you set up a special mailbox to act as the Postmaster Mailbox. Because this mailbox is required for the system to function properly, it should not be a mailbox likely to be deleted or have changes made to it. It will, however, have administrative messages delivered to it upon occasion and should be checked regularly (on a daily basis if possible).

- a. From the Messaging Administration web interface, click **Messaging Administration > Subscriber Management**. The system opens Manage Subscribers page.
- b. Next to the **Local Subscriber Mailbox Number** field, click **Add or Edit**.
- c. On the Add Local Subscriber page, enter the following information:
 1. For **Last Name**, type **postmaster**. Use lower-case letters.
 2. Leave **First Name** blank.
 3. For **Password**, type the password for the postmaster mailbox.
 4. For **Mailbox Number**, type a valid mailbox number. Enter 3-to-10 digits as required by the dial plan.
 5. For **Numeric Address**, type an address that is unique for the messaging network. The numeric address can be identical to the **Mailbox Number**, or you can alter them to facilitate easier addressing by remote subscribers. For example, you might prepend a **1** or the area code to the mailbox number.
 6. For **Class Of Service**, select the cos that you set up for special mailboxes. See [Setting up a cos for required special mailboxes](#) on page 114.

Note:

The **Email Handle** will be auto populated when you save this information. It *must* be postmaster in lower-case letters. Any other email address causes an error. All fields in the **SUBSCRIBER DIRECTORY** will also be saved.

2. Scroll down and click **Save**.
3. At the confirmation prompt, click **OK**.

4. *If fax service is installed*, set up the required fax service mailbox.

Note:

The IP H.323 switch integration does not support fax service.

On the Manage Subscribers page:

- a. Click **Add or Edit**.
- b. On the **Add Local Subscriber** page, enter the following information:
 1. For **Last Name**, type **fax**.
 2. For **Password**, type the password that was entered in the DCT data file.
 3. For **Mailbox Number**, type a valid mailbox number. This is the same mailbox number that you configured earlier on the MAS; see page [32](#).

Note:

This number must *not* be a real telephone (PBX) extension on the system, or the fax feature will not work correctly.

4. For **Numeric Address**, type an address that is unique among all the addresses in the messaging network. The numeric address can include or be identical to the **Mailbox Number**.
 5. For **Class Of Service**, select the cos that you set up for special mailboxes. See [Setting up a cos for required special mailboxes](#) on page 114.
- c. Scroll down and click **Save**.
 - d. At the confirmation prompt, click **OK**.
5. From the Messaging Administration web interface, select **Messaging Attributes**.

The system displays the Configure Subscriber Management page.

- a. In the **SYSTEM MAILBOXES** section:
 1. For the **Internet postmaster Mailbox Number**, enter the extension for the Mailbox Number that you used in Step 1.
 2. *If fax is installed*, for the **Fax Mailbox Number**, enter the extension for the Mailbox Number that you used in Step 4.
- b. Scroll down and click **Save**.

Adding test subscribers

Set up at least one local subscriber to test the system. If you have to test multiple types of telephone user interface (TUI), set up a test subscriber for each TUI. For instructions on how to add and configure the mailbox, see the *Modular Messaging with Avaya MSS - MAS Administration Guide*.

To add test subscribers:

1. From the Manage Subscribers page, next to the **Local Subscriber Mailbox Number** field, click **Add or Edit**.
The system displays the Add Local Subscriber page.
2. Fill in the fields in the Subscriber Information section as shown in [Table 7: Subscriber page sample settings](#). Click **Help** if you need more information about completing any fields on this page.
3. Scroll down and click **Save**.
4. At the confirmation prompt, click **OK**.
5. *If you want to test multiple user interfaces*, repeat Steps 1 through 4 to set up an MM AUDIX or MM Serenade test subscriber, as required.

Table 7: Subscriber page sample settings

Field	Setting
Last Name	Aria
First Name	Test
Password	1
Mailbox Number	Type a valid number for the test subscriber mailbox. Usually this is the same number as the primary telephone (PBX) extension for that subscriber. Enter 3-to-50 digits as required by the dial plan.
Class of Service	Use the one you modified for Setting up a cos for test subscribers on page 115, or as directed. It must have all the features that you need to test activated.
Numeric Address	Type an address that is unique within the messaging network. The numeric address can include or be identical to the Mailbox Number . Enter 3-to-50 digits as required by the dial plan.

Configuring the MSS modem

 **Important:**

New installations of Modular Messaging supports SAL only.

To configure the optional USB modem on the MSS, complete the following:

Note:

Configure the USB modem only after you have physically connected the modem.

1. From the Messaging Administration web interface, on the Server Administration menu, click **Modem/Terminal Configuration**.
2. On the Configure Modem/Terminal page, locate the correct modem either inside the **Serial Modems and Terminals** box or the **USB Modem** box. For a serial modem you need to know if it's connected to COM1 or COM2. For a USB modem, the "USB Modem Connected?" column will be marked **YES**.
3. From the Modem Type drop-down menu, select the type of modem you are use. If you select Other, you will need to fill in the Modem Init String.
4. From the Speed drop-down menu, select the applicable speed of the modem.
5. Click the check box in the far-left column for that modem, click **Save**.

Configuration status displays "successfully registered."

Installing any software updates

A new Modular Messaging system ships with the most current software that is available at the time of shipping. However, you *must* update the software after an installation or upgrade to include the latest changes. The updates might be in the form of an Avaya Service Pack (SP) or a software patch.

Complete the following steps to update Modular Messaging software:

1. Locate any relevant Avaya software updates on the Avaya Support Web site at <http://www.avaya.com/support>. For complete steps, see [Getting software updates from the Web](#) on page 370.

Note:

If you followed the procedure for [Downloading software updates](#) on page 12, you already downloaded any required software updates.

2. Complete the update procedure before you do acceptance testing:
 - a. Follow the instructions provided in [Appendix E: Updating Modular Messaging software](#) on page 369 to update the system with the latest changes.
 - b. After you install the updates, continue with [Chapter 6: Performing acceptance tests for a new installation](#) on page 121.

Verifying network adapters and bindings

After you install an Avaya S8800 1U MAS, a Supplementary server or HP DL360 G7 server, complete the following steps to verify the search order in which private and corporate LANs are ordered on an MAS or a Supplementary server.

1. On Windows desktop, select **My Network Places**.
2. Right-click and select **Properties**. The system opens the **Network Connections** window.
3. From the **Advanced** menu, click **Advanced Settings**.
4. In the **Adapters and Bindings** tab, from the list of connections, ensure that the connection to the private LAN (Local Area Connection) appears above the connection to the corporate LAN (Local Area Connection 2). This is to ensure that MAS accesses private LAN before the corporate LAN.

Note:

If the Local Area Connection is *not* the first entry, select **Local Area Connection**. Use the up arrow key to move the item to the first position. Click **OK**.

5. Close all open Windows.

Chapter 6: Performing acceptance tests for a new installation

This chapter describes how to run acceptance tests for each Messaging Application Server (MAS) that is set up to take calls. Acceptance tests verify that the Modular Messaging system is working correctly. You can run these tests from any MAS.

 **CAUTION:**

You must first install any software updates before performing acceptance tests, see [Installing any software updates](#) on page 120 for information.

You must wait about 1 minute for the MSS and MAS to synchronize their data after you add any test subscribers. Otherwise, the acceptance tests do not run correctly.

Topics in this chapter include:

- [Setting up monitoring tools—optional](#) on page 122
- [Running acceptance tests](#) on page 124
- [Removing the test subscribers on the MSS](#) on page 132

Setting up monitoring tools—optional

You can use the monitoring tools described in this section to help you complete the acceptance tests.

Using the Operation History Viewer

You can use the Operation History Viewer to monitor the call progress for any MAS. You can also identify the cause for the problems that occur during testing.

Note:

Without additional configuration, the Operation History Viewer functions on the server only where the Tracing Service is running. For more information about using the Operation History Viewer, obtain the *Modular Messaging with Avaya MSS - MAS Administration Guide*; see [Downloading user documentation](#) on page 13.

To open the Operation History Viewer:

1. Click **Start > Programs > Avaya Modular Messaging > Operation History Viewer**.
2. Set up a live mode session for all MASs in the voice mail domain:
 - a. In the **Operation History Viewer** window, click **File > New**.
 - b. In the Session Properties window, verify that **Message Application Server** shows **All Servers**.
 - c. Select the **Live Mode** check box.
 - d. Verify that all the **Select Types** check boxes are selected.
 - e. Under **Selection Activities**, verify that **All Activities** check box is selected.
 - f. Click **OK**.
3. During testing, monitor Operation History (OPH) events in the OPH Viewer. The OPH Viewer displays events as they happen on the system.
4. After testing is complete, close the OPH Viewer.
5. If the system prompts you to save the session, click **No**.

Setting up the port monitor

Test calls come in through the ports on various MASs in the system depending on how the hunt group is set up on the PBX. Use the port monitor to verify that the test calls you make come in through the ports of the MAS that you want to test.

To display the port monitor:

1. Switch the monitor to show the correct MAS. For more information, see [Displaying an MAS from the console](#) on page 42.
2. Click **Start > Programs > Avaya Modular Messaging > Port Monitor**.
3. When the system prompts for the Message Application Server, select the MAS that you want to test, such as *mymas2*. Click **Select**.

The Port Monitor displays the ports for this MAS.

4. Repeat Steps 1 through 3 to bring up Port Monitor windows on multiple MASs if desired.
5. After you dial the message retrieval number for the Modular Messaging system during the acceptance tests, check the Port Monitor window.
 - Verify that the call is coming in on a port of the MAS that you want to test.
 - If you notice that the test call does not come through the desired MAS, hang up. Dial the message retrieval number again, until you reach the correct MAS.

The number of times you might have to dial depends on the switch administration. For example, the hunt group might be administered to send each new call to the next MAS in the system. Alternatively, the hunt group might be administered to send all the calls to one MAS before it sends any calls to a subsequent MAS.

Running acceptance tests

Test each MAS that is set up to handle calls.

Leaving a call answer message

The following test works only if call-coverage is assigned on the switch to route unanswered calls to the extension for the test subscriber.

To place a test call that can be answered by the Modular Messaging system:

1. Call the first test subscriber extension from another telephone. Use an extension for which you have access to the physical telephone. Allow the Modular Messaging system to answer.
2. Speak into the telephone and record test message after the tone, for example:
"This is a test call answer message."
3. Hang up the telephone to disconnect.
4. *If you have to test multiple telephone user interfaces*, repeat steps 1 through 3 to leave a call answer message for the next test subscriber.

Retrieving test messages in integrated mode

Test the fully integrated operation of the system as directed in this section. Use an extension for which you have access to the physical telephone.

To verify the receipt of the test messages in integrated mode:

1. *If MWI is installed*, check the message waiting indicator (MWI) on the test subscriber telephone. The MWI can be a light, a screen display, or a dial-tone stutter that you hear when you pick up the telephone.

Note:

The message waiting lamp can take up to 1 minute to light on the appropriate telephone after a test message is sent.

If the MWI does *not* indicate that a message was received:

- a. Verify that the Mailbox Monitor and MWI services are started on the server designated as the MWI server (and on no other server).
- b. Verify that the Mailbox Monitor and MWI services are started:
 1. Double-click the **Monitor** icon on the desktop of the MAS designated as the MWI server, and then scroll down to these MM services in the right pane.
 2. If the Mailbox Monitor or MWI service is stopped or if the **Status** column is blank, right-click the appropriate MM service and select **Start**.
 3. Close this window.
- c. If the Mailbox Monitor and MWI services are started, check for any problem in the following:
 - test subscriber administration. MWI service *must* be enabled both in the **Class of Service** and in **Subscriber Options** for the subscriber.
 - switch integration
 - switch number administration for the test telephone
2. From the test subscriber telephone, dial the message retrieval number for the Modular Messaging system.
3. Enter the password for this mailbox and press the pound key (#).

The system voices the name of the test subscriber.
4. The first time you access this mailbox, you answer a series of prompts to set up the mailbox for operation. Answer all voice prompts as directed.

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Performing acceptance tests for a new installation

5. After the mailbox is set up, retrieve the test message.

The system uses different commands to retrieve messages, depending on the type of user interface you use. Continue with the appropriate user interface:

- On the MM Aria interface:
 - a. Press **1 1** to review the new voice messages.
 - b. Listen to the test message. If the message does not play properly, contact the remote support center.
 - c. Press **7** to erase this message.
 - d. Repeat Steps b and c to review the next message, if any.
 - e. Press the star key (*) to return to the main menu.
 - f. Continue with Step 6.
- On the MM AUDIX interface:
 - a. Press **2** to review the new messages.
 - b. Press **0** to listen to the test message. If the message does not play properly, contact the remote support center.
 - c. Press star (*) **D**, or star (*) **3**, to erase this message.
 - d. Repeat Steps b and c to review the next message, if any.
 - e. Press star (*) **R**, or star (*) **7**, to return to the main menu.
 - f. Continue with Step 6.
- On the MM Serenade interface:
 - a. Press **5** to review the new messages.
 - b. Listen to the test message. If the message does not play properly, contact the remote support center.
 - c. Press **3** to erase this message.
 - d. Repeat Steps b and c to review the next message, if any.
 - e. Press the pound key (#) to return to the Ready menu.

6. Hang up the telephone to disconnect.

7. *If MWI is installed*, check the MWI on the test subscriber telephone. The MWI should be off. If it is not off, check the MWI administration on the MAS and the PBX.

Creating and sending a test message in nonintegrated mode

The system uses slightly different commands for each telephone user interface. Note the differences in the text.

Use the following steps to create and send a test message in nonintegrated mode:

1. Dial the message retrieval number for the Modular Messaging system from any telephone that is *not* administered on the system.

The system voices the "Welcome to Avaya Messaging" prompt.

2. Press the pound key (#) to skip the system introduction.
3. Enter the extension number for test subscriber mailbox.
4. Enter the password for this mailbox and press the pound key (#).

The system voices the name of the test subscriber.

5. To create a new voice message:

- On the MM Aria interface, press **2**.
- On the MM AUDIX interface, press **1**.
- On the MM Serenade interface, press **6**.

6. Speaking into the telephone, record the following or a similar test message after the tone: "This is a test voice mail message."

7. Press the pound key (#) to approve the message.

8. When the system prompts you for the mailbox number, enter the mailbox number of another test subscriber. Then press the pound key (#).

The system voices the name of the test subscriber.

9. To approve the message and address list:

- On the MM Aria interface, press the pound key (#) twice.
- On the MM AUDIX interface, press the pound key (#).
- On the MM Serenade interface, press the pound key (#) twice.

10. Press the pound key (#) again to send the test message to the test subscriber mailbox.

11. Hang up the telephone to disconnect.

12. Retrieve the message as described in [Retrieving test messages in integrated mode](#) on page 125.

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Testing the outcalling capability

Test the outcalling capability of the system:

To test system outcalling:

1. Switch the monitor to show the appropriate MAS. For more information, see [Displaying an MAS from the console](#) on page 42.
2. Run the Modular Messaging Client software:
 - a. On the Avaya MAS, open **Internet Explorer**.
 - b. If the system displays a warning that the Internet Explorer Enhanced Security Configuration is enabled, click **OK**.
 - c. In the Internet Explorer main window, select **Tools > Internet Options**.
 - d. In the Internet Options window, click the **Security** tab.
 - e. Click **Trusted Sites** so the item is highlighted, and then click the **Sites** button.
 - f. In the Trusted sites window, verify that the **Require server verification (https:) for all sites in this zone** check box is clear.
 - g. Under **Add this Web site to the zone**, enter the full corporate computer name of the MSS and click **Add**. Use the format *mymss.loc.avaya.com*, for example, enter *mss.dr.avaya.com*.



Important:

Do not enter **http://** or **https://** in front of the computer name, or the browser might not find the server automatically.

- h. Click **OK** to close the Trusted sites window.
- i. Click **OK** to close the Internet Options window.
- j. In the address field of the Internet Explorer main window, enter *http://mss1*, the private address of the MSS and then press **Enter**. Use the format *mymss.loc.avaya.com*, for example, type *mss.dr.avaya.com*.
- k. Continue logging in to the MSS.
3. Launch Subscriber Options:
 - a. On the **Messaging Administration** web interface, Click **Messaging Administration > Subscriber Management**.
 - b. On the **Manage Subscribers** page, type a mailbox number into the **Local Subscriber Mailbox Number** field and click **Add or Edit**.
 - c. On the **Edit Local Subscriber** page, scroll to the bottom of the page and click **Launch Subscriber Options**.
 - d. On the File Download window, click **Open**.

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4. Set up the recording and playback options to use a telephone near you:
 - a. In the Modular Messaging User Properties window, click the **Media Setup** tab.
 - b. For **When composing voice messages**, select **Telephone**.
 - c. Click **Configure**.
 - d. In the Telephone Properties window, enter the extension number of a telephone near you.
 - e. Select or enter the name of this MAS if needed. Click **OK**.
 - f. For **When reviewing voice messages**, select **Telephone**.
 - g. Repeat Steps c through e to set up telephone playback.
 - h. Click **Apply**.
5. Record a personal greeting:
 - a. In the Modular Messaging User Properties window, click the **Greetings** tab.
 - b. Verify that system uses the telephone to record and playback:
 1. Check the icon to the left of the status display. If it shows a telephone, continue with Step c.
 2. If the icon shows a terminal, right-click and select **Telephone**. The icon changes to show a telephone. Continue with Step c.
 - c. Under Rules:
 1. Under Default call handling, select **Play my personal greeting**.
 2. Click red **Record** button on the player near the bottom of the window.
 3. When the telephone rings, answer the call and record a personal greeting for the test subscriber.
 4. After you record the test greeting, hang up the phone.
 5. Click **Apply**.

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6. Play back the greeting to test outcalling, as follows:
 - a. Click the black, single-arrow **Play** button on the player near the bottom of the window.
 - b. Answer the telephone when it rings.

The picture of the telephone changes to off-hook.
 - c. Listen for the system to play the greeting of the test subscriber.
 - d. Hang up the telephone.

The picture of the telephone changes back to being on-hook in two seconds.
7. Set up the MWI rule:
 - a. On the **Assistant** tab, right-click **Message Waiting Indicator** and click **New Rule**. Make sure that the option is checked.
 - b. Click the Message Waiting Indicator rule that appears. Text for the rule appears near the bottom of the tab.
 - c. Click **Apply**.
8. Click **OK** to close the Modular Messaging User Properties window.
9. Close all open windows.

Creating and printing a fax message

Do this test *only* under the following circumstances:

- When the MM Fax Sender server is installed in the vmd.
- On the MAS that hosts the MM Fax Sender server.

To create and send a test fax message:

1. From a fax machine, send a fax to the test subscriber mailbox. The subscriber's class of service must have both Inbound Fax and Outbound Fax Calls set to **Yes**.
2. Wait a few minutes for the fax to be delivered. The MWI lamp, if present, on the test subscriber telephone should light.
3. From a telephone (NOT the fax machine), dial the message retrieval number for the Modular Messaging system.
4. Press the pound key (#) to access the test subscriber mailbox.
5. Enter the extension number for the test subscriber mailbox.
6. Enter the password and press the pound key (#).

The system speaks the name of the test subscriber.

7. Retrieve and print the fax as follows:
 - On the MM Aria interface:
 - a. Press **1** to retrieve new messages.
 - b. Press **3** to retrieve the fax message.
 - c. After the prompt finishes, press **2** and follow the prompts.
 - On the MM AUDIX interface:
 - a. Press **2** to retrieve new messages.
 - b. Press star (*) **1** to print the fax.
 - c. Press star star (**) **6** and follow the prompts.
 - On the MM Serenade interface:
 - a. Press **1 9** to retrieve new messages.
 - b. Press **8** to print the fax.
 - c. Press **3** and follow the prompts.
8. Verify that the fax prints correctly.
9. *If MWI is installed*, check the MWI on the test subscriber telephone again. The MWI should be off.

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Removing the test subscribers on the MSS

Before you remove the test subscribers, ensure that you complete any other testing, such as ELA or Broadcast testing. When acceptance testing is complete, remove the test subscribers:

1. Switch the monitor to show the MSS.
2. From the Messaging Administration web interface, click **Subscriber Management**.
The system displays the Manage Subscribers page.
3. On the line **Local Subscribers** for this MSS, such as *mymss*, click **Manage**.
4. On the Manage Local Subscribers page:
 - a. Select the test subscriber to delete.
 - b. Click **Delete the Selected Subscriber**.
 - c. If the system prompts you to confirm removing the subscriber, click **OK**.
 - d. At the confirmation prompt, click **OK**.
5. Repeat Step 4 to remove all test subscribers.

Chapter 7: Setting up support and making system backups

This chapter describes how to complete the serviceability configuration for the Message Storage Server (MSS), backup the Modular Messaging system information and complete the new installation on Modular Messaging system.

This chapter includes the following topics:

- [Setting up logins and remote access](#) on page 134
- [Setting up alarming on the MSS](#) on page 138
- [Backing up the system](#) on page 145
- [Completing the installation](#) on page 148

Setting up logins and remote access

Set up the required logins and remote access as described in this section. These steps allow a remote service center to dial in to the system for troubleshooting or system maintenance.

 **Important:**

If you are installing or migrating to Modular Messaging Release 5.2, SAL is the *only* remote access mechanism that Avaya supports. To activate the remote access using SAL, you must register your Modular Messaging system and the SAL gateway. For more information, see *Secure Access Link 1.5 Gateway Implementation Guide*. Avaya field technicians can also help you with the SAL registration.

Registering the system in ART

You must register the Modular Messaging system through the Avaya Automatic Registration Tool (ART) to obtain the information that is required to complete the installation. The information that you need for installation includes:

- Product identifier (ID) for each MAS, used to identify the server that generates an alarm
- IP addresses to remotely access each server:
 - the `tscppp` point-to-point protocol (PPP) login on the MSS for Avaya technical support
 - IP addresses that the remote access service (RAS) uses to access each MAS. You can register an MAS to obtain the product ID and IP addresses in advance. For more information about using ART, see your local procedures.

Registering an MSS

The MSS must be running and remote access must be established when you register the server. For example, you can register the MSS first, and continue with the installation.

When you register the MSS, the Avaya expert system dials in and automatically programs the server with the product ID and `tscppp` IP addresses. The ART registration process reprograms certain system passwords for improved security.

Registering an MAS

You can register an MAS before you install it because the Avaya expert systems do not automatically dial in or program any information on an MAS. You must register each MAS in the system, including the Supplementary server, if present. The registration process populates the customer login and password information in Maestro and provides RAS IP addresses and product IDs for each server.

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To register an MAS, call the Product Registration group. The registration group must add the **Cust Assigned Login ID** and the **Cust Assigned Password** in the Maestro. The login and password *must* match the technical support account for you to access an MAS.

After you register each MAS, record the RAS IP addresses in the DCT data file. To enter RAS IP addresses on the MAS, see [Entering RAS IP addresses on each MAS](#) on page 51.

Administering logins and passwords

Note:

You can set this up in the DCT. In that case, these logins and passwords should already be configured for all logins except for *dadmin* (Business Partners). If you use *dadmin*, complete this procedure.

You must administer logins and passwords for all Modem Dialout-supported systems to support remote maintenance. You can set up any additional required logins, such as the *dadmin* login that Avaya Business Partners use to administer or maintain the system.

You can set up additional logins either from the console or from another computer on the customer LAN. You can use the *craft* login to activate *dadmin* or other required logins and grant permission.

To administer additional logins:

1. From the Security menu, click **Local Administrators**.

The system displays the Manage Local Administration Accounts page.

2. Select an account, such as *sa* or *vm*, and then click **Edit the Selected Admin**.

The system displays the Edit Local Administration Account page.

- a. From the Local Authentication Enabled? drop-down menu, select **yes** (if it's not already selected).
 - b. For **Password**, enter the appropriate password.
 - c. For **Confirm Password**, type the same password.
 - d. Click **Save**.
3. Repeat Step 2 for each additional login that you must administer. The logins include:
 - *craftppp* for technical support remote access
 - *dadmin* for Business Partners support
 - *sa* and *vm* for customer administration

Setting up the PPP server configuration

 **Important:**

New installations support SAL alarming only.

Perform this task if you need to provide local and remote IP addresses for point-to-point protocol (PPP) remote access because the system does not provide other connectivity, such as through the Internet. Type of login you might administer this way is *craftppp* or *sapppp*.

Note:

You can set this up in the DCT. In that case, this should already be configured. Also, the ART registration process automatically programs the *tscppp* login for Avaya remote technical support.

To set up the PPP service on this server:

1. From the Security menu, click **PPP Configuration**.
The system displays the Configure PPP Users page.
2. For each login account that you must administer, enter the following information:
 - a. For **Local IP Address**, type the customer-provided IP address for PPP access through the MSS modem.
 - b. For **Remote IP Address**, type the IP address for the remote device that is to connect to this MSS. Either the customer or remote support might provide this IP address.
 - c. For **Password**, type the password for the login account.
 - d. For **Confirm Password**, type the same password for the login account.
3. Repeat Step 2 for each of the PPP logins that you must set up.
4. After you administer all required logins, click **Save**.

Setting up alarming on the MSS



Important:

New installations support SAL only.

Complete and test the setup for alarm on the MSS as described in this section.

Specifying MSS alarm origination

Activate alarm origination to enable the appropriate party to receive notification of alarms that occur on the system. This might be a remote service center or a corporate NMS.

To set up alarm origination through the MSS:

1. Clear all alarms. For instructions, obtain "MSS alarms;" see [Downloading user documentation](#) on page 13.
2. Insert a labeled, writable DVD-RAM into the DVD drive for the nightly backup.
3. From the **Alarming** menu, click **Alarming Configuration**.

The system displays the **Configure Alarms** page.

4. Enter the **Product ID** for the MSS.

Note:

The ART registration process automatically programs the MSS product ID. A valid product ID must be present, or the test fails.

5. Set the alarm origination type:
 - For new installations, set the **Alarm Origination** to SAL or INACTIVE.
 - For Modular Messaging system that is upgraded to Release 5.2, set the **Alarm Origination** to the type of alarm used on the system or indicate that alarm is inactive:
 - **INACTIVE**
 - **Modem Dialout**
 - **SNMP**
 - **Internet**
6. Verify that **Alarm Suppression** is set to **INACTIVE**. You can use the default settings for **Alarm Level** and **Clear Alarm Notification**. For more information about completing each field, click **Help**.

7. Complete the alarming information for the site:

- If you selected **SAL** alarming:
 - a. click **Save** on the **Configure Alarms** page.
 - b. From the Alarming menu, select **SNMP Community**.
 - c. On the Administer SNMP Community page, click **Add** to add the community you need for SNMP trap destination. If the community already exists, skip to step g.
 - d. For **Community**, click the field and enter a community name. This name is used to validate when communicating between the SNMP client and the SNMP server.
 - e. For **Apply To**, from the drop-down menu, select either **Traps** or **Both**.
 - f. Click **Save**, a window appears if the add was successful.
 - g. From the **Alarming** menu, click **SAL Destinations**.
 - h. Click **Add**.
 - i. Complete the appropriate fields. For more information about completing each field, see the SAL Destinations setup in the task [Configuring serviceability settings on MAS#1](#) on page 59.
 - j. Click **Save**.
- If you selected **Modem Dialout** alarming, enter the **Modem Dialout Destination** telephone number and then click **Save**.
- If you selected **SNMP** alarming:
 - a. Click **Save** on the Configure Alarms page.
 - b. From the Alarming menu, select **SNMP Community**.
 - c. On the Administer SNMP Community page, click **Add** to add the community you need for SNMP trap destination. If the community already exists, skip to step g.
 - d. For **Community**, click the field and enter a community name. This name is used to validate when communicating between the SNMP client and the SNMP server.
 - e. For **Apply To**, from the drop-down menu, select either **Traps** or **Both**.
 - f. Click **Save**, a window appears if the add was successful.
 - g. From the Alarming menu, select **SNMP Trap Destination**.
 - h. Click **Add**.
 - i. Complete the appropriate fields. For more information about completing each field, see the SNMP Trap Destination setup in the task [Configuring serviceability settings on MAS#1](#) on page 59.
 - j. Click **Save**.
- If you selected **Internet** alarming:
 - a. Click **Save** on the Configure Alarms page.

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- b. From the Alarming menu, select **HTTPS Servers**.
- c. On the Administer HTTP Proxy Servers page:
 - If Internet alarming is not using proxy servers, verify the default addresses in both **Destination** fields.
 - If the enterprise network configuration does not pass HTTP, then set Internal alarming to use proxy servers. From the "Enable Customer HTTPS Proxy Servers" drop-down menu, select **Enabled** and then complete both **Proxy Server** fields.
- d. Click **Save**.

Testing alarming origination

Important:

New installations of Modular Messaging support SAL only. However, this section also provides the set up required to test the alarm origination for SNMP, Internet or Modem Dialout type of alarm.

For alarming setups, test the alarm origination to verify that alarms are logged correctly and are sent to the correct destination.

Note:

This test requires the receiving system, either Modem Dialout, SNMP, or Internet, to be set up by the appropriate party and ready to receive alarms.

For more information about setting up SNMP alarming at a site, obtain "Administering SNMP on the MSS;" see [Downloading user documentation](#) on page 13. Do additional SNMP administration beyond the steps in this installation guide after the Modular Messaging system is set up and running.

To test the alarm origination:

1. From the Diagnostics menu, click **Alarm Origination**.
The system displays the Test Alarm Origination page.
2. Click **Run Test**.
3. If the alarm origination test must use the modem, log off as quickly as possible.
4. Wait for five minutes for the test alarm to be acknowledged and resolved.
5. Access the Alarm Log. From the Logs menu, click **Alarm**.
6. On the Alarm Log page, click **Display** to determine if the minor alarm VM type ALARM_ORIG is still active. If the alarm is resolved before 30 minutes has elapsed, consider that the alarm is working. If during the 30 minutes the alarm is still active:
 - a. Click **Back** on the Web browser.
 - b. Wait a few more minutes, and then click **Display** again.
7. When the active alarm no longer appears in the alarm list:
 - a. On the Alarm Log page, set the **Alarm Type** to **Resolve**.
 - b. Click **Display**.
 - c. Locate the **VM** alarm type **ALARM_ORIG** at alarm level **MIN**. Verify that the alarm was acknowledged with a **Y** in the **Ack** column, and resolved.
8. If the test fails, that means the alarm only cleared after a reboot or after 30 minutes had elapsed (the MAINT process clears the alarm automatically after 30 minutes), verify that the remote service center is connected. Correct any settings, and test the alarm.

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Using the DCT to analyze the current configuration

As a final installation task, you must ensure that the DCT data file for the Avaya Modular Messaging system is complete and current. To do this, you must collect information from each MAS in the system.

To collect current data from each MAS and the Supplementary server, if present:

1. Replace the **MMDCT.exe** file found in **C:\Program Files\Avaya Modular Messaging\Install\MISCM** with the most current version (see [Downloading software updates](#) on page 12). This must be done on each MAS and Supplementary server.
2. Verify that the Modular Messaging system is working correctly and all servers are running.
3. Switch the monitor to show the server to analyze.

 **CAUTION:**

For a new installation, start with MAS#1 and analyze MASs in order: MAS#1 and then MAS#2, and so on.

4. Insert a storage device into the server.
5. In Windows Explorer, navigate to the directory that contains the DCT program. You can find a copy of the DCT executable file in **C:\Program Files\Avaya Modular Messaging\Install\MISCM**.
6. Double-click **MMDCT.exe**.
7. In the Avaya Modular Messaging Data Collection Tool window, select **Analyze existing system**, and then click **OK**.
8. When the program asks if you want to use an existing DCT file, click **Yes**.
9. In the Open window, click the drop-down list next to **Look in**.
10. Complete *one* of the following:
 - For MAS#1, navigate to the location of the site's original DCT data file.
 - For subsequent MASs, navigate to the location of the most current DCT data file on the storage device, such as *sitelfile-analyzed.mmdct*.

 **CAUTION:**

For a multiple-MAS system, you must open the same data file that you saved from the previous MAS. Otherwise, the data from the previous server is lost. Do *not* manually enter the data for subsequent servers! Use the DCT to analyze each server in turn. The tool collects some data that does not appear on the DCT screens.

11. Double-click the appropriate data file.

12. On the MM System Analysis screen, use the **MAS Information is being collected from** drop-down menu to select the appropriate MAS, such as **First MAS (#1)** or **Second MAS (#2)**.
13. Click **Start**.

The system displays the data collection process in the window. After the information is collected successfully, which could take several minutes, the system displays a confirmation window.
14. Click **OK**.
15. On the **Avaya Modular Messaging Data Collection Tool** window, click **Save**.
16. In the **Save As** window, navigate to the storage device.
17. Complete *one* of the following:
 - For MAS#1, type the name of the data file in the **File** name field. Use a new filename to indicate that this is the most current data file. For example, you might type *sitfile-analyzed*.
 - For subsequent MASs, select the same file you saved for MAS#1, such as *sitfile-analyzed*, in the **File** name field.
18. Click **Save**. For subsequent MASs, then click **Yes** when asked if you want to replace this file.
19. On the Avaya Modular Messaging Data Collection Tool window, click **Cancel**.
20. Click **No** when asked to save the current configuration (you already saved the file above).
21. Double-click the icon on the task bar to **Safely Remove Hardware** and follow the prompts to safely remove the storage device.
22. Repeat this task for each subsequent MAS.
23. When you have analyzed all MASs and the Supplementary server:
 - a. Get the original DCT file.
 - b. Get the analyzed DCT file.
 - c. In the analyzed DCT file, enter the values in fields that are not populated by the analyzed DCT file with the data from the original DCT file. Use DCT tool to enter the information.

Copying the DCT data file for backup

Once all MAS servers in the voice mail domain have been analyzed, copy the most recent version of the DCT data file from the storage device to the MSS. This is to keep a backup of the data.

To copy the most current DCT data file from the storage device:

1. Insert the storage device into an MAS.
2. Log on to the same account that you used on the Windows Domain Setup page for [Placing the MSS in a Windows domain](#) on page 112:
 - In a private Windows domain, use the domain administrator account name, such as *dom-admin*.
 - In a corporate Windows domain, use the customer account name, such as *custacct*.
3. Copy the updated DCT data file from the storage device to **\\mss1\masbackup** location on the MSS.
 - a. Click **Start > Run**. The system opens **Run** window.
 - b. Enter **\\mss1\masbackup** and click **OK**. The system opens the **Windows Explorer** window.
 - c. Copy the DCT data file to the **\\mss1\masbackup** directory.
4. Remove the storage device from an MAS.

Backing up the system

As a final installation task, back up the information that you administered on the system. Do an attended (manual) backup to save your work and to verify the backup function.

Note:

If a system failure occurs, the system does not restore the local administration accounts on the MSS that the AAA server authenticates. The administrator must re-add the local administration accounts while restoring the data on the MSS.

Running backups on each MAS

Do this task on each MAS.

You must send MAS backup data to the MSS, so it can be backed up with the rest of the system data on DVD-RAM.

To back up the data on each MAS:

1. Switch the monitor to show MAS#1. For more information, see [Displaying an MAS from the console](#) on page 42.
2. Log on to the same account that you used on the Windows Domain Setup page for [Placing the MSS in a Windows domain](#) on page 112:
 - In a private Windows domain, use the domain administrator account name, such as *dom-admin*.
 - In a corporate Windows domain, use the customer account name, such as *custacct*.
3. To view the scheduled backup program for the MAS, double-click the **Scheduled Tasks** icon on the desktop.
4. In the **Scheduled Tasks** window, run an attended backup on this MAS:
 - a. Right-click the task named **MAS Backup** and select **Run**.

The system immediately starts to back up the data on this MAS to the MSS. The **Status** column shows **Running**. When the backup is complete, the **Status** column goes blank. This process takes about a minute.

When the backup completes successfully, continue with Step 5.

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b. *Optional:* To verify if the backup process is successful:

1. Double-click the **Monitor** icon on the desktop.
2. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
3. Refresh the window display periodically until you see the following events.
 - **ntbackup 8009, End Verify: The operation was successfully completed.**
 - **ntbackup 8019, End Operation: The operation was successfully completed.**

Note:

On MAS#1, the event viewer shows two sets of backup events because the backup program generates two files on the MSS: *MYMAS#1MASSingle.bkf* and *MYMAS#1MASAll.bkf*. The process of backup on subsequent MASs generate only the MASAll.bkf file for each MAS, so only one set of backup events is present.

c. *If the backup fails to run,* verify the account settings:

1. Double-click the task **MAS Backup** to view the properties window.
 2. In the MAS Backup window, click the **Task** tab. Verify that the account in the **Run as** field is the correct account that has permissions to run backups manually. If the account is incorrect, you can type the correct value now. For more information, see [Placing the MSS in a Windows domain](#) on page 112.
 3. If you change the account, or if you want to verify the password, click **Set password**. In the Set Password window, enter and confirm the password for the required account. Click **OK**.
 4. Click **OK** to close the MAS Backup window.
 5. Repeat Step 4-a to run the backup again.
5. Close the Scheduled Tasks window.
 6. Repeat this procedure for each MAS in the system.

Setting up and running a backup on the MSS

After you have run an attended backup of each MAS, run an attended backup on the MSS now. Make the first system backup to DVD-RAM.

1. Log on to the MSS server as **craft** using the appropriate password.
The system displays the Messaging Administration web interface.
2. From the Backup/Restore menu, click **Backup**.
The system displays the Backup page.
3. Make a backup of the new Release 5.2 system data:
 - a. Because the system is not yet in service, you do not necessarily have to stop the voice system.
 - b. Verify that **Media Type** is set to **DVD-RAM**.
 - c. Set all the data fields to back up to **Yes**.
 - d. Click **Start Backup**.
 - e. If the system prompts you to continue, click **Continue**.
 - f. The system estimates the number of DVDs that it requires. Verify that you have the correct number of DVDs available. Click **Continue**.
 - g. When the system prompts you to insert the DVD, click **Continue**.
The system saves the new system configuration to the DVD. Allow about 30 minutes for each DVD.

Note:

If you have not inserted a writable DVD, the system displays the following error message: **Wrong media, Please use DVD-RAM media**.

- h. Follow the prompts on the screen to track and complete the backup process. Scroll to the bottom of the page to see the most recent status messages. The message **FULL-MANUAL BACKUP completed successfully** indicates that the backup is complete.
4. Consult the customer to decide the time and the method used to run the periodic unattended backups of the system data.
The system supports backups to DVD-RAM or through the customer network using FTP or SFTP. For instructions, obtain "Backing up the MSS;" see [Downloading user documentation](#) on page 13. For overview information, see *Avaya Modular Messaging Concepts and Planning Guide*.
5. When you are finished, log off from the system.

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Completing the installation

Use the following steps to complete the installation of a new system:

- [Installing the client software](#) on page 148
- [Turning over the system](#) on page 149

Installing the client software

Install the appropriate client software, which includes the following:

- Modular Messaging Web Client. This software *must* be on its own server and *not* on an MAS or a Supplementary server
- Modular Messaging Web Subscriber Options, if installed on a non-MAS server
- Avaya Modular Messaging Notes Client
- Avaya Modular Messaging Outlook Client, Avaya Modular Messaging Outlook Restricted Client, Subscriber Options.

Note:

The ***Subscriber Options components*** are automatically installed on the MAS as part of Release 5.2. *Do not* manually install or delete any MM Clients, including Subscriber Options, on any MAS. For more information, see the *Avaya Modular Messaging Subscriber Options User Guide* and see [Downloading configuration notes](#) on page 12.

Turning over the system

The system is now considered ready for handoff to the customer. Complete the following steps as part of the handoff procedure.

1. Make a copy of the original DCT data file used to configure the new system and the analyzed DCT data file created at the end of the installation.
2. Distribute the copies of DCT data files to the following:
 - Customer
 - Project planner
 - Organization that remotely supports the system
 - Appropriate technical support group
3. Delete the data files from your storage device for security purposes.
4. Advise the customer about the initial administration that was completed. The customer can customize the following:
 - a. The feature parameters in the Voice Mail System Configuration (VMSC) program. For more information, see [Configuring the voice mail system](#) on page 54.
 - b. The method used for automatic (scheduled) system backups. For example, customers might want to implement FTP backup over the LAN instead of using DVD-RAM.
 - c. The classes of service to use for subscribers might need to be updated or expanded. For more information, see [Setting up a cos for test subscribers](#) on page 115.
5. Advise the customer about the ongoing administration that is required, such as customizing parameters, installing client packages, and maintaining the system. For more information, direct the customer to [Downloading user documentation](#) on page 13.

Note:

The system is set up to send alarm information and receive incoming technical support calls. If the customer does not want this service, suppress alarm notification. To suppress the alarm notification, select **Suppress alarm notifications** on the **Serviceability** page, in the Voice Mail System Configuration. For more information, see *Modular Messaging with Avaya MSS - MAS Administration Guide*.

Chapter 8: Upgrading to Modular Messaging Release 5.2

This chapter describes how to upgrade MSS, Avaya MAS or customer-provided MAS or a Supplementary server to Modular Messaging Release 5.2 from:

- Release 5.0 or Release 5.1 running on an S3500, S8730 or a customer-provided MAS using the Modular Messaging Release 5.2 Upgrade application.
- Release 3.x or Release 4.0 running on an S3500 server.

Note:

You *cannot* upgrade from S8800 server to Release 5.2. Migrating to HP DL360 G7 server hardware is the only way to move the Modular Messaging system from S8800 server to Release 5.2.

You *cannot* upgrade from S3400 server to Release 5.2. Migrating to S8800 1U hardware is the only way to move the Modular Messaging system from S3400 server to Release 5.2.

If you are replacing S3400, S3500 or S8730 servers with S8800 1U servers, follow the instructions provided in [Migrating to Modular Messaging Release 5.2 on S8800 1U-family server](#) on page 209.

If you are moving the Modular Messaging system to the corporate Windows domain, first complete the entire upgrade, then move the system to the corporate Windows domain. For complete information, see [Moving to the corporate Windows domain after upgrade](#) on page 193.

If you are changing the switch integration, perform the conversion procedure before or after you complete the upgrade process. For complete instructions to change the switch integration, see [Changing switch integration](#) on page 186.

Topics in this chapter include:

Upgrading from Release 5.0 or Release 5.1:

- [Upgrading from Release 5.0 or Release 5.1 to Release 5.2](#) on page 153

Upgrading from Release 3.x or Release 4.0:

- [Planning for the upgrade from Release 3.x or Release 4.0](#) on page 154
- [Performing pre-upgrade tasks](#) on page 157
- [Upgrading the MSS from Release 3.x or Release 4.0](#) on page 171
- [Upgrading an MAS from Release 3.x or Release 4.0](#) on page 173
- [Completing the upgrade from Release 3.x or Release 4.0](#) on page 181

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- [Converting Supplementary server to run a 0 port MAS on the Supplementary server](#) on page 183
- [Changing switch integration](#) on page 186
- [Moving to the corporate Windows domain after upgrade](#) on page 193

Upgrading from Release 5.0 or Release 5.1 to Release 5.2

To upgrade from Modular Messaging Release 5.0 or Release 5.1 to Release 5.2, you *must* use the latest Modular Messaging Release 5.2 Upgrade application available at the Avaya Support Web site (<http://www.avaya.com/support>).

Before you upgrade the Modular Messaging system to Release 5.2, ensure that you meet the following requirements:

- Obtain the *Upgrading MM components to Release 5.2 using Modular Messaging 5.2 Upgrade application* guide.
- Follow the instructions provided in the document while you upgrade Modular Messaging Release 5.0 or Release 5.1.
- *Do not* use the media to complete the upgrade. The procedure to upgrade Release 5.0 or Release 5.1 to Release 5.2 is different from the procedure you follow to upgrade Modular Messaging Release 3.x or Release 4.0 to Release 5.2.


Planning for the upgrade from Release 3.x or Release 4.0

Consider the requirements to upgrade the Modular Messaging system given in section [Upgrade requirements](#) on page 155.

In Modular Messaging Release 5.2, the process that you use to upgrade a Supplementary server is the same process that you use to upgrade the MAS. Upgrade each MAS and then upgrade the Supplementary server.

You must complete the following before you upgrade from Release 3.x or Release 4.0:

1. Assemble and review the required documentation. For more information about how to access these items on the Web site, see [Downloading required software and documentation](#) on page 11:
 - Data Collection Tool (DCT). You do not need a DCT data file for an upgrade. However, you must analyze the system to create a DCT file before the upgrade to save any important system information for backup.
 - Upgrade checklists
 - Web Client Installation and Upgrades guide
 - Web Subscriber Options Installation and Upgrades guide.
2. Manually check for the following:
 - a. Ensure that there are no errors or warnings on the system.
 - b. Resolve major and minor alarms.
 - c. Verify that backups are completed.
 - d. Verify that the private IP addresses are in the correct range.

 **Important:**
When you verify the steps e and f, remember that private IP addresses and corporate IP addresses must not use the same subnet.

 - e. Verify that private IP addresses are on the same subnet.
 - f. Verify that corporate IP addresses are on the same subnet.
 - g. Verify that the private name of the MSS is **mss1**.
 - h. Verify that the corporate NetBIOS name is not **mss1**. For example, the corporate name cannot be **mss1.loc.avaya.com**.
3. Review product functionality with the customer:
 - Differences that are noticeable to the customer.
 - Known issues; see Product Support Notices (PSNs) on the Avaya support Web site.
 - Rollout plan for new features.

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- Security concerns.
4. Coordinate with MMTAC to provide implementation schedule for Tiered Support.

Upgrade requirements

To upgrade a Modular Messaging system, you need:

- Avaya Modular Messaging R5.2.—MSS Application disk, MSS OS disk and MAS Application disks. For more information about these disks, see [Table 1: Required Modular Messaging software](#) on page 10.
- The original DCT file or planning forms for the system that runs on Release 3.x.
- The latest analyzed DCT file for the system.
- A new license file to apply on the WebLM server. For instructions, see [Obtaining the license file](#) on page 63.
- To ensure that the Modular Messaging system is at minimum Service Pack and Patch level as provided in the table.

Table 8: Minimum required Service Pack and patch level

MM Release Number	Minimum SP level required	Minimum Patch on SP required
3.0	SP7	Patch 4
3.1 ¹	Avaya does not recommend any specific SP or Patch level	
4.0	SP7	Patch 2

1. However, if the Modular Messaging Release 3.1 system is at SP9, you *must* remove the M7040rf+k on the MSS as instructed in step 4 c in [Preparing for the upgrade](#) on page 157.

- The following information and software from the Avaya Support Web site at <http://www.avaya.com/support>. For more information about how to access these items on the Web site, see [Downloading required software and documentation](#) on page 11.
 - The most current copy of the configuration notes for this switch integration.
 - The Avaya Modular Messaging MSS Pre-upgrade and Backup Verification Tool. For more information, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 159.
 - The latest applicable Modular Messaging software updates from the Avaya Support Web site at <http://www.avaya.com/support> including release notes.

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 **CAUTION:**

Avaya does not support DecTalk and TTS3000 TTS engines. If you were using either of these TTS engines, the upgrade automatically removes them and installs the ScanSoft RealSpeak TTS engine.

- Print the upgrade checklist from [Modular Messaging Release 5.2 upgrade and migration checklists](#) on page 312. Use the checklist to track your progress.

Switching the monitor to show the correct server

You must switch the display from one server to another during a system upgrade.

To display the correct server, complete the following steps:

1. Verify that the monitor is showing the MSS.
 - For a 2-port KVM switch, the MSS is connected to one of the computer port.
 - For an 8-port Belkin KVM switch, the MSS usually is connected to the first computer port on the switch. The port is labeled **VGA 01**.
2. If the monitor displays a different server, toggle the port to show the MSS.
 - To have a 2-port Belkin KVM switch show a different server:
 - a. Gently press **Scroll Lock** twice.
The LED on top of the Belkin KVM switch starts to blink.
 - b. Type the port number on the keyboard. For example, type **1** for port 1.
 - To have an 8-port Belkin KVM switch show a different server:
 - a. Gently press **Scroll Lock** twice within 2 seconds.
 - b. Select the server to display using *one* of the following methods:
 - Press the up (or down) arrow key to change to the server connected to a higher (or lower) port number.
 - Type the port number using the keyboard. For example, type **1** for port 1.

For complete user and troubleshooting instructions on KVM switch, see the KVM switch documentation.Issue 1.2

Performing pre-upgrade tasks

Perform the following tasks before you upgrade the system:

- [Preparing for the upgrade](#) on page 157
- [Preparing for the upgrade on the MAS](#) on page 158
- [Installing the Pre-upgrade and Backup Verification tool](#) on page 159
- [Running the Pre-upgrade tool](#) on page 159
- [Completing pre-upgrade tasks](#) on page 161

Preparing for the upgrade

You must complete the following tasks before you upgrade the system.

1. Download any Avaya software updates required to bring the Avaya Modular Messaging software up-to-date after an upgrade. Download this software to a storage device. See [Downloading software updates](#) on page 12.
2. As a precaution (this is information you might need later if you need to recover), verify and record the key settings on the MSS and MAS:
 - a. Record non-default port groups.
 - b. Record RAS IP addresses for each MAS.
 - c. Back up Caller Application files on a separate computer.
 - d. Record associations for Caller Applications. You need this for performing a re-association later.
 - e. Record SNMP trap destination and community details from the **Serviceability - Voice Mail Domain** window.
3. Obtain and review the configuration notes for any changes, that might be needed regarding board configuration, switch programming, and application configuration. Make any necessary changes as part of the upgrade.
4. Verify if Modular Messaging system is at the required service pack (SP) and Patch level, for more information on the minimum required SP and Patch level for the release you upgrade, see the table [Minimum required Service Pack and patch level](#) on page 155.

If the system is not at the minimum required SP or Patch level, you must update the Modular Messaging system.

- a. Verify the service pack and patch installed on the MAS:
 1. Log on to the MAS.
 2. Select **Start > Programs > Avaya Modular Messaging**.

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3. Click the **About Modular Messaging** tab.
The dialog box displays the version of Modular Messaging installed.
4. Click the **Patches** tab.
The dialog box displays the level of Service Packs and patches installed.
- b. Verify the RFU level on the MSS:
 1. On the Messaging Administration web interface, click **Software Management > Messaging Software Display**.
The page displays the RFU installed on the system.
- c. To remove an RFU installed on the MSS:
 1. On the Messaging Administration web interface, click **Software Management > Software Removal**.
 2. Select the RFU to be removed and click **Submit**.
 3. On the next page, click **Proceed with removal**.

Preparing for the upgrade on the MAS

Complete the following:

1. Switch the monitor to show the correct server; see [Switching the monitor to show the correct server](#) on page 156.
2. Verify that all messaging servers and services are running.
3. Verify the DCT data file. A DCT data file is not required for the upgrade; however, analyze the system to create one prior to the upgrade to save important system information for backup. For more information, see [Using the DCT to analyze the current configuration](#) on page 142.

Installing the Pre-upgrade and Backup Verification tool

The Pre-upgrade and Backup Verification tools are packaged together. You install the tools simultaneously. However, you do not run them at the same time. For information on running the tools, see [Running the Pre-upgrade tool](#) on page 159 and [Running the Backup Verification tool on page 169](#).

To install the Pre-upgrade and Backup Verification Tool on MSS:

1. From the Avaya Support Web site, at <http://www.avaya.com/support>, click **Downloads**.
2. Download the **Avaya Modular Messaging 5.2 MSS Pre-upgrade and Backup Verification Tool** and copy it to a disk.

You cannot copy the file in any sub folders on that disk.

3. At the prompt on the MSS you are upgrading, login as either **tsc**, **craft**, or **dadmin**.
The server displays the Messaging Administration main menu.
4. From the main menu, click **Utilities > Software Management > Software Installation**.
5. Insert the disk that contains Pre-upgrade and Backup Verification tool.
6. From the Software Installation menu, click **CD**.
7. On the screen that appears, click **Continue this operation without current system backup**.

This installation does not affect the service.

8. On the screen that appears, check **pubvt**.
9. Click **Install selected packages**.

The installation begins and takes about one minute. You must see a message that the install completed successfully.

10. Click **Return to Main**.

Running the Pre-upgrade tool

A member of the installation team from Avaya or the business partner uses the Pre-upgrade tool to identify potential pitfalls and to help plan for the upgrade. This tool produces a report that includes:

- The expected number of disks necessary for a complete backup, including all data categories.
- The expected duration of the upgrade.
- An indication of whether the MAS backup files on the MSS are current (or when the MAS last performed a backup of its data to the MSS).
- An analysis of the active alarms and their effect upon the upgrade.

Running the pre-upgrade tool does *not* affect your service. Run the Pre-upgrade tool twice:

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Upgrading to Modular Messaging Release 5.2

- First time two or three weeks before the upgrade.
- Second time the day of the upgrade:

Do the following to run the pre-upgrade tool:

1. At the MSS prompt, log in as either **tsc**, **craft**, or **dadmin**.
2. From the Messaging Administration main menu, click **Utilities > Pre-Upgrade Information**.

The **Show Last Summary** button only appears if someone has run the tool before. Click **Show Last Summary** to view the previous summary information.

3. Click **Start** to begin the pre-upgrade tool.

The tool takes about two minutes to run and you get the output every 30 seconds to let you know that the tool is still running. If needed, click **Abort** to stop the tool from running.

4. Review the output information from the tool.

Ideally, there will not be any errors and warnings and you can proceed with the upgrade.

5. If you find any errors or warnings, you must resolve them before you continue with the upgrade.

Completing pre-upgrade tasks

Complete the following tasks *before* you start upgrade to Release 5.2:

1. If not running, start the MSS.
2. Using the latest DCT file or planning form (if you upgrade from Release 3.x), verify the key settings on the MSS and MAS that includes:
 - Switch integration settings
 - Port board settings and extensions
 - Domain information
 - Basic system setup
 - SNMP trap destination and community details from the **Serviceability - Voice Mail Domain** window
3. On the Messaging Administration web interface, complete the following:
 - a. Under the **Alarming** menu, click **Alarming Configuration**.
The system opens **Configure Alarms** page.
 - b. In the **Alarm Suppression** field, click **ACTIVE**.
4. On the MAS, complete the following steps to record all Personal Operator Schedules. You need this information to verify the schedules following the upgrade:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Telephone User Interface**.
 - c. Select the **Personal Operator Schedules** tab.
 - d. Click each schedule listed in the **Schedules** box and record the times set for each schedule.
5. On the MAS, disable alarms:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Serviceability**.
 - c. On the **Serviceability** page, on the **General** tab, select **Suppress alarm notifications**.
 - d. Close all windows.
6. On each MAS, record the IP addresses for the MAS modems in the remote access service (RAS) group. You must manually re-enter the RAS IP addresses.
7. If the site has Caller Applications, ensure that copies of all editable files are on a separate computer, *not* the MAS. The data restoration procedure restores only the deployed Caller Applications. The deployed version is not editable; always use the administrator version. Ensure that all editable Caller Applications scripts are in a separate working folder before

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the upgrade, such as on the administrator personal computer. Use the Caller Applications editor to see a list of the deployed applications.

8. Review the configuration notes for any changes that might be needed about the board configuration, switch programming, and application configuration. Make any necessary changes as part of the upgrade.

Using the DCT to collect information from an MAS

Use the Avaya Modular Messaging Data Collection Tool (DCT) to collect information from each MAS and Supplementary server. The tool copies the server system information into a data file, allowing for easy reconfiguration of the servers.

Always check the Avaya Support Web site at <http://www.avaya.com/support> to obtain the most recent version of the DCT program. Download the mmdct.exe file to a storage device and use it instead of the one on the applications DVD.

Collecting DCT data

Use the DCT to collect the system data:

1. Run a DCT analyze on the system, see [Using the DCT to analyze the current configuration](#) on page 142.
2. Proceed with [Verifying DCT data](#) on page 162.

Verifying DCT data

After analyzing the last MAS to be upgraded, the Avaya Modular Messaging Data Collection Tool (DCT) displays the results of the last analysis. The DCT collects most of the system information. However, you must enter some of the data manually, and verify the information as described in this section.

 **Important:**

You must verify the data in the analyzed DCT file only after you have analyzed all MASs and Supplementary servers in your MM System.

For more information about completing the DCT screens, click the **Help** button in the Avaya Modular Messaging Data Collection Tool window. You can also use the printed document, *Avaya Modular Messaging Data Collection Tool Online Help*; see [Downloading user documentation](#) on page 13.

Do not change the data that is populated by the DCT.

 **Important:**

If the DCT left pane shows a red **X** for an item, the data is incomplete or incorrect on that screen. Click each flagged item and correct the problem before you continue. Information must be complete and valid to continue with the upgrade. If you cannot fix a bad entry, do not continue with the upgrade.

1. From the DCT window, on the **Customer details** screen:
 - a. Complete all fields on this screen.
 - b. Click **Next**.
2. Verify the settings on the **Regional settings** screen. Click **Next**.
3. Verify that the message store is **MSS with Avaya MAS servers**. Click **Next**.
4. On the **Voice Mail Domain** screen:
 - a. Verify the name for the voice mail domain (VMD).
 - b. Verify the number of MASs in the voice mail domain.
 - c. Click **Next**.
5. Verify the corporate network setting. Click **Next**.
6. On the **Corporate MM server networking details** screen:
 - a. Verify the server names and other settings, depending on the connection type. If necessary, fill in the IP address and the Full computer name fields.
The DCT updates this information with each MAS that it analyzes.
 - b. Click **Next**.
7. On the **Corporate network details** screen:
 - a. Verify the domain name server (DNS), corporate default gateway, and WINS values. If the WINS field shows 127.0.0.0, change it to the correct value.
 - b. Click **Next**.
8. On the **Private network** screen, verify that all the settings are correct. Click **Next**.
9. On the **Exchange message store** screen, click **Next**.
10. On the **Domino message store** screen, click **Next**.
11. On the **MSS message store** screen, verify that the information matches with your configuration.
For more information, see *Avaya Modular Messaging Data Collection Tool Online Help*.
12. Verify the MSS trusted server passwords are populated.
13. Click **Next**.

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14. On the **MAS accounts and passwords** screen:
 - a. Enter the correct logon name for each MAS administration account.
 - b. Enter the password for each account. By design, the DCT tool does not automatically insert passwords.
 - c. Click **Next**.
15. On the **Logon accounts and passwords** screen:
 - a. Enter the correct logon name and password for the technical support account and the customer administration account. The names and passwords must comply with the security standards.
 - b. Click **Next**.
16. On the MAS service account screen, verify that **Run MAS services using LocalSystem** is selected. Click **Next**.
17. On the **TTS and announcements** screen, click **Next**.
18. On the **MM service selection** screen:
 - a. Verify that the correct services are selected for each server. The DCT updates this information with each MAS that it analyzes.
 - b. To activate the Web Subscriber Options (WSO) application on an MAS, click the appropriate column.
You can activate Web Subscriber Options only once per voice mail domain.
 - c. Click **Next**.
19. On the **Switch Integration** screen, do not change the settings. Click **Next**.
20. After you have opened each DCT screen and cleared any red-flagged items, the **Cancel** button changes to a **Complete** button. After you have entered and verified all required data, click **Complete**. The system displays a **Save** window. Save the *.mmdct* data file to a storage device.
21. After you save the file, the Data Collection Tool window closes.
22. Remove the storage device from the server to prevent any damage to the data file.
23. Continue with [Busying out ports on each MAS](#) on page 165.

Busying out ports on each MAS

Modular Messaging system should not take any calls during the upgrade. To achieve this, busyout the ports on the each MAS and on the switch before you start the upgrade. Otherwise, messages spool on the MAS, and delay the upgrade.

Busyout the ports on each server and on the switch before you upgrade that server.

To busyout the ports on each MAS:

1. The PBX administrator must use the procedures appropriate for this PBX to busyout the ports for the MAS being upgraded. Depending on the switch integration, the administrator might be able to temporarily reroute calls to other MASs. Otherwise, callers into the system might hear ring-no answer or a busy signal.
2. Switch the monitor to show the correct MAS. For more information, see [Switching the monitor to show the correct server](#) on page 156.
3. Unplug all modems to the Modular Messaging system. Otherwise, the system sends unnecessary alarms to the remote technical support group throughout the upgrade procedure.
4. Use the Port Monitor to disable ports on each MAS:
 - a. Click **Start > Programs > Avaya Modular Messaging > Port Monitor**. The system opens the **Port Monitor** window.
 - b. Select all ports in the list: Click on the first port, hold down the **Shift** key, and click on the last port.
 - c. Right-click the port list and select **Disable**.
 - d. Verify that the status of all ports is **Disabled**.
 - e. Close the **Port Monitor** window.
5. Proceed with [Checking the spool folder on each MAS](#) on page 166.

Checking the spool folder on each MAS

Before you upgrade the MAS, verify that any spooled messages are delivered:

1. Switch the monitor to show the applicable MAS.
2. Open Windows Explorer.
3. Navigate to the folder **C:\Program Files\Avaya Modular Messaging\Server\Spool**
4. Verify that the **Spool** folder contains no message files.

 **CAUTION:**

If the folder contains spooled messages, wait for the system to deliver them, which can take awhile.

5. When the **Spool** folder is empty, you can proceed with upgrading the MASs.

Backing up each MAS

You must backup the data on each MAS in the system before you back up the MSS.

To back up all the data on the Modular Messaging system, first send backup data from each MAS to the MSS. The MAS information is backed up along with the MSS system data on the DVD-RAM disks.

To back up the data on each MAS:

1. Switch the monitor to show the correct MAS. See [Switching the monitor to show the correct server](#) on page 156.
2. To view the scheduled backup program for this MAS, double-click the **Scheduled Tasks** icon on the desktop.
3. In the Scheduled Tasks window, run an attended backup on this MAS:
 - a. Right-click the backup task that is already set up. This task is named **MAS Backup** on most systems, but might have a customer-specified name for upgrades. Select **Run**.
The system backs up the data on this MAS to the MSS. The **Status** column shows **Running**. When the backup is complete, the **Status** column goes blank.
 - b. To verify the success of the backup:
 1. Double-click the **Monitor** icon on the desktop.
 2. In the left pane, expand **Event Viewer (Local)**, and then double-click **Application**.
 3. Refresh the window display periodically until you see the two **8009 ntbackup** events.
When the events indicate a successful backup, continue with Step 4.

Note:

If the backup fails to run, verify the backup settings:

- Double-click the task **MAS Backup** to view the properties window.
 - In the **MAS Backup** window, click the **Task** tab. Verify that the **Run as** field shows an account that has permissions to run manual backups, such as *privdom1\dom-admin*. If the account is incorrect, enter the correct value.
 - If you change the account, or to verify the password, click **Set password**. In the **Set Password** window, enter and confirm the password for the account. Click **OK**.
 - Click **OK** to close the **MAS Backup** window.
 - Run the backup again.
4. Close the **Scheduled Tasks** window.
 5. Repeat steps 1 - 5 on each MAS in the system.

**CAUTION:**

If any MAS backup fails to complete, *Do not* proceed with the upgrade. Contact your remote support center for assistance.

Backing up the MSS

After you back up each MAS to the MSS, you then back up all data from the MSS to the DVD:

1. Connect the console to the MSS by switching the KVM.
2. Log on to the MSS server as **craft**.
The system displays the Messaging Administration main menu.
3. Verify the number of subscribers:
 - a. From the Messaging Administration menu, click **Subscriber Management**.
 - b. Make a note of the number of subscribers.
4. Stop the messaging service:
 - a. From the **Utilities** menu, click **Stop Messaging**.
The system opens the **Stop Messaging Software** page.
 - b. Click **Stop**.
5. After the system reports that the voice system has completely stopped, begin an attended backup:
 - a. From the **Backup/Restore** menu, click **Backup**.
 - b. On the **Backup** page, set all data types to **Yes**.
 - c. Verify that **Media Type** is set to **DVD-RAM**.

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- d. Click **Save** or **Start Backup**.
- e. If the system opens an SSH Authorization window, log in as **craft**.
- f. The system warns you to not exit the backup page. Click **OK**.
6. The system estimates the number of DVDs required. Verify that you have enough DVDs. Press **Enter** or click **Continue**.
7. Insert a labeled, writable DVD-RAM into the DVD drive. Press **Enter** or click **Continue**.
8. The system saves the new system configuration to the DVD. Allow about 30 minutes for each DVD.
9. Follow the prompts on the screen to track and complete the backup process. Scroll to the bottom of the page to see the most recent status messages. The message **FULL-MANUAL BACKUP completed successfully** indicates that the backup is complete.

 **CAUTION:**

If the attended backup does not complete successfully, **DO NOT** proceed with the upgrade. Contact your remote support center for assistance.

10. After the backup is complete, press the eject button on the front of the DVD-RAM drive, and remove the DVD-RAM backup medium. Change the tab on the DVD-RAM backup to write-protect.
11. Continue with [Running the Backup Verification tool on page 169](#).

Running the Backup Verification tool

The Backup Verification tool examines each disk and verifies if the system's data has a reliable backup. Use this tool after a preupgrade backup, before you proceed with an "irreversible" upgrade. To install the Backup Verification tool, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 159.

Running the Backup Verification tool does *not* affect service. Run the Backup Verification tool on the day of the upgrade:

1. At the MSS prompt, log in as **tsc**, **craft**, or **dadmin**.

The server displays the **Messaging Administration** main menu.

2. On the main menu, click **Utilities > Backup/Restore > Backup Verification Tool**.

The **Show Last Summary** button only appears if someone has run the tool once before. Click the button if you want to view the previous summary information.

3. Insert the first DVD into the MSS.

4. On the **Backup Verification Tool** menu, click **Start**.

5. The system displays a warning if you verify a backup from a different Modular Messaging system. Click **Yes** to proceed or **Abort** to stop.

Once the Backup Verification tool begins to run, the output displays the percentage of the verification that is complete and what file it is being verified.

6. If you use Netscape, the system might display the **Netscape is unable to locate the server localhost** error dialog box. This can happen for various reasons, such as if the verification takes longer than 15 minutes.

If the system displays Netscape error dialog box:

- a. On the error dialog box, click **OK**.
- b. On your browser, click **Reload**.

You must reload the page so that the output can continue to display the status of the backup verification.

7. If you abort the Backup Verification tool (by clicking Abort) for whatever reason, when you next try to run the tool do the following:

- a. On the Backup Verification Tool menu, click **Stop Runaways** if the button is available.

Anytime you are starting the Backup Verification tool and the Stop Runaways button appears on the menu, click it.

- b. Click **Start**.

When the verification is complete, a validation box appears.

8. Click **OK**.

The system displays verification output.

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9. Review the output for the current DVD:
 - A successful backup displays **Backup Verification Succeeded with no Errors**. If successful, proceed with step 10.
 - If the tool detects a bad backup the output log displays: **The Following Errors (or Warnings) Were Found in the Backup Set**. Return to the MSS main menu and redo the backup.
10. Repeat this procedure for every backup DVD.
11. After you verify that backup of every DVD is successful, return to the **Messaging Administration** main menu.

Upgrading the MSS from Release 3.x or Release 4.0

Perform the following and make sure you install software from both the OS and Application DVDs before you reboot the system:

1. Log on to the MSS as **craft**; see [Logging on to the MSS](#) on page 24.
2. Insert the Modular Messaging R5.2 MSS OS disk into the MSS.
3. From the Messaging Administration main menu, under **Software Management**, click **Software Update > CD/DVD**.
4. Click **Install the newer software management software**.
5. From the status page that appears, click **Continue**.
6. A warning page may appear saying that you have not backed up your system recently. If this page appears, do *one* of the following:
 - Click **Continue without current system backup** if you do not want to back up the system.
 - Click **Cancel** to stop the software update, at which time you can perform a system backup. After the backup is complete, repeat this process from the beginning.
7. On the page which lists the upgrade packages, click **Install selected packages**.
8. If a pop-up window appears, click **Continue**.
9. On the page which lists the upgrade packages, click **Proceed with Installation**.
10. On the status page that appears, scroll to the bottom of the page to see the most recent status messages.
11. After the system successfully installs the packages, remove the Modular Messaging R5.2 MSS OS disk.

 **Important:**

Do not reboot now; wait until you have finished with the MSS Application disk as explained below.

12. Insert the Modular Messaging R5.2 MSS Application disk into the MSS.
13. Click **Update software from other media**.
14. On the page that appears, click **CD/DVD**.

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15. A warning page may appear saying that you have not backed up your system recently. If this page appears, do *one* of the following:
 - Click **Continue without current system backup** if you do not want to back up the system.
 - Click **Cancel** to stop the software update, at which time you can perform a system backup. After the backup is complete, repeat this process from the beginning.
16. On the page that appears, which lists the upgrade packages, click **Install selected packages**.
17. If a pop-up window appears, click **Continue**.
18. On the page that appears, which lists the upgrade packages, click **Proceed with update**.
19. On the status page that appears, scroll to the bottom of the page to see the most recent status messages.
20. After the system successfully installs the packages, remove the Modular Messaging R5.2 MSS Application DVD, and then click **Reboot**.

Note:

After this update, when you log into the console browser you might see a message about Firefox updates; if the message appears, click **Cancel**.

Upgrading an MAS from Release 3.x or Release 4.0

Upgrading an MAS from Release 3.x or Release 4.0 to Release 5.2 involves performing the following procedures on each MAS. Complete the processes on one before you proceed to the next MAS:

- [Logging off all remote logins](#) on page 173
- [Upgrading overnight](#) on page 173
- [Upgrading RealSpeak](#) on page 174
- [Upgrading Dialogic drivers](#) on page 176
- [Upgrading the MAS software](#) on page 177

After you complete the upgrade for each MAS, proceed with the procedures in [Completing the upgrade from Release 3.x or Release 4.0](#) on page 181 to complete the upgrade process.

Logging off all remote logins

To log off all remote logins:

1. Log on to the MAS using an account that has administrative permissions.
2. Click **Start > Programs > Administration**.
3. Open **Windows Task Manager** and select the **Users** tab.
4. Select remote logins and click **Logoff**.
5. If there are no remote logins, click **Cancel** to exit.

Upgrading overnight

If you run the upgrade overnight, use the Voice Mail System Configuration application to disable the tracing database nightly tasks. After you complete the upgrade successfully, you must enable the scheduled tasks again when you perform the procedures in [Completing the upgrade from Release 3.x or Release 4.0](#) on page 181.

If you upgrade from Release 4.0, proceed with instructions outlined in [Upgrading Dialogic drivers](#) on page 176.

Upgrading RealSpeak

Complete the following tasks *only* if you are upgrading from Release 3.x.

- [Stopping all Modular Messaging services](#) on page 174
- [Uninstalling and re-installing RealSpeak](#) on page 175
- [Starting all Modular Messaging services](#) on page 176

Stopping all Modular Messaging services

You need to stop all Modular Messaging services on each MAS that you upgrade. Perform these steps only if you are upgrading from a Release 3.x system:

1. Make a list of all Modular Messaging services running on this MAS, you need this list later.
2. Switch the monitor to show the correct MAS.
3. Stop all Modular Messaging services as follows:
 - a. Click **Start** > **Run** to open the Run window.
 - b. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe

A command window displays the status of the Modular Messaging services shutdown. The script might take several minutes to complete.

Note:

This script also stops Intel Dialogic services and some Windows services.

4. Confirm that all Modular Messaging services are stopped:
 - a. Double-click the **Monitor** icon on the desktop or from the command prompt, run **services.msc**.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. If the Monitor window was already open, refresh the screen.
 - d. In the right pane, scroll down to the list of installed Modular Messaging services. These all start with the abbreviation **MM**.
 - e. Verify that the **Status** column is blank. If any service is *not* stopped, repeat Steps 3 and 4.

Uninstalling and re-installing RealSpeak

Perform these steps only if you are upgrading from a Release 3.x system:

You must complete the following when performing an upgrade:

1. Log onto the MAS using the Windows Account used to install the original RealSpeak.
For MAS#1, this will be the domain administrator account, and for subsequent MASs this is the local administrator account.
2. Insert the 'Modular Messaging R5.2 MAS Application DVD 2 of 2' disk into the MAS.
3. From the DVD, run the **RealSpeak\uninstallRealspeak.bat** file.
4. The MAS should automatically reboot; if it does not, manually reboot the MAS.
5. Log back onto the MAS using the Windows Account used in Step 1.
6. On the MAS, delete the folder: **C:\Program Files\ScanSoft**.
7. From the Modular Messaging R5.2 MAS Application DVD 2 of 2 disk, run the **RealSpeak\installRSEngine.bat** file.
8. On the InstallShield Wizard, click **Next**.
9. Select **I accept the terms in the license agreement** and click **Next**.
10. On **Custom Setup**, keep the default settings and click **Next**.
11. On **RealSpeak Host service**, keep the default setting and click **Next**.
12. On **Ready to Install the Program**, click **Install**.
A window shows the installation status.
13. When the installation is complete, click **Finish**.
14. On the pop-up window, click **Yes** to restart the system.
15. Log back onto the MAS using the customer account.
16. In the Modular Messaging R5.2 MAS Application DVD 2 of 2 disk, locate and launch the **RealSpeak\installRSLangs.bat** file to install RealSpeak languages.
The system displays the status of each language installation.
17. Remove the Modular Messaging R5.2 MAS Application DVD 2 of 2 disk.

Starting all Modular Messaging services

Restart the Modular Messaging services and verify that the services are running. Perform these steps only if you are upgrading from a Release 3.x system:

1. Click **Start > Run** to open the Run window.
2. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Scripts\serverrecovery.vbs

The script takes a few seconds to run. The program sets up all Modular Messaging services correctly.

3. Verify that the Modular Messaging services are set correctly.

Upgrading Dialogic drivers

Complete these steps to update the drivers on each MAS that contains Dialogic port boards:

1. Log onto the MAS using the customer account.
2. Insert the Modular Messaging R5.2 MAS Application DVD 1 of 2 into the MAS.
3. Uninstall Dialogic drivers:
 - a. From the DVD, run the **Dialogic_Drivers\MMDialogicUnInstall.bat** file.
 - b. On the Question window that prompts for a backup, click **No**.
 - c. On the Confirm Uninstall window, click **OK**.

A window appears that displays the uninstall status.
 - d. On the Maintenance Complete window, select **Yes, I want to restart my computer now** and then click **Finish**.
4. Log onto the MAS using the customer account.

The system runs the **Clean-up Utility** automatically.
5. On the Hardware Update Wizard, click **Cancel**.
6. Reinstall Dialogic drivers:
 - a. From the DVD, run the **Dialogic_Drivers\MMDialogicUpgrade.bat** file.
 - b. On the Dialogic(R) System Release window, click **Next**.
 - c. On the Customer Information window, keep the default names and click **Next**.
 - d. On the Choose Destination Location window, keep the default location and click **Next**.
 - e. On the **Select Features** window, keep the default selection(s) and click **Next**.
 - f. On the Question window, click **Yes**.
 - g. If a warning window about Java appears, click **OK**.

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- h. On the Select Program Folder window, keep the default folder and click **Next**.
 - i. On the Start Copying Files window, click **Next**.
The Setup Status window displays the installation status. After the Dialogic files install, a Found New Hardware window appears.
 - j. Select **No, not this time**, and click **Next**.
 - k. Select **Install the software automatically**, and click **Next**.
 - l. If an unsigned driver dialog box appears, click **Yes**.
 - m. After the board is set up, click **Finish**.
 - n. Repeat this for all Dialogic boards installed on this MAS.
 - o. On the **Setup Complete** window, select to restart your computer at this time and click **Finish**.
7. Log on to the MAS using the customer account.
8. From the DVD, run the **Dialogic_Drivers\mm_install\SetDialogicSettings.exe** file. This restores the Dialogic configuration for your MAS.
9. Start the Dialogic drivers:
- a. Click **Start > Programs > Intel Dialogic System Release > Configuration Manager - DCM**.
 - b. The Intel Dialogic product Configuration Manager window opens.
 - c. From the Intel Dialogic product Configuration Manager window, on the button bar, click the green > (Start) button.
 - d. Wait for the devices to start and the installed boards to show a green light.
 - e. Close the DCM window.

Upgrading the MAS software

The following steps explain how to upgrade the MAS software.

Note:

Avaya does not support Remote Desktop updates.

It is important to perform the tasks in the following order:

1. Log onto the MAS using the customer account.
2. Verify that **MM Service Connector** is set to **Automatic**.
3. Ensure that all Windows applications are closed.
4. Close all monitoring tools, such as the port monitor.
5. Insert the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk.

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6. From the DVD, run **Install\setup.exe** and complete the following:
 - a. Verify that Select Configuration lists **Avaya MSS**.
 - b. Make sure that you select the **Enable Windows Installer logging** check box in the lower left-hand corner. Select the check box if it is not already selected.
 - c. Make sure that you select the **MM Configuration Tools** check box.
 - d. Expand the prompts and select any prompts that are not already selected.
 - e. Click **Install**.
 - f. On the **System Upgrade** window, click **Run System Upgrade**.
 - g. When the system prompts you, on the **Installation Wizard** window, click **Restart**. The system restarts.
 - h. Log on using the customer account.
 - i. If any patches exists on the system:
 1. The system displays a window that lists the patches to be uninstalled. Follow the prompts.
 2. Patch uninstaller may require server restarts. If the system prompts you, restart the server.
 3. If the server restarts, the Modular Messaging Installation wizard automatically launches. If it does not, then manually run **Install\setup.exe**.
 4. Return to Step 6-a to verify the configuration settings.

The system upgrades the Modular Messaging software components. As the components window shows which component is installing, it pauses on Avaya SPIRIT Agent for several minutes. This is an expected behavior.
 - j. Restart the server when prompted.
7. When the server starts, log in to the server using the customer account.

The Modular Messaging Configuration Wizard runs automatically, displaying the Service configuration window.
8. Follow the installation Configuration Wizard prompts.
9. When complete, click **Finish**.
10. Verify that all the appropriate Modular Messaging services are enabled on an MAS. For the list of services that are to be enabled on each MAS, see [Enabling Modular Messaging services in a VMD](#) on page 80.

11. Install and configure the WebLM server. Use one of the following methods:
 - To install WebLM server on an MAS or a Supplementary server, proceed with [Installing WebLM server on an MAS](#) on page 62.
 - If you already have a WebLM server that you are using for licensing other Avaya products, proceed with [Obtaining the license file](#) on page 63.
 - To install WebLM server on a standalone server, see *Installing and configuring Avaya WebLM server* guide available on the Avaya Support Web site at <http://www.avaya.com/support>.
12. Install the latest Avaya Service Pack (SP). For more information, see [Installing software updates](#) on page 180. The patch install notes will be in the patch distribution folder along with the patch. The system restarts Modular Messaging services automatically.
13. You **must** obtain the new license file and apply it on the WebLM server for your upgraded system. For instructions to obtain and apply the license, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.
14. Perform the following steps if you are upgrading from Release 3.x:
 - a. Enter the product ID for the current MAS; see [Entering Product ID for current MAS](#) on page 65.
 - b. Configure the SNMP trap destination and community details using the **Serviceability - Voice Mail Domain** window of the Voice Mail System Configuration program. Enter the SNMP trap destination and community information you recorded before beginning the upgrade. For additional information, see [Configuring serviceability settings on MAS#1](#) on page 59.
 - c. Configure the MM Audit Service; see [Configuring MM Audit Service](#) on page 69.
 - d. Configure the MM Fax Service:
 - Run **C:\Avaya_Support\Utils\FaxSenderEnable.exe** on the machine that hosts the MM Fax Sender service.
 - Restart the Microsoft Fax Service.
 - Complete all of the steps in [Configuring the MM Fax Sender server](#) on page 70.
15. Do the following as appropriate:
 - a. If you have additional MASs or Supplementary server to upgrade, continue with [Upgrading an MAS from Release 3.x or Release 4.0](#) on page 173.
 - b. Proceed with [Completing the upgrade](#) on page 181.

Installing software updates

The Modular Messaging Release 5.2 software is the most current version available at the time of shipping. However, you need to update the software after an upgrade to include the latest changes. Avaya provides these updates in the form of an Avaya Service Pack (SP) or a software patch.

Complete the following steps to update Modular Messaging software:

1. Locate any relevant Avaya software updates on the Avaya Support Web site at <http://www.avaya.com/support>. For complete steps, see [Getting software updates from the Web](#) on page 370.

Note:

If you followed the procedure for [Downloading software updates](#) on page 12, you already downloaded any required software updates.

2. Follow the instructions provided in [Updating Modular Messaging software](#) on page 369 to update the system with the latest changes before you do acceptance testing.
3. Proceed with step 13 in [Upgrading the MAS software](#) on page 177.

Completing the upgrade from Release 3.x or Release 4.0

This section describes the topics required to complete the upgrade of Modular Messaging system to Release 5.2.

Completing the upgrade

Note:

You do not need to upgrade the offline access (OLA) server, as the server does not run any Modular Messaging services.

After you complete the upgrade of all MASs and the Supplementary server, ([Upgrading an MAS from Release 3.x or Release 4.0](#) on page 173), perform the following procedures:

1. Do the acceptance tests that are appropriate for each server; see [Performing acceptance tests for a new installation](#) on page 121. For example:
 - a. For an MAS, test to check if the server can send and receive calls.
 - b. For all servers, verify that the services run on the appropriate server.
2. Run a DCT analyze on the system; see [Using the DCT to analyze the current configuration](#) on page 142.
3. Back up the DCT data files; see [Copying the DCT data file for backup](#) on page 144.
4. *Only* when you upgrade from Release 3.0, verify all Personal Operator Schedules:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Telephone User Interface**.
 - c. Select the **Personal Operator Schedules** tab.
 - d. Verify that all Personal Operator Schedules recorded before the upgrade are included in the list. If a schedule is missing, complete the following steps:
 1. Click the **Add** button
 2. In the **Enter Personal Operator Schedule Name** dialog box in the **Schedule Name** field, enter the name of the missing schedule.
 3. Click **OK** to return to the Personal Operator Schedules tab.
 4. In the schedule grid, enter the schedule times.
 - e. Click each Personal Operator Schedule in the schedule list and verify that the schedule times correspond to the times recorded before the upgrade. Correct any discrepancies in the schedule grid.
 - f. Close all windows.

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Upgrading to Modular Messaging Release 5.2

5. Review event and alarm logs and resolve any problems; obtain the *Modular Messaging with Avaya MSS - MAS Administration Guide*; see [Downloading user documentation](#) on page 13.
6. Run backups on each MAS; see [Backing up each MAS](#) on page 166. You DO NOT need to remove the old backup files from the MSS.
7. Run a backup on the MSS; see [Backing up the MSS](#) on page 167. If using DVD-RAM, use a separate DVD-RAM disk to avoid overwriting the backup data from the previous release that is saved during the pre-upgrade steps.
8. Perform this step *only* if you are upgrading from Release 3.x. Due to a change in file names, older logs might remain on the system. Remove older logs from **c:\lavaya_support\logs** folder on each MAS and delete any logs that are older than the upgrade's start time.
9. On the Messaging Administration web interface, complete the following:
 - a. Under the **Alarming** menu, click **Alarming Configuration**.
The system opens **Configure Alarms** page.
 - b. In the **Alarm Suppression** field, click **INACTIVE**.
10. On the MAS, enable alarms:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Serviceability**.
 - c. On the **Serviceability** page, on the **General** tab, clear **Suppress alarm notifications** check box, to turn on the alarm notifications options.
 - d. Click **Save** to save the changes.
 - e. Close all windows.

This completes the upgrade of Modular Messaging system to Release 5.2.

Converting Supplementary server to run a 0 port MAS on the Supplementary server

This section is optional, you only need to complete this procedure if your Modular Messaging support organization has advised you to do so.

Use the following steps on the Supplementary server to convert the Supplementary server to run a 0 port MAS on the Supplementary server:

Note:

These steps only need to be completed on supplementary servers, which have been upgraded to Modular Messaging Release 5.2.

1. Run the registry file, **C:\Avaya_Support\Registry_Keys\convertsupp_2_0portmas.reg**.
2. Under the **Messaging Administration** of the Messaging Administration web interface, click **Trusted Servers**. The system displays **Manage Trusted Servers** page. Do *one* of the following:
 - Change the trusted server for the Supplementary server using the following steps:
 - a. Highlight the Trusted Server with a service name of **Supplementary Server**. Click **Edit the Selected Trusted Server**.
The server displays the **Edit Trusted Server** page.
 - b. In the **Special Type** field, click **Messaging Application Server** from the drop-down list.
 - c. Click **Save**.
 - Create the trusted server for the Supplementary server using the following steps:
 - a. Click **Add a New Trusted Server**.
The server displays the **Add Trusted Server** page.
 - b. In the **Special Type** field, click **Messaging Application Server** from the drop-down list.
 - c. Click **Save**.
3. Install MMFEDB.
 - a. Copy all the contents from **<cd drive>\Install\System Upgrade\SQL2005EXP** of the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk to the **C:\MM_SYSTEM_UPGRADE** directory of the MAS.
 - b. If the system prompts you, select to overwrite all existing files.
 - c. Double-click **C:\MM_SYSTEM_UPGRADE\setup.bat**.
The system opens the command prompt.
 - d. Type **1** and press **Enter**. The system installs the MMFEDB service.

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Upgrading to Modular Messaging Release 5.2

- e. Wait for MMFEDB install to complete.

Installation process takes some time. The system opens and closes various windows installation dialogs boxes automatically. *Do not* make any manual intervention.

4. Set the MM MAS service to **Automatic**. *Do not* start the service at this time.
5. Ensure that the MM Service Connector service is set to **Automatic**. *Do not* start the service at this time.
6. Ensure that the MM Fault Monitor service is set to **Automatic**. Do not start the service at this time.
7. Ensure that the following MM Alarming Services are set to **Automatic**:

- MM Alarming Server
- MM Event Monitor Server
- MM Performance Monitor Server
- MM Process Monitor Server

Do not start the services at this time.

8. Locate and run **gvconfig.exe**:
 - a. Locate and run **C:\Program Files\Avaya Modular Messaging\VServer\Config\gvconfig.exe** file.
 - b. When prompted, enter the name of the **Peer Message Storage Server** for your system.
 - c. Click **Next**.
 - d. When prompted, select **Subsequent Server** in an existing VMD
 - e. Click **Next**.
 - f. Enter the LDAP Security Password for your Modular Messaging system.
 - g. Click **Next**.
 - h. Click the name of your MM VMD from the drop down list.
 - i. Click **Next**.
 - j. If the system prompts you to install missing prompts, insert the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk in to the Supplementary server DVD drive.
 - k. Click **Next**.
 - l. Select the **Skip Caller Application deployment** check box.
 - m. Click **Next**.
 - n. Click **Next** on **User Information** screen.

This **User Information** screen remains displayed and disabled while user information is populated on the server. The time taken to populate the user information depends on the number of users supported by the Modular Messaging system.

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

Converting Supplementary server to run a 0 port MAS on the Supplementary server

- o. Click **Finish**.
9. Configure MAS Host Setup on the Supplementary server.
 - a. On the Messaging Administration web interface, click **Server Administration > MAS Host Setup**.

The system opens **Setup MAS Host Information** page.
 - b. In the **MAS ID** field, click the appropriate MAS for the supplementary server.

Use the lowest available MAS. For example, if you have two MASs and one Supplementary server, then add the Supplementary server as MAS Host Setup for MAS3.
10. Send the MAS host information to all MASs:
 - a. On the Messaging Administration web interface, click **Server Administration > MAS Host Send**.

The system opens **Send MAS Host Information** page.
 - b. Click **Send**.

The system sends the host information to all MASs at the same time and reports whether the information was updated successfully. For more information, see [Updating MAS host information](#) on page 107.
11. Double-click **C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe** file to stop all Modular Messaging services.
12. Double-click **C:\Avaya_Support\Scripts\serverrecovery.vbs** file to start all Modular Messaging services.

Changing switch integration

This topic describes how to change the switch integration after an upgrade. This assumes you only change the switch integration type of the MASs and that MAS servers remain the same. These procedures vary with the type of switch integration involved:

- [Changing from DSE or Analog to QSIG](#) on page 186
- [Changing from DSE or QSIG to H.323](#) on page 188
- [Changing from DSE, Analog or QSIG to SIP](#) on page 189
- [Changing from QSIG T1 to QSIG E1](#) on page 190
- [Changing from H.323 to SIP](#) on page 192

If changing from H.323 to QSIG, contact support for instructions.

Changing from DSE or Analog to QSIG

The following explains how to change from the DSE or Analog switch integration to the QSIG switch integration:

1. Upgrade all MASs in the Voice Mail Domain (VMD) to Release 5.2 as explained in this chapter.
2. Using VMSC, complete the following changes to the switch integration and telephony interface settings for the MAS you plan to move to QSIG:
 - a. Set Switch Integration to **None**.
 - b. Set number of ports to **0**.
3. Set all Modular Messaging services to Manual that are running on the MAS:
 - a. Double-click the **Monitor** icon on the desktop or from command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane.
 - c. In the right pane, scroll down to the list of Modular Messaging services.
These services start with the abbreviation **MM**.
 - d. Double-click the service to open the **Properties** window.
 - e. Set the **Startup type** to **Manual**.
 - f. Click **OK**.
 - g. Repeat this procedure for all appropriate **MM** services.
4. Shutdown the MAS.

5. Remove the Dialogic boards from the MAS.
See the *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* for board removal and installation.
6. Start the MAS without any Dialogic boards installed.
7. Shutdown the MAS.
8. Install the Dialogic QSIG boards into the MAS and connect the QSIG trunks to each Dialogic board.
9. Start the MAS.
10. Configure the boards using DCM; see [Configuring port boards](#) on page 326.
11. Start the MAS service:
 - a. Once configured, double-click the **Monitor** icon on the desktop or from command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to **MM Messaging Application Server**.
 - d. Right-click **MM Messaging Application Server** and select **Start**.
12. Using VMSC, configure the Switch Integration and the telephony interface settings for the MAS to match the recommended settings in the QSIG Switch Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
13. To restart Modular Messaging services, see [Restarting Modular Messaging services](#) on page 242.
14. Test the QSIG integration; see [Verifying call-handling capability](#) on page 82.
15. Repeat steps 2 through 14 for each of the remaining MASs you are moving to a QSIG integration.
16. After you confirm that the new switch integration is working on the MASs, create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.

Changing from DSE or QSIG to H.323

The following explains how to change from the DSE or QSIG switch integration to the H.323 switch integration:

1. Upgrade all MASs in the Voice Mail Domain (VMD) to Release 5.2 as explained in this chapter.
2. Using VMSC, complete the following changes to the switch integration and telephony interface settings for the MAS you plan to move to H.323:
 - a. Set Switch Integration to **None**.
 - b. Set number of ports to **0**.
3. Set all Modular Messaging services to **Manual** that are running on the MAS:
 - a. Double-click the **Monitor** icon on the desktop or from the command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane.
 - c. In the right pane, scroll down to the list of Modular Messaging services.
These services start with the abbreviation **MM**.
 - d. Double-click the service to open the Properties window.
 - e. Set the **Startup type** to **Manual**.
 - f. Click **OK**.
 - g. Repeat this procedure for all appropriate **MM** services.
4. Shutdown the MAS.
5. Remove the Dialogic boards from the MAS.
See the *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* for board removal and installation.
6. Start the MAS.
7. Start the MAS service:
 - a. Once configured, double-click the **Monitor** icon on the desktop or from command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to **MM Messaging Application Server**.
 - d. Right-click **MM Messaging Application Server** and select **Start**.
8. Using VMSC, configure the Switch Integration and the telephony interface settings for the MAS to match the recommended settings in the H.323 Switch Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
9. To restart Modular Messaging services, see [Restarting Modular Messaging services](#) on page 242.

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10. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigMMIPSEC\ConfigMMIPSEC.exe`
11. Test the H.323 integration; see [Verifying call-handling capability](#) on page 82.
12. Repeat steps 2 through 14 for each of the remaining MASs you are moving to a H.323 integration.
13. After you confirm that the new switch integration is working on the MASs, create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.

Changing from DSE, Analog or QSIG to SIP

The following explains how to change from the DSE or QSIG integration to the SIP switch integration:

1. Create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.
You will not be changing the Switch Integration type at this time.
2. Upgrade all MASs in the Voice Mail Domain (VMD) to Release 5.2 as explained in this chapter.
3. After completing the upgrade, apply the license to the WebLM server as outlined in [Applying license file on the WebLM server](#) on page 63. Use the VMSC to import the certificates as outlined in [Importing certificates from license](#) on page 64.
4. Using VMSC, change the Switch Integration type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
5. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
6. To restart Modular Messaging services, see [Restarting Modular Messaging services](#) on page 242.
7. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigMMIPSEC\ConfigMMIPSEC.exe`
8. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
9. Shutdown the MAS.
10. Remove the Dialogic boards from the MAS.
See *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* guide for information on board removal and installation.
11. Start the MAS without any Dialogic boards installed.

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12. Ensure that all Modular Messaging Services start up properly.
13. Repeat steps 4 through 12 for each MAS you plan to move to the SIP integration.
14. Create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.

Changing from QSIG T1 to QSIG E1

The following explains how to change from the QSIG T1 to the QSIG E1 switch integration:

1. Upgrade all MASs in the Voice Mail Domain (VMD) to Release 5.2 as explained in this chapter.
2. Using VMSC, complete the following changes to the switch integration and telephony interface settings for the MAS you plan to move to QSIG:
 - a. Set Switch Integration to **None**.
 - b. Set number of ports to **0**.
3. Set all Modular Messaging services to **Manual** that are running on the MAS:
 - a. Double-click the **Monitor** icon on the desktop or from the command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane.
 - c. In the right pane, scroll down to the list of Modular Messaging services.
These services start with the abbreviation **MM**.
 - d. Double-click the service to open the Properties window.
 - e. Set the **Startup type** to **Manual**.
 - f. Click **OK**.
 - g. Repeat this procedure for all appropriate **MM** services.
4. Shutdown the MAS.
5. Remove the Dialogic boards from the MAS.
See the *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* guide for information on board removal and installation.
6. Start the MAS without any Dialogic boards installed.
7. Shutdown the MAS.
8. Install the Dialogic QSIG E1 boards into the MAS and connect the QSIG E1 trunks to each Dialogic board. See *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* guide.
9. Start the MAS.
10. Configure the boards using DCM; see [Configuring port boards](#) on page 326.

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11. Start the MAS service:
 - a. Once configured, double-click the **Monitor** icon on the desktop or from the command prompt, run **services.msc**.
 - b. Select **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to **MM Messaging Application Server**.
 - d. Right-click **MM Messaging Application Server** and select **Start**.
12. Using VMSC, configure the Switch Integration and the telephony interface settings for the MAS to match the recommended settings in the QSIG E1 Switch Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
13. To restart Modular Messaging services, see [Restarting Modular Messaging services](#) on page 242.
14. Test the QSIG integration; see [Verifying call-handling capability](#) on page 82.
15. Repeat steps 2 through 14 for each of the remaining MASs you are moving to a QSIG integration.
16. After you confirm that the new switch integration is working on the MASs, create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.

Changing from H.323 to SIP

The following explains how to change from the H.323 to the SIP switch integration:

1. Upgrade all MASs in the Voice Mail Domain (VMD) to Release 5.2 as explained in this chapter.
2. After completing the upgrade, apply the license to the WebLM server as outlined in [Applying license file on the WebLM server](#) on page 63. Use the VMSC to import the certificates as outlined in [Importing certificates from license](#) on page 64.
3. Using VMSC, change the Switch Integration type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration note (for note information, see the Avaya Support Web site at <http://www.avaya.com/support>).
4. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
5. To restart Modular Messaging services, see [Restarting Modular Messaging services](#) on page 242.
6. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigureMMIPSEC\ConfigureMMIPSEC.exe`
7. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
8. Repeat steps 3 through 7 for each MAS in the VMD you plan to move to the SIP integration.
9. Create and verify the DCT for all MASs in your VMD; see [Using the DCT to collect information from an MAS](#) on page 162.

Moving to the corporate Windows domain after upgrade

 **Important:**

If the system remains in the private Windows domain, you can skip this entire section.

After you upgrade to Release 5.2, you can move the Avaya Modular Messaging system to the customer's corporate Windows domain. This feature is optional and is beneficial to those customers who do not want a separate private Windows domain within their network.

Perform the following tasks to move a system during an upgrade to the customer's corporate Windows domain:

- [Preparing to join a system to the corporate Windows domain](#) on page 193.
- [Moving subsequent servers to the corporate Windows domain](#) on page 194.
- [Moving the MSS to the corporate Windows domain](#) on page 201.
- [Moving MAS#1 from the private Windows domain to corporate Windows domain](#) on page 201.
- [Completing the move to the corporate Windows domain](#) on page 205.

Preparing to join a system to the corporate Windows domain

Use the following steps to prepare an Modular Messaging system that is joining the corporate Windows domain after an upgrade:

1. Complete the upgrade to Release 5.2, as described in this chapter.
2. Create user accounts in the corporate Windows domain; see [Creating user accounts in the corporate Windows domain](#) on page 19.
3. Create computer accounts in the corporate Windows domain; see [Creating computer accounts in the corporate Windows domain](#) on page 20.
4. Update the corporate DNS Hosts records with corporate Netbios names of all MAS and MSS. Update the corporate LAN DNS settings for each MAS and the MSS. This step MAY NOT be necessary as the existing DNS configuration may be correct. Make sure that the Corporate Domain Name can be resolved with this configuration or joining the Modular Messaging system to the corporate Windows domain fails. Change the DNS settings for the MSS; see [Setting up network addressing](#) on page 28.
5. Continue with [Moving subsequent servers to the corporate Windows domain](#) on page 194.

Moving subsequent servers to the corporate Windows domain

When moving your Modular Messaging system to the corporate Windows domain, you must first move all subsequent MASs (MAS#2 and above) and, if present, the Supplementary server and optional servers BEFORE you move the MSS or MAS#1.



Important:

DO NOT MOVE the MSS or the MAS#1 at this time. These servers are covered later in this section.

Preparing the system before moving subsequent servers

To prepare the system before moving subsequent servers (MAS#2 and above) to the corporate Windows domain:

1. Verify that logon accounts in the corporate Windows domain were created during the pre-installation stage; see [Creating user accounts in the corporate Windows domain](#) on page 19.
2. Be sure that you have the local administrative account and password for all MASs and, if present, the Supplementary server and optional servers. To be sure, log into each server to verify.

Determine if the corporate Windows domain has a policy established to change the local administrative account and password when new machines move to the corporate Windows domain. If this is the case, then make sure you have the local administrative account name and password that will be assigned after all MASs move to the corporate Windows domain.

3. Click **Start > Run**.
4. In the Run window **Open** field, type **cmd** and press **Enter**.
5. In the command prompt window, type the following and press **Enter**:
net time /setsntp
6. Run a DCT analyze on the system; see [Using the DCT to analyze the current configuration](#) on page 142.
7. Back up the DCT data files; see [Copying the DCT data file for backup](#) on page 144.
8. Manually run a backup of all MASs and, if present, the Supplementary server and optional servers; see [Backing up each MAS](#) on page 166.

9. Run a backup of the MSS; see [Backing up the MSS](#) on page 167.

 **Important:**

Make sure you complete steps 1 through 9 before continuing.

10. Disable the Offline Access feature. Otherwise, errors occur as the system searches for the missing offline store.
 - a. For MAS#1, in the Voice Mail System Configuration window, double-click **Messaging**.
 - b. In the Messaging - Voice Mail Domain window, click the **Offline Access** tab.
 - c. Clear the **Enable offline access to messages** check box. Click **OK**.

Creating Trust Between Private Domain and Corporate Windows Domain

To create trust between private domain and corporate Windows domain:

1. Log on to MAS#1.
2. Create trust between the MAS in private Windows domain and corporate Windows domain controller:
 - a. Change the LAN settings of the MAS in the private Windows domain to create trust with the corporate Windows domain controller:
 1. Log on to the MAS on the private Windows domain.
 2. From the control panel, double-click **Network Connections** or right-click on the **Network Connection** icon in the notification area and click **Open Network Connections**.
 3. Right-click on **Local Area Connection** that is connected to the corporate LAN.
 4. Click **Properties**.
 5. On the **General** tab, click **Internet Protocol (TCP/IP)**.
 6. Click **Properties**.
 7. Under DNS server address, in the **Alternate DNS server** field, enter the IP address of the corporate Windows Domain Name Server.
 8. Click **OK**.
 9. Click **Close**.
 - b. Create one-way trust between the MAS in private Windows domain and the corporate Windows domain controller:
 1. Click **Start > Programs > Administrative Tools Active Directory Domains and Trusts**.

The system opens the **Active Directory Domains and Trusts** window.
 2. Right-click on private Windows domain name and click **Properties**.

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3. On the **Trusts** tab, click **New Trust**.
The system opens the **New Trust** wizard.
4. Click **Next**.
5. In the **Trust Name** dialog box, enter the domain name server (DNS) or full computer name of the corporate Windows domain.
6. Click **Next**.
7. In the **Trust Type** dialog box, click **Trust with a Windows domain**.
8. In the **Domain name** field, enter only the domain name.
9. Click **Next**.
10. On the **Direction of Trust** dialog box, click **One-way outgoing**.
11. Click **Next**.
12. On the **Sides of Trust** dialog box, click **This domain only**.
13. Click **Next**.
14. On the **Outgoing Trust Authentication Level** dialog box, click **Domain-wide authentication**.
15. Click **Next**.
16. On the **Trust Password** dialog box, enter a password.

Note:

Use the same password when prompted during creation of trust relationship in the corporate Windows domain.

17. Click **Next**.
18. Click **Next**.
19. On **Trust selections Complete** dialog box, click **Next**.
20. On the **Confirm Outgoing Trust** dialog box, click **Yes**, confirm the outgoing trust.
21. Click **Next**.
22. Click **Finish**.

Note:

The following procedure needs to be performed on corporate domain controller.

- c. Create one-way trust between the corporate Windows domain controller and the MAS in private Windows domain:
 1. Click **Start > Programs > Administrative Tools Active Directory Domains and Trusts**.
The system opens the **Active Directory Domains and Trusts** window.
 2. Right-click on corporate Windows domain name and click **Properties**.

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3. On the **Trusts** tab, click **New Trust**.
The system opens the **New Trust** wizard.
4. Click **Next**.
5. In the **Trust Name** dialog box, enter the domain name server (DNS) or the full computer name of private Windows domain.
6. Click **Next**.
7. In the **Trust Type** dialog box, click **Trust with a Windows domain**.
8. In the **Domain name** field, enter only the domain name.
9. Click **Next**.
10. On the **Direction of Trust** dialog box, click **One-way incoming**.
11. Click **Next**.
12. On the **Sides of Trust** dialog box, click **This domain only**.
13. Click **Next**.
14. On the **Outgoing Trust Authentication Level** dialog box, click **Domain-wide authentication**.
15. Click **Next**.
16. On the **Trust Password** dialog box, enter the password you used while creating trust relationship in the private Windows domain. See Step 2-b-16 for more information.
17. Confirm the password.
18. Click **Next**.
19. Click **Next**.
20. On **Trust selections Complete** dialog box, click **Next**.
21. On the **Confirm Incoming Trust** dialog box, click **Yes**, confirm the incoming trust.
22. In the **Username and Password** fields, enter the username and password of the private Windows domain.
23. Click **Next**.
24. Click **Finish**.

Moving subsequent servers

 **Important:**

Complete [Preparing the system before moving subsequent servers](#) on page 194 before continuing.

To move subsequent servers (MAS#2 and above) and Supplementary servers to the corporate Windows domain:

1. Log on to the MAS using the private domain administrator account such as *dom-admin*.
2. Add the Modular Messaging Service accounts of corporate Windows domain in the MAS:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.

The system opens the **Voice Mail System Configuration** window.

- b. Under the specific VMD, click **Security Roles**.

- c. Add the users of corporate Windows domain:

1. Double-click **System Administrator**.

The system opens the **Security Roles – Voice Mail Domain** dialog box.

2. Click **Add**.

The system opens the **Select User or Group** dialog box.

3. Click **Locations** and select the corporate domain name.
 4. Click **OK**.

5. Add the following users of corporate domain:

- Administrator
- mmacct
- Domain Admin

6. Click **OK**.

- d. Add *mmacct* user of corporate domain to Servers:

1. Double-click **Servers**.

The system opens the **Security Roles – Voice Mail Domain** dialog box.

2. Click **Add**.

The system opens the **Select User or Group** dialog box.

3. Click **Locations** and select the corporate domain name.
 4. Add the user and click **OK**.

3. Change the DCT Analyze scheduled tasks so that they run under the new corporate Windows domain customer account:

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- a. Double-click the **Schedule Tasks** icon on the desktop.
 - b. In the **Scheduled Tasks** list, open the DCT Analyze properties.
 - c. Click the **Task** tab.
 - d. Change the **Run as** entry to be the corporate Windows domain customer account.
 - e. Click **Set Password**.
 - f. Enter and confirm the corporate Windows domain customer account password.
 - g. Click **OK**.
 - h. Click the **Security** tab.
 - i. In the **Group or User Names** window, remove Private Domain Administrators Group.
 - j. Add the corporate Windows domain customer account to the **Security** list.
 - k. Change the permissions for the corporate Windows domain customer account to Full Control.
4. Change the scheduled tasks Nightly backup so they run under the new corporate customer account:
- a. Double-click the **Schedule Tasks** icon on the desktop.
 - b. In the **Scheduled Tasks** list, open the MAS Backup properties.
 - c. Click the **Task** tab.
 - d. Change the **Run as** entry to be the corporate Windows domain customer account.
 - e. Click **Set Password**.
 - f. Enter and confirm the corporate Windows domain customer account password.
 - g. Click **OK**.
 - h. Click the **Security** tab.
 - i. In the **Group or User Names** window, remove Private Domain Administrators Group.
 - j. Add the corporate Windows domain customer account to the security list.
 - k. Change the permissions for the corporate Windows domain customer account to Full Control.
5. Stop all Modular Messaging services on the server you are moving to the corporate Windows domain. Double-click **C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe** file to stop all Modular Messaging services.
6. Repeat step 4 and 5 for all subsequent servers (MAS#2 and above).
7. Move the MAS from the private Windows domain to the corporate Windows domain:
- a. Right-click **My Computer** and click **Properties**.
 - b. Click the **Computer Name** tab.
 - c. Click **Change**.

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- d. In the Member of box, select **Workgroup** and type **WORKGROUP** in the provided field.
 - e. Click **OK** and then select to restart the computer.
 - f. After the restart, log in as the local administrator account.
 - g. Make sure that the corporate DNS IP address is added to the list of DNS Servers in the Corporate LAN Settings.
 - h. Right-click **My Computer** and click **Properties**.
 - i. Click the **Computer Name** tab.
 - j. Click **Change**.
 - k. In the Member of box, select **Domain** and type the corporate Windows domain name in the provided field.
 - l. Click **OK** and then select to restart the computer.
8. Log on to the computer as the local administrator account.
 9. Add the corporate Windows domain customer account and technical support account to the local machine's Administrators group:
 - a. Right-click **My Computer** and click **Manage**.
 - b. Click **Local Users and Groups**.
 - c. Double-click **Groups**.
 - d. Double-click **Administrators**.
 - e. Click **Add**.
 - f. Change **From this Location** to point to the corporate Windows domain.
 - g. In the **Enter the object names to select** field, enter the name of the corporate Windows domain customer account (or technical support account) and click **Check Names**.
 - h. Highlight the customer account (or technical support account) from the list of accounts resolved.
 - i. Click **OK**.
 - j. Repeat steps e through i as needed to add both the technical support account and the customer administration account to the local machine's Administrators group for all subsequent MAS servers.
 10. Log off from the MAS.
 11. Log on to the MAS and the corporate Windows domain using the corporate Windows domain customer account.
 12. Start all Modular Messaging services that were previously stopped. Double-click C:\Avaya_Support\Scripts\serverrecovery.vbs file to start all Modular Messaging services.
 13. Repeat these steps for all subsequent MASs, Supplementary server and optional servers.

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14. When MAS#1 is the only server left in the private Windows domain, continue with [Moving the MSS to the corporate Windows domain](#) on page 201.

Moving the MSS to the corporate Windows domain

To move the MSS to the corporate Windows domain:

1. Update the MAS host information; see [Updating MAS host information in a corporate Windows domain](#) on page 110.
2. Place the MSS in the corporate Windows domain; see [Placing the MSS in the corporate Windows domain](#) on page 113.

Moving MAS#1 from the private Windows domain to corporate Windows domain

To move MAS#1 from the private Windows domain to corporate Windows domain:

1. Change the DCT Analyze scheduled tasks so that they run under the new corporate Windows domain customer account:
 - a. Double-click the **Schedule Tasks** icon on the desktop.
 - b. In the **Scheduled Tasks** list, open the DCT Analyze properties.
 - c. Click the **Task** tab.
 - d. Change the **Run as** entry to be the corporate Windows domain customer account.
 - e. Click **Set Password**.
 - f. Enter and confirm the corporate Windows domain customer account password.
 - g. Click **OK**.
 - h. Click the **Security** tab.
 - i. In the **Group or User Names** window, remove Private Domain Administrators Group.
 - j. Add the corporate Windows domain customer account to the **Security** list.
 - k. Change the permissions for the corporate Windows domain customer account to Full Control.
2. Change the scheduled tasks Nightly backup so they run under the new corporate customer account:
 - a. Double-click the **Schedule Tasks** icon on the desktop.
 - b. In the **Scheduled Tasks** list, open the MAS Backup properties.
 - c. Click the **Task** tab.

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- d. Change the **Run** as entry to be the corporate Windows domain customer account.
- e. Click **Set Password**.
- f. Enter and confirm the corporate Windows domain customer account password.
- g. Click **OK**.
- h. Click the **Security** tab.
 - i. In the **Group or User Names** window, remove the Private Domain Administrators Group.
 - j. Add the corporate Windows domain customer account to the **Security** list.
 - k. Change the permissions for the corporate Windows domain customer account to Full Control.
3. Change security settings in VMSC for all accounts (corporate customer and technical support accounts, as well as all MAS computer accounts):
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration** to open the **VMSC** window.
 - b. Expand **Security Roles**.
 - c. Double-click **System Administrator**.
 - d. In the **Permissions for System Administration** window, click **Remove**.
 - e. Select each account that belongs to private Windows domain customer account and technical support account, and then click **Remove**.
 - f. Click **OK** to close the permissions window.
 - g. Return to Security and then double-click **Subscriber Administrator**.
 - h. Select each account that belongs to private Windows domain customer account and technical support account, and then click **Remove**.
 - i. Verify that the following corporate Windows accounts have been added under **Security Roles > System Administrator and Subscriber Administrator**:
 - Corporate customer account
 - Corporate technical support account
 - All MAS computer accounts
4. Uninstall SQL Server and any related components from the MAS#1:
 - a. Click **Start > Run**.
 - b. In the **Open** field, type *appwiz.cpl* and click **OK**.

The system opens the **Add or Remove Programs** window.
 - c. Select **Microsoft SQL Server 2005**, and then click **Remove**.

- d. Select each of the following components, and then click **Uninstall**.

The system displays two components MMAUDIT and MMFEDB, select each component and click Uninstall.

- MMAUDIT
- MMFEDB
- SQL Server Native Clients
- Microsoft SQL Server Setup Support Files
- Microsoft SQL Server VSS Writer

- e. Delete the *Microsoft SQL Server* folder located under *C:\Program Files*.

5. Stop all MM Services on MAS#1. Double-click **C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe** file to stop all Modular Messaging services.

6. Run the setsntp command:

- a. Click **Start > Run**.

- b. In the **Run** dialog box, type *cmd* in the **Open** field, and then press **Enter**.

- c. In the command prompt window, type the following, and then press **Enter**:

net time /setsntp

7. Run *DCPromo* to demote MAS#1 from being the Domain Controller for the private Windows domain:

- a. Ensure that File Replication Service is started on MAS#1.

- b. On MAS#1, click **Start > Run**.

- c. In the **Run** dialog box, type *dcpromo*, then click **OK**.

- d. Click **Next**.

- e. In the **Warning** dialog box, click **OK**.

- f. Click the **This server is the last Domain Controller in the Domain** check box.

- g. Click **Next**.

- h. Click **Next**.

- i. Click the **Delete all application partitions on this DC** check box.

- j. Click **Next**.

- k. Enter and confirm the Local Administrator password.

- l. Restart MAS#1.

- m. Click **Next**.

- n. Click **Next**.

- o. Click **Finish**.

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- p. Click **Restart Now**.
8. Log on to MAS#1 using the local administrative account.
9. Move MAS#1 to the corporate Windows domain:
 - a. Right-click **My Computer** and click **Properties**.
 - b. Click the **Computer Name** tab.
 - c. Click **Change**.
 - d. In the **Domain name** field, replace the existing private Windows domain name with the corporate Windows domain name.
 - e. Click **OK**.
 - f. Click **OK**.
 - g. Restart the server.
10. Log on to MAS#1 using the local administrative account.
11. Add the corporate Windows domain customer account and technical support account to the MAS#1 Administrators group:
 - a. Right-click **My Computer** and click **Manage**.
 - b. Click **Local Users and Groups**.
 - c. Double-click **Groups**.
 - d. Double-click **Administrators**.
 - e. Click **Add**.
 - f. Change **From this Location** to point to the corporate Windows domain.
 - g. In the **Enter the object names to select** field, enter the name of the corporate Windows domain customer account (or technical support account), and then click **Check Names**.
 - h. Highlight the customer account (or technical support account) from the list of accounts resolved.
 - i. Click **OK**.
 - j. Repeat steps e through i as needed to add both the technical support account and the customer administration account to the MAS#1 Administrators group.
 - k. Go back to **Local Users and Groups**.
 - l. If necessary, rename the local administrator account name from Administrator to the name that appears on the DCT data file (or planning form for Release 3.x).
12. Install the SQL server, SQL FEDB and SQL Audit services:
 - a. Copy all the contents from <cd drive>\Install\System Upgrade\SQL2005EXP of the 'Avaya Modular Messaging R5.2 MAS Application DVD 1 of 2' disk to your MAS.

You cannot install SQL Server completely if you run the SQLEXP32.exe from remote location or map the folder to the drive.

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- b. Double-click **setup.bat** from the **SQL2005EXP** directory.
The system opens the command prompt and displays four options.
 - c. Type **1** and press **Enter**. The system installs the MMFEDB service.
The installation process takes some time. The system opens and closes various Windows installation dialog boxes automatically. Do not make any manual intervention.
 - d. Repeat the step c.
 - e. Type **3** and press **Enter**. The system installs the MMAUDIT service.
13. Run **FEDBSynch.exe** from the **C:\Avaya_SupportTools\FEDBSynch** directory on the MAS.
 14. Log off from MAS#1.
 15. Log on to MAS#1 and the corporate Windows domain using the corporate Windows domain customer account.
 16. Start all the Modular Messaging services that were previously running on this MAS.
Double-click **C:\Avaya_SupportScripts\serverrecovery.vbs** file to start all Modular Messaging services.

Enabling offline access to messages

After you have moved all servers to the corporate windows domain, enable Offline Access feature:

1. In the VMSC window, double-click **Messaging**, and then click the **Offline Access** tab.
2. Select the **Enable offline access to messages** check box.
3. Select the **Synchronize offline messages with remote store** check box.
4. Click **Browse** to select an existing, shared folder in the domain for the remote offline message store. The name *must* use the format `\\computername.privdom.local\sharename`, such as `\\mymas2.privdom.local\RemoteOfflineStore`.
5. Click **OK** to close this window.

Completing the move to the corporate Windows domain

To complete the move to the corporate Windows domain during an upgrade you must reset the MM System shares, the backup tasks, and the time server configuration:

1. Recreate the Offline Store share and add computer accounts for all MASs in your VMD on the server that hosts the Offline Store feature:
 - a. Using Windows Explorer locate the **Remote Offline Store** folder.
 - b. Right-click the folder name and click **Properties**.

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- c. Click the **Sharing** tab.
 - d. Click **Share this folder**.
 - e. Click **Permissions**.
 - f. Under Groups and Users, click **Add**.
 - g. Add **Computers** into the list of Object Types.
 - h. In the Object name window, enter the corporate domain name of the MAS.
 - i. Click **Check Names**.
 - j. Highlight the name of the MAS and click **OK**.
 - k. Set the permissions for the MAS local machine account to **Allow Change and Read**.
 - l. Repeat steps g to k for all MASs that handle calls.
2. Change the mini backup batch file so that it contains the corporate Windows domain name for the MSS:
 - a. Locate file: **C:\Avaya_Support\CMD\MASminiBackup.bat**
 - b. Open the file so that you can edit its content.
 - c. Change the line:

```
net use v: \mss1\masbackup
```

to

```
net use v: \mssccorporatename\masbackup
```

where *mssccorporatename* is the corporate Windows Netbios name of the MSS.
 - d. Save and close the file.
 3. Change backup batch file so that it contains the corporate Windows domain name for the MSS:
 - a. Locate file: **C:\Avaya_Support\CMD\MASBackup.bat**
 - b. Open the file so that you can edit its content.
 - c. Change the line:

```
net use v: \mss1\masbackup
```

to

```
net use v: \mssccorporatename\masbackup
```

where *mssccorporatename* is the corporate Windows Netbios name of the MSS.
 - d. Save and close the file.
 4. Run a DCT analyze on the system; see [Using the DCT to analyze the current configuration](#) on page 142.
 5. Back up the DCT data files; see [Copying the DCT data file for backup](#) on page 144.

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Chapter 9: Migrating to Modular Messaging Release 5.2 on S8800 1U-family server

The chapter describes how to migrate from Modular Messaging Release 3.x, Release 4.0, Release 5.0 or Release 5.1 that runs on an S3400, S3500, S8730 or customer-provided server to Modular Messaging Release 5.2 system that runs on an S8800 1U server.

If you are upgrading to Release 5.2, and still use the S3500 or S8730 server, use the procedures described in [Upgrading to Modular Messaging Release 5.2](#) on page 151.

If you are performing a staged upgrade, see *Avaya Modular Messaging Staged Upgrades for the Avaya Message Store Server (MSS) Release 5.0* guide.

If you are moving the Modular Messaging system to the corporate Windows domain, first complete the entire migration and then move the system to the corporate Windows domain. See [Moving to the corporate Windows domain after migration](#) on page 254 for more information.

You may need to change the switch integration to SIP as migration to Modular Messaging Release 5.2 supports *only* SIP based switch integration. For more information, see [Changing switch integration to SIP](#) on page 212.

Topics in this chapter include:

- [Migration requirements](#) on page 210
- [Preparing for the migration](#) on page 211
- [Migrating MSS and MAS to the S8800 1U-family server](#) on page 217
- [Migrating each MAS](#) on page 222
- [Completing MSS administration](#) on page 237
- [Restoring data on each MAS](#) on page 239
- [Completing the system migration](#) on page 245
- [Reducing number of servers](#) on page 252
- [Using the DCT to collect information from an MAS](#) on page 213
- [Moving to the corporate Windows domain after migration](#) on page 254.

Migration requirements

To successfully migrate a Modular Messaging system, you need:

- Planning forms for the system that runs on Release 3.x or the original DCT file for the system that runs on Release 4.0, Release 5.0 or Release 5.1.
- The latest analyzed DCT file for the system.
- The following information and software from the Avaya Support Web site at <http://www.avaya.com/support>. For more information about how to access these items on the Web site, see [Downloading required software and documentation](#) on page 11.
 - The most current copy of the configuration notes for this switch integration.
 - The Avaya Modular Messaging MSS Pre-upgrade and Backup Verification Tool. For more information, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 212.
 - The latest version of **MMDCT.exe** file.
 - Any Avaya software updates required to bring the Avaya Modular Messaging software up to date after the migration is complete. Download this software to a USB storage device such as a flash drive, memory stick, or equivalent.
- To ensure that the Modular Messaging system is at minimum Service Pack and Patch level as provided in the table.

Table 9: Minimum required Service Pack and patch level

MM Release Number	Minimum SP level required	Minimum Patch on SP required
3.0	SP7	Patch 4
3.1 ¹	Avaya does not recommend any specific SP or Patch level	
4.0	SP7	Patch 2
5.0	Avaya does not recommend any specific SP level	Patch 15 and RFU M7025pt+a for the MSS
5.1	SP2	Patch 1

1. However, if the Modular Messaging Release 3.1 system is at SP9, you *must* remove the M7040rf+k on the MSS as instructed in step 4 c in [Preparing for the upgrade](#) on page 157.

- Print the migration checklist from [Modular Messaging Release 5.2 system migration checklist](#) on page 316. Use the checklist to track your progress.

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- Obtain a new license file and apply it on the WebLM server. For additional information, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.

Preparing for the migration

This section describes how to prepare the Modular Messaging system that runs on S3400, S3500 or an S8730 server while you migrate to Modular Messaging Release 5.2, that runs on Avaya S8800 1U server.

Avaya S8800 1U servers are supplied with MSS and MAS software pre-loaded on them.

When migrating from S3400 hardware, you may reduce the number of MASs in your VMD. For complete procedures to reduce MASs, see [Reducing number of servers](#) on page 252.

Perform the following tasks to prepare the Modular Messaging system for the migration:

- [Performing pre-upgrade tasks](#) on page 211
- [Using the DCT to collect information from an MAS](#) on page 213.

Performing pre-upgrade tasks

Perform the following tasks before you migrate the system:

- [Installing the Pre-upgrade and Backup Verification tool](#) on page 212
- [Running the Pre-upgrade tool](#) on page 212
- [Changing switch integration to SIP](#) on page 212
- [Using the DCT to collect information from an MAS](#) on page 213.
- [Completing pre-migration tasks](#) on page 213

Installing the Pre-upgrade and Backup Verification tool

Install the MSS Pre-upgrade and Backup Verification Tool as outlined in [Installing the Pre-upgrade and Backup Verification tool](#) on page 159.

Running the Pre-upgrade tool

A member of the Avaya or business partner installation team uses the Pre-upgrade tool to identify potential pitfalls and plan for the migration. Run the Pre-upgrade tool using the steps outlined in [Running the Pre-upgrade tool](#) on page 159.

Changing switch integration to SIP

The switch integrations may use different Dialogic port boards or may not use a Dialogic port board. If you are migrating to S8800 1U, irrespective of the switch integration type you use, you must convert to SIP based switch integration. Modular Messaging Release 5.2 running on S8800 1U supports only SIP based switch integration.

Use the following procedures as appropriate:

[Changing from DSE, Analog or QSIG to SIP](#) on page 212

[Changing from H.323 to SIP](#) on page 213

Changing from DSE, Analog or QSIG to SIP

1. Using VMSC, change the Switch Integration type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
2. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
3. Restart the messaging service and set all services to **Automatic**; see [Restarting Modular Messaging services](#) on page 242.
4. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigureMMIPSEC\ConfigureMMIPSEC.exe`
5. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
6. Shut down the MAS.
7. Remove the Dialogic boards from the MAS.

See *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* guide or *Maintaining the Avaya S8730 Server for Modular Messaging* guide as appropriate for information on how to remove the port board.

8. Start the MAS without any Dialogic boards installed.

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9. Make sure that all MM Services start up properly.
10. Repeat the steps for each MAS you plan to move to the SIP integration.

Changing from H.323 to SIP

For changing the H.323 to SIP, you need to:

1. Using VMSC, change the **Switch Integration** type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
2. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
3. Restart the messaging service and set all services to **Automatic**; see [Restarting Modular Messaging services](#) on page 242.
4. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigureMMIPSEC\ConfigureMMIPSEC.exe`
5. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
6. Repeat the steps for each MAS in the VMD you plan to move to the SIP integration.

Completing pre-migration tasks

Complete the tasks outlined in [Completing pre-upgrade tasks](#) on page 161, *before* you start migrating to Release 5.2.

Adding a new server

If you are adding a new MAS to an existing Modular Messaging system, *first* migrate the system. *After* the migration is complete, install the new MAS. See [Adding an MAS or a Supplementary server to an existing system](#) on page 387.

Using the DCT to collect information from an MAS

Use the Avaya Modular Messaging Data Collection Tool (DCT) to collect information from each MAS and Supplementary server. The tool puts the server system information into a data file. This allows you to easily configure the servers.

Always check the Avaya Support Web site at <http://www.avaya.com/support> to obtain the most recent version of the DCT program. Download the **mmdct.exe** file to a storage device and use the latest version rather than the one on the applications DVD.

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Collecting DCT data

Run a DCT analyze on each MAS and Supplementary server to collect system data as instructed in [Using the DCT to analyze the current configuration](#) on page 142.

Verifying DCT data

After analyzing the last MAS to be migrated, the Avaya Modular Messaging Data Collection Tool (DCT) window displays the results of the last analysis. The DCT collects the information that the system requires to migrate an MAS to Release 5.2. However, you must enter some data manually, and verify the information as described in this section.

For more information about completing the DCT screens, click the **Help** button in the Avaya Modular Messaging Data Collection Tool window. You can also use the printed document, *Avaya Modular Messaging Data Collection Tool Online Help*; see [Downloading user documentation](#) on page 13.

Do not change the data that was populated by the DCT.

Important:

If the DCT left pane shows a red **X** for any item, the data is either incomplete or incorrect on that screen. Click each flagged item and correct the problem before you proceed. Information must be complete and valid to continue with the migration. If you cannot fix a bad entry, do not proceed with the migration.

All account names and passwords must conform to Windows 2003 R2 security rules. If your account names and passwords do not conform to the new rules, you must change them before you analyze your system with the DCT executable file (MMDCT.exe). If you must change your Modular Messaging account names or passwords, contact your support organization for more information.

1. On the DCT window, click **Customer details** screen. The system opens the **Customer details** page:
 - a. Complete all of the fields on this screen.
 - b. Click **Next**.
2. Verify the settings on the **Regional settings** page. Click **Next**.
3. Verify that the message store is **MSS with Avaya MAS servers**. Click **Next**.
4. On the **Voice Mail Domain** screen:
 - a. Verify the name for the voice mail domain (VMD).
 - b. Verify the number of MASs in the voice mail domain.
 - c. Click **Next**.
5. Verify the setting on the **Corporate network details** page. Click **Next**.

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6. On the **Corporate MM server networking details** screen:
 - a. Verify the server names and other settings, depending on the connection type. If necessary, fill in the IP address and the Full computer name fields.
The DCT updates this information with each MAS that it analyzes.
 - b. Click **Next**.
7. On the Corporate network details screen:
 - a. Verify the domain name server (DNS), corporate default gateway, and WINS values. If the WINS field shows 127.0.0.0, change it to the correct value.
 - b. Click **Next**.
8. On the **Private network** screen, verify that all the settings are correct. Click **Next**.
9. On the **Exchange message store** screen, click **Next**.
10. On the **Domino message store** screen, click **Next**.
11. On the **MSS message store** screen:
 - a. Select **Join the Private Windows Domain (default configuration)**.
If the customer wants the system to move to the corporate domain, you complete this move AFTER you migrate the system. For more information, see [Moving to the corporate Windows domain after migration](#) on page 254.
 - b. In the **Private Windows Domain name** field you can enter a new name if needed. To change the name, first select the **Change default information** check box and then type the new name in the field.
 - c. Ignore the **Corporate Windows Domain** field.
 - d. Click **Next**.
12. Verify the MSS trusted server passwords are populated.
13. Click **Next**.
14. On the **MAS accounts and passwords** screen:
 - a. Enter the correct logon name for each MAS administration account.
 - b. Enter the password for each account. By default, the DCT tool does not automatically insert passwords.
 - c. Click **Next**.
15. On the Logon accounts and passwords screen:
 - a. Enter the correct logon name and password for the technical support account and the customer administration account. The names and passwords must comply with the security standards.
 - b. Click **Next**.

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16. On the MAS service account screen, verify that **Run MAS services using LocalSystem** is selected. Click **Next**.
17. On the **TTS and announcements** screen, click **Next**.
18. On the MM service selection screen:

 **CAUTION:**

Do not use the DCT to try to move services from one MAS to another during the migration! Moving services might require changes elsewhere in the system, such as on the MSS and in the VMSC. Move Modular Messaging services only after the migration is complete.

- a. Verify that the correct services are selected for each server.
 - b. To activate the Web Subscriber Options (WSO) application on an MAS, click the appropriate column.
You can activate Web Subscriber Options only once per voice mail domain.
 - c. Click **Next**.
19. On the WebLM Server screen, complete the WebLM settings:
 - a. Select the server on which you install the WebLM server:
 - On an MAS or Supplementary server
 - On an Avaya optional server or customer provided equipment
 - b. MAS Number
 - c. WebLM Server URL
 - d. Click **Next**.
 20. On the Switch Integration screen, do not change the settings. Click **Next**.

 **CAUTION:**

When you are migrating a Modular Messaging system, you must complete the migration with the same PBX integration used for the previous release. Changes to the PBX integration can be made only after you complete the migration. For more information, see [Using the DCT to collect information from an MAS](#) on page 213.

21. After you have opened each DCT screen and cleared any red-flagged items, the **Cancel** button changes to a **Complete** button. After you have entered and verified all required data, click **Complete**. A **Save** window appears.
22. Save the *mmdct* data file to the storage device.
After you save the file, the system closes the Data Collection Tool window.
23. Remove the storage device from the server to prevent damage to the data file.

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Migrating MSS and MAS to the S8800 1U-family server

Migrate the Message Storage Server (MSS) before you migrate any other server in the Modular Messaging system. The MSS Release 5.2 migration involves:

- [Preparing MAS#1 for the migration](#) on page 217
- [Backing up each MAS](#) on page 218
- [Backing up the MSS](#) on page 218
- [Running the Backup Verification tool](#) on page 218
- [Migrating the MSS hardware](#) on page 218
- [Restoring data on the MSS](#) on page 219

Preparing MAS#1 for the migration

Before you start the process of migration, the current Modular Messaging system must be made non-operational. Backup the data on each MAS and then backup the data on MSS.

You must prepare the first MAS for the migration before you start to migrate the MSS. These tasks are essential for a successful migration.

Busying out ports on MAS

You must not take calls during the migration. To achieve this, busyout the ports on each MAS and on the switch before you start the migration. Otherwise, messages spool on the MAS. Any spooled messages that have not been delivered to the MSS prior to performing the MSS backup gets lost. Perform the tasks as outlined in [Busying out ports on each MAS](#) on page 165 to busyout ports on the first and the subsequent MASs. This process makes the entire system inactive.

Checking the spool folder on each MAS

Before you migrate the MAS, verify that any spooled messages are delivered to the MSS:

1. Switch the monitor to show the applicable MAS.
2. Open Windows Explorer.
3. Navigate to the folder *C:\Program Files\Avaya Modular Messaging\VServer\Spool*.
4. Verify that the Spool folder contains no message files.

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 **CAUTION:**

If the folder contains spooled messages, wait for the system to deliver them, which can take awhile.

5. When the *Spool* folder is empty, continue with the process of migration of MASs.

Backing up each MAS

You must back up the data on each MAS in the system before you back up the MSS.

To back up all the data on the Modular Messaging system, first send backup data from each MAS to the MSS. The MAS information will be backed up with the MSS system data on the DVD-RAM disks. Perform the tasks outlined in [Backing up each MAS](#) on page 166.

Backing up the MSS

You must stop the voice system completely and backup all data from MSS to the DVD as instructed in [Backing up the MSS](#) on page 167. You must then leave the voice system out of service so that the subscribers cannot access the MSS. This is because any changes you make to mailbox or message after you take the backup will get lost.

Note:

Do not shut down the entire system until you complete verifying the backup data as described in [Running the Backup Verification tool](#) on page 218.

Running the Backup Verification tool

Use the Backup Verification tool after a pre-upgrade backup before you continue with the migration. To install the Backup Verification tool, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 212. For more information on running the tool, see [Running the Backup Verification tool on page 169](#).

Run the Backup Verification tool on the day you want to migrate. After you verify that every backup DVD is successful, return to the MSS main menu.

Migrating the MSS hardware

Avaya supports the following hardware migrations to an S8800 1U server:

- S3400, S3500 or S8730-family Avaya Message Storage Server High Availability version (MSS-H) to an S8800 1U server

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- S3400, S3500 or S8730-family Avaya Message Storage Server Standard Availability version (MSS-S) to an S8800 1U server
- S8730-family six-disk server to an S8800 1U four-disk server

Note:

For complete procedures to do a staged upgrade, see *Avaya Modular Messaging Staged Upgrades for the Avaya Message Store Server (MSS)* guide.

To migrate your existing MSS to S8800 1U-family MSS:

1. Turn off the existing MSS server.
2. Label all cables so you can easily reconnect them.
3. Unplug all cables to the old server.
4. Remove the existing MSS server from the stacked configuration or customer cabinet.
5. Install the S8800 1U-family MSS. For more information, see *Installing the Avaya S8800 1U Server for Modular Messaging* guide.

Restoring data on the MSS

You must restore the customer data on to Modular Messaging system Release 5.2 running on S8800 1U server.

Note:

If a system failure occurs, the system does not restore the local administration accounts on the MSS that the AAA server authenticates. The administrator must re-add the local administration accounts while restoring the data on the MSS.

 **CAUTION:**

A software restoration after a migration takes longer than a usual restore procedure, because the software does additional steps to migrate the data. Do not reboot the server until the software restoration is complete, or you will have to reload the software and restore the data again. The time required for the data restoration to complete depends on the number of subscribers in the system.

To restore data on the MSS:

1. Stop the messaging service:
 - a. From the **Utilities** menu, click **Stop Messaging**.
 - b. On the Stop Messaging Software page, click **Stop**.The system displays the status of stopping the messaging system.
2. After the system reports that the voice system has completely stopped, insert the DVD-RAM backup disk with the full manual backup in the DVD drive of the new hardware.

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Note:

S8800 1U server does not support reading the DVD-RAM disk when it is still inside the cartridge. If you are migrating from a system that uses a cartridge DVD-RAM disk, you *must* remove the disk from the cartridge to restore the backed up data onto the new server. If you have multiple backup disks, get them labeled with the correct number in sequence. Data is recorded on the imprinted side of the disk. Do not touch the imprinted side of the disk.

Complete the following steps to safely remove the disk from the cartridge without damaging the data:

- a. Using a pointed object, break the disk locking pin. Depending on the type of disk, you might have more than one locking pin.
 - b. Remove the locking pin (or pins).
 - c. Unlatch the cover by using the pointed object to press the indentation on the front left-hand corner of the cartridge.
 - d. Remove the disk.
 - e. When placing the disk into the cartridge, ensure that the printed side of the cartridge and the printed side of the disk face the same direction.
3. Start the data restoration:
- a. From the **Backup/Restore** menu, click **Restore**.
 - b. On the Restore page, set all the data types to **Yes**.
 - c. Click **Start Restore**. When you see the overwrite warning, click **OK**.
 - d. On the Restore status screen, when the system prompts you to insert the first DVD, click **Continue**.

You may get the following warning message:

The following package needs to be installed before continuing:

pubvt Pre-Upgrade and Backup Verification Tools for Avaya Modular Messaging

- e. If the system displays the following message:
 1. Would you like to stop the restore and install the missing software now? [n]:, click **Continue**.
 2. Attempt to continue without updating or installing software? [Y.]:, click **Continue**.

The system starts restoring all data to the system. Allow up to 40 minutes for the system to restore the data from each backup DVD. To follow the progress of the data restoration, press **Page Down** or scroll down to see the bottom of the screen.

4. After the restore is complete, reboot the system.
 - a. From the Utilities menu, click **Reboot Server**.
 - b. On the Reboot Server page, click **Reboot**.

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- c. At the prompt that you will lose access to the system, click **OK**.

The reboot starts. The system displays several login prompts.

- d. Ignore all login prompts until you see **Press Enter to return to prompt...**
- e. Press **Enter**.

The login prompt appears.

5. Prepare for the next system backup:

- a. Remove the DVD-RAM backup medium from the drive. File the pre-upgrade backup DVDs in a safe place.
- b. Insert a new, writable DVD-RAM in the drive to support a Release 5.2 attended backup.

6. At the prompt, log on to the MSS as **craft**.

The server displays the Messaging Administration web interface.

7. As a sanity check, display the Configure Network Addressing page:

- a. From the Server Administration menu, click **TCP/IP Network Configuration**.
- b. Verify the settings on this page. See [Setting up network addressing](#) on page 28. Verify that the corporate and private LANs are not backward.

8. From the Messaging Administration web interface, click **Subscriber Management**:

- a. Verify that the correct number of subscribers is restored. You recorded this number before backing up the MSS.
- b. On the **Manage Classes-of-Service** page, verify that the classes of service are correctly restored.

9. The system does *not* back up passwords for the remote-access login accounts. You must re-enter the correct passwords to enable remote access.

- a. From the Security menu, click **Local Administrators**.

The system displays the Manage Local Administration Accounts page.

- b. Select an account, such as *sa* or *vm*, and then click **Edit the Selected Admin**.

The system displays the Edit Local Administration Account page.

- c. From the **Local Authentication Enabled?** drop-down menu, select **yes** (if it is not already selected).

- d. In the **Password** field, enter the appropriate password.

- e. In the **Confirm Password** field, enter the password again for verification.

- f. Click **Save**.

- g. Repeat Step b for each additional login that you must administer.

- h. Set the administrative password defaults (**sa** and **vm**) and give the passwords to the customer.

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Migrating each MAS

Do this procedure on each MAS.

After you complete the migration of the MSS, you must migrate each MAS. Server migrations involve:

- [Starting the MAS migration](#) on page 222
- [Preparing the new server](#) on page 225
- [Updating settings in VMSC](#) on page 228
- [Continuing the MAS migration](#) on page 236

Starting the MAS migration

To start migrating the MAS server:

1. Insert the storage device that contains the analyzed DCT file from your existing server into the S8800 1U server. You must start with MAS #1.
2. To boot the MAS, press the power button.
The Avaya Modular Messaging Configuration wizard runs automatically.
3. On the Welcome screen, click **Next**.
4. If the data file (such as *sitfile.mmdct*) is on the **Locate Configuration Data** screen, highlight the file and then click **Next**; otherwise, do the following:
 - a. Click **Browse**.
 - b. In the Open window, click the drop-down list next to **Look in**.
 - c. Select the storage device, and navigate to the appropriate folder that contains the data file for this site. If the server fails to recognize the storage device, do one of the following:
 1. In the Open window, click **My Computer** in the left pane. After the **Look in** field shows **My Computer**, press **F5** to refresh the screen.
 2. If the storage device still fails to appear, remove and then insert the device again.
 - d. Double-click the analysed DCT file you have edited earlier for this site, such as *sitfile.mmdct*.
 - e. On the Locate Configuration Data screen, select the correct data file.
 - f. Click **Next**.
5. When the system prompts you to confirm the data file, click **Yes**.

The system opens Avaya Modular Messaging Data Collection Tool window.

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- a. If desired, page through each screen to verify the data. Click **Next** on each screen.

Note:

For more information about completing or verifying the data on each screen, see [Verifying DCT data](#) on page 214.

- b. To continue the configuration process, click **Complete**.

The system automatically saves the updated data to the MISCM folder on the server.

 **CAUTION:**

Be sure to save the file back to the storage device, irrespective of whether you updated any information in the DCT data file or not. You need a current copy for technical support and for subsequent server migrations.

The system returns you to the Avaya Modular Messaging Configuration Wizard.

6. On the **Messaging Application Server Number** screen, verify that the **MAS number** field shows the correct number for this server.

- Start with MAS#1.
- If required, change the **MAS number** field to show the correct number for this server.

7. Click **Next**.

The Configuring System screen shows the MAS configuration starting. The Sysprep window opens. The server then reboots.

8. After the reboot, a Windows Setup wizard runs. To complete the wizard:

- a. On the License Agreement screen, select **I accept this agreement**. Click **Next**.
- b. On the Your Product Key screen, type the Windows product key for this server.

Note:

Each Windows computer has a unique product key for the Windows 2003 R2 operating system. Enter the number exactly as shown. Record the product key.

- For an S8800 1U server, the product key sticker is located on top of the server chassis.
- Use only the new Windows product key received with the S8800 1U, do not use the Windows product key from S3400, S3500 or S8730.

- c. Click **Next**.

The Avaya Modular Messaging Configuration Wizard displays its configuration status on the Configuring System screen. The server reboots several times, but you do not need to log on manually. The entire process takes about 30 minutes.

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9. If the system displays a Configuration Credential LDAP failure, verify that the MSS is running. The MSS must be available during the MAS configuration process. If the MSS is running, try the following:
 - Verify that LDAP passwords in the DCT data file and on the MSS match. See [Setting up the MSS local machine](#) on page 32.
 - Verify that the private network LAN cable is connected.
 - If the above doesn't work, contact support.
10. When the server configuration is complete, the progress bar stretches across the screen and the **Next** button becomes active. Click **Next**.

Note:

If you leave the server unattended, the server can time out. If you see a message indicating that the computer is locked, press **Ctrl+Alt+Del** to log on.

11. On the Avaya Modular Messaging Wizard Completed screen, click **Finish**.

 **CAUTION:**

Do not run the Avaya Modular Messaging Configuration Wizard on any subsequent server until you complete the configuration of each server in turn.

Preparing the new server

This section describes how to update and protect the new server. To prepare a new server, complete the following procedures:

- [Installing the WebLM server](#) on page 225
- [Obtaining and applying the license file](#) on page 225
- [Importing certificates and configuring the WebLM URL in VMSC](#) on page 225
- [Installing and administering anti-virus software](#) on page 226
- [Updating Microsoft Windows](#) on page 226
- [Reapply the remote access settings for each MAS](#) on page 227.

Installing the WebLM server

Install the WebLM server using *one* of the following methods:

- On an MAS, a Supplementary server or a standalone server as outlined in [Installing WebLM server on an MAS](#) on page 62. For more information on WebLM, licensing, see *Installing and configuring Avaya WebLM server*.
- If you already have a WebLM server that you are using for licensing other Avaya products, proceed with [Obtaining and applying the license file](#) on page 225.

Obtaining and applying the license file

You **must** obtain the new license file and apply it on the WebLM server for your system. For instructions to obtain and apply the license, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.

Importing certificates and configuring the WebLM URL in VMSC

Complete the following procedures:

- Import the license file in VMSC to apply the certificates to your VMD as outlined in [Importing certificates from license](#) on page 64.
- Configure the URL for the WebLM server in VMSC on the MAS as outlined in [Configuring the WebLM URL in VMSC](#) on page 64.

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Installing and administering anti-virus software

Avaya strongly recommends that anti-virus software be installed on any Microsoft Windows computer that runs Avaya Modular Messaging software. The anti-virus software used and the method of installation depends on customer requirements and the local implementation. To install the anti-virus software, use the instructions in

For more information about anti-virus software, obtain “Modular Messaging and security;” see [Downloading user documentation](#) on page 13.

Updating Microsoft Windows

A new Avaya MAS contains the most current Microsoft Windows software at the time it is shipped. After installation, you must install the latest updates for Microsoft Windows, including operating system updates and security patches. These software updates protect the system from known security weaknesses. Check with the appropriate Windows administrator for the software update procedures to use at this site.

Note:

Avaya technical support representatives must follow the specified internal procedures to verify the software that is installed. If required, the support representative must update the software with the latest patches as instructed.

Reapply the remote access settings for each MAS

Important:

New installations and migrations of Modular Messaging support SAL only.

Do this task on each MAS.

Enter the IP addresses on each MAS to allow remote access:

1. Double-click the **Configure** icon on the desktop.
2. In the left pane of the Configure window:
 - a. Expand **Routing and Remote Access**.
 - b. Expand the server name, such as *MYMAS1*.
3. Set up a static IP address pool as follows:
 - a. In the left pane, right-click the server name, such as *MYMAS1*. Select **Properties**.
 - b. In the local Properties window for the server, click the **IP** tab.
 - c. Under **IP address assignment**, select **Static address pool**.
 - d. Add or edit the address range as follows:
 - If the window shows an incorrect IP address range, select the displayed range and click **Edit**. For example, the range might show all zeroes or start with *192.168.2*.

CAUTION:

If Avaya is to support this server, do *not* use the preprogrammed IP addresses, such as *192.168.2.200*. You must **Edit** or **Remove** these addresses for Avaya remote access to work.

- If no address range is already entered, click **Add**.
- e. In the Address Range window, enter the start and end IP addresses for this server.
 - f. Verify that the number of addresses is **2**.
 - g. Click **OK**.
 - h. For the **Adapter** field, select **Allow RAS to select adapter**.
 - i. Click **OK** to close the properties window.
4. Close the Configure window.

Updating settings in VMSC

 **Important:**

S8800 1U supports SIP based switch integration *only*.

After the migration, you must verify and update certain key settings in the Voice Mail System Configuration (VMSC) program, as described in this section.

Note:

The system prompts you to restart service several times during this procedure. You need to restart service only when this guide instructs you. You must restart service before entering the port board extension numbers in [Configuring MAS-specific parameters](#) on page 76. You must restart service again at the end, when configuration is complete.

Use the following steps to verify and update the following key settings:

1. In the **Voice Mail System Configuration** window, double-click the appropriate voice mail domain.
2. Verify key settings such as TUI settings, switch integration settings, and port board extensions.
3. Verify port board settings and port groups using the following steps:
 - a. Double-click **Message Application Servers**.

Note:

These values are already be set. Use the most current configuration notes for this PBX integration.

- b. Expand the appropriate MAS, such as *MYMAS1*.
- c. Double-click **Telephony Interface**. Verify the port board settings for this MAS. Use the configuration notes, download the configuration notes as instructed in see [Downloading configuration notes](#) on page 12.

Note:

To verify Dialogic board configuration settings, see [Appendix B: Configuring and testing port boards](#) on page 323.

4. Update the access permissions for the Modular Messaging system:
 - a. In the Voice Mail System Configuration window, expand **Security Roles**.

 **CAUTION:**

You must complete all updates to permissions in steps b and c before you exit the VMSC. Otherwise, you can lose access to the system, and you must start over from [Migrating each MAS](#) on page 222.

- b. Double-click **System Administrator**.
 1. Add the appropriate Modular Messaging logon accounts.

In an MSS configuration, the Microsoft Windows **Domain Admins** account includes the other logon accounts. To add the **Domain Admins** account:

 - In the **Permissions for System Administration** window, click **Add**.
 - In the **Select Users, Computers, or Groups** window, type the first letter of the account to add in the **Enter the object names to select** box. For example, type **d** for **Domain Admins**. Click **Check Names**.
 - In the **Multiple Names Found** window, double-click the correct account.
 - Verify that the account is underlined in the list box. Click **OK**.
 - *Optional:* Repeat this task to add other logon accounts, if required.
 2. Add the Modular Messaging local service account for each server in the system.
 - In the Permissions for System Administration window, click **Add**.
 - In the Select Users, Computers, or Groups window, click **Object Types**.
 - In the Object Types window, select **Computers** so the box is checked. Click **OK**.
 - In the Select Users, Computers, or Groups window, type the first letter of the server name in the **Enter the object names to select** box. For example, type **m** for **mymas1**. Click **Check Names**.
 - In the Multiple Names Found window, double-click the server name. The **Logon Name** field shows the local account for this server in the form **MASNAME\$(privdom1\masname\$)**, such as **MYMAS1\$(PRIVDOM1\WYMAS#1\$)**.
 - Verify that the local server name is listed and underlined in the list box. Click **OK**.
 - Repeat this procedure to add the local service account for each MAS and the Supplementary server in the VMD to the System Administration ACL.
 3. Select each **Account Unknown** entry. Click **Remove**.
 4. Select the **Everyone** account. Click **Remove**.
 5. Click **OK** to close the permissions window.

 **CAUTION:**

You must complete all updates to access permissions in Steps b and c before you exit the VMSC. Otherwise, you can lose access to the system, and you must start over from [Migrating each MAS](#) on page 222.

c. Double-click **Subscriber Administration**.

In the **Permissions for Subscriber Administration** window:

1. Add the same Modular Messaging logon accounts as you did in Step 4-b.
2. Add the local account for each server in the system, as you did in Step 4-b.
3. Select each **Account Unknown** entry. Click **Remove**.
4. Select the **Everyone** account. Click **Remove**.
5. Click **OK** to close the permissions window.

5. Double-click **Audio Encoding**.

a. In the Audio Encoding window, change the **Default Audio Encoding Format** to:

- **G.711 μ -Law** (mu-Law) for the United States and Japan
- **G.711 A-Law** for other countries, particularly Europe

Note:

S8800 1U supports SIP only: The default Microsoft GSM encoding produces smaller files but poorer voice quality. Update the audio encoding to provide better sound quality, especially for H.323 and SIP integrations. G.711 encoding is required to support TTY/TDD devices.

b. Click **OK** to close this window.

6. In a multiple-MAS system, disable the Offline Access feature until all the servers are migrated. Otherwise, errors occur as the system searches for the missing offline store.

- a. For MAS#1, in the **Voice Mail System Configuration** window, double-click **Messaging**.
- b. Click the **Offline Access** tab.
- c. Clear the **Enable offline access to messages** check box and click **OK**.

You must enable the Offline Access feature only after you complete the migration of all MASs as described in [Enabling Offline Access to messages](#) on page 236.

7. Only on the system running Modular Messaging Release 3.x, complete the following steps to verify all Personal Operator Schedules:

- a. In the **Voice Mail System Configuration** window, double-click the appropriate voice mail domain.
- b. Double-click **Telephone User Interface**.
- c. Select the **Personal Operator Schedules** tab.

- d. Verify that all Personal Operator Schedules recorded before the migration are included in the list. If a schedule is missing, complete the following steps:
 1. Click **Add**.
 2. In the **Enter Personal Operator Schedule Name** dialog box in the **Schedule Name** field, enter the name of the missing schedule.
 3. Click **OK** to return to the **Personal Operator Schedules** tab.
 4. In the schedule grid, enter the schedule times.
- e. Click each Personal Operator Schedule in the schedule list and verify that the schedule times correspond to the times recorded before the migration. Correct any discrepancies in the schedule grid.
- f. Close all windows.

Creating the offline message share, if needed

Do this task only on the server that is to host the Offline Message Store.

In a multiple-MAS system that uses the Offline Access feature, the system requires an offline message store to synchronize messages among the MASs. If the folder for offline message access is to be located on this server, you must first create the shared folder for the offline messages. The folder must be available before you can administer the Offline Access feature.

To create a shared folder for offline messages with the correct permissions:

1. Using Windows Explorer, create a new folder on this server. For example, create *RemoteOfflineStore* on the C: drive.
2. Right-click the folder name and select **Sharing and Security**.
3. In the Properties window, on the **Sharing** tab:
 - a. Select **Share this folder**.
 - b. Verify the **Share name**, such as *RemoteOfflineStore*.
 - c. Click **Permissions**.
- d. In the Permissions window, verify that the **Everyone** account exists. If it does exist, continue with step 4. If the **Everyone** account does not exist, do the following to add it:
 1. In the Permissions window, click **Add**.
 2. In the Select Users, Computers, or Groups window, type the first letter of the account to add in the **Enter the object names to select** box.
For example, type **e** for **Everyone**.
 3. Click **Check Names**.
 4. In the Multiple Names Found window, double-click the correct account.
 5. Verify that the account is listed and underlined in the list box.

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6. Click **OK**.
 7. *Optional:* Repeat this task to add other logon accounts, if required.
 8. Give the correct share permissions to the accounts. In the Permissions window:
 - Select each account in turn.
 - In the **Permissions** box, under **Allow**, select the permissions **Change** and **Read**, so the boxes are checked.
 - Repeat this task for each logon account.
 9. Click **OK** to close the Permissions window.
4. In the **Properties** window, click the **Security** tab.
 - a. Click **Add** and add all Modular Messaging computer accounts that will access the offline storage server:
 1. In the Select Users, Computers, or Groups window, click **Object Types**.
 2. In the Object Types window, select **Computers** so the box is checked. Click **OK**.
 3. In the Select Users, Computers, or Groups window, type the first letter of the server name in the Enter the object names to select box. For example, type **m** for mymas1.
 4. Click **Check Names**.
 5. In the Multiple Names Found window, double-click the server name.

The Logon Name field shows the local account for this server in the form MASNAME\$(privdom1\masname\$), such as MYMAS1\$(PRIVDOM1\MYMAS#1\$).
 6. Verify that the local server name is listed and underlined in the list box. Click **OK**.
 7. Repeat this procedure to add a local service account for each server in the system.
 - b. Give the correct share permissions to these accounts. In the **Properties** window:
 1. Select each account in turn.
 2. In the **Permissions** box, under **Allow**, select the following permissions so the boxes are checked:
 - Modify
 - Read & Execute
 - List Folder Contents
 - Read
 - Write
 3. Repeat this task for each logon account and each MAS computer account.
5. Click **OK** to close the **Properties** window.
 6. Reboot each MAS in the system for the offline access permissions to take effect.

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Restarting messaging services

After you verify and update all required settings, you must restart the messaging service for the configuration changes to take effect. Verify that the system is working.

To restart messaging service:

1. Double-click the **Monitor** icon on the desktop.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. Restart messaging service to accept any changes you made in the VMSC:
 - a. In the right pane of the Monitor window, scroll down to **MM Messaging Application Server**. Right-click it and select **Stop**.

 **CAUTION:**

Do not select the **Restart** option. Always stop, and then start, as described.

- b. When service is stopped, right-click **MM Messaging Application Server** again and select **Start**.

The system restarts the messaging service.

Note:

When you restart messaging service, the Monitor window displays the status of the service as **Started**. However, the service might take several minutes to start, depending on the number of port boards installed and the integration method.

- c. Track the startup progress as follows:
 1. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 2. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
4. Verify that the correct messaging services required for this MAS are started.
 - a. In the Monitor window, click **Services (Local)** in the left pane, if the item is not already selected.
 - b. In the right pane, scroll down to the list of Modular Messaging services. These services start with the abbreviation **MM**. Verify that the **Status** column shows the correct state for each messaging service:
 - The following services, see [Table 10](#), are automatically installed on every MAS. Enable them based on the information in the table.
 - Services that are required for this server must show **Started** and a startup type of **Automatic**.

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- Services that are *not* required on this server must show a blank status and a startup type of **Disabled**.

Table 10: Enabling Modular Messaging services in a VMD

Modular Messaging service name	Condition for enabling service
MM Messaging Application Server MM Service Connector Apache Tomcat ¹ Avaya Diagnostic Tools Avaya SPIRIT MM Alarming Server MM Audit Service MM Event Monitor Server MM Fault Monitor MM Performance Monitor Server MM Process Monitor Server	Enable on each MAS and on the Supplementary server.
MM Call Me ² MM Fax Sender ³ MM Mailbox Monitor ² MM MWI ² MM Tracing Service	Enable on <i>only one server</i> in each VMD, either on an MAS or the Supplementary server. See the <i>Avaya Modular Messaging Concepts and Planning Guide</i> for the recommended load balancing of services between multiple servers.

1. Apache Tomcat service must be enabled on the server on which WebLM server is installed. Apache Tomcat is not a Modular Messaging service.
2. The Call Me, MWI, and Mailbox Monitor services must always be enabled on the same server.
3. IP H.323 switch integration does not support fax service.

c. If the **Startup Type** for any **MM** service that is *not* required for this server is **Manual**:

1. Double-click the service to open the Properties window.
2. Set the **Startup type** to **Disabled**.
3. Click **OK**.
4. Refresh the screen to verify that all **MM** services *not* required for this server are **Disabled**. Repeat Step c as needed.

 **CAUTION:**

All **MM** services that are *not* required for this server must be set to **Disabled** before you do Step d. Serious problems occur if you activate a service that is supposed to run on only one server in the VMD on multiple servers.

- d. If the **Status** for any **MM** service that is required for this server is **Stopped** or blank:
 1. Click **Start > Run** to open the Run window.
 2. In the **Open** field, type the following and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
 The script takes a few seconds to run. The program sets up all **MM** services correctly.
 3. Refresh the screen to verify that all **MM** services required for this server are **Started** and set to **Automatic**.
 4. If any required **MM** services are not set up correctly, repeat Step d.
5. When configuration is complete, close all open windows.
6. *For a multiple-MAS system*, after you configure the last MAS, restart MM services on all servers in the VMD. A restart ensures that the voice mail domain-wide properties are consistent across the VMD. To restart MM services on all MASs in the voice mail domain:
 - a. Switch the monitor to show the next MAS in the system.
 - b. Repeat steps 3 through 5 under [Restarting messaging services](#) on page 233 to restart messaging service.
 - c. Repeat step 6 for each MAS in the system.

Completing VMSC setup

Complete the following for the current MAS:

1. Enter product IDs for the current MAS; see [Entering Product ID for current MAS](#) on page 65.
2. Configure the SAL destinations and community details using the **Serviceability - Voice Mail Domain** window of the Voice Mail System Configuration program. Enter the SAL destination and community information you recorded before beginning the migration. For additional information, see [Configuring serviceability settings on MAS#1](#) on page 59.
3. Configure the following services as applicable:
 - MM Audit Service; see [Configuring MM Audit Service](#) on page 69.
 - MM Fax Sender server; see [Configuring the MM Fax Sender server](#) on page 70.
4. Verify each service:
 - MM Audit Service; see [Verifying Audit service](#) on page 85.
 - MM Fax Sender server; see [Creating and printing a fax message](#) on page 131.

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Continuing the MAS migration

After you migrate an MAS, continue as appropriate:

- For MAS#1, continue the migration all the way through [Completing MSS administration](#) on page 237. If you restore the data onto MAS#1 and redeploy the caller applications, all subsequent MASs automatically get the deployed Caller Applications.
- For subsequent MASs and Supplementary server:
 1. Ensure that the most current data file is on the storage device.

 **CAUTION:**

When you update any information in the DCT data file, save the updated file to the storage device. You must use the most current copy for subsequent server migrations. Copy the most recent DCT data file to the storage device.

2. Configure each MAS:
 - If you have another MAS or Supplementary server, continue with [Migrating each MAS](#) on page 222.
 - If all MASs and Supplementary servers are now migrated, continue with [Restoring data on each MAS](#) on page 239.

Enabling Offline Access to messages

After you complete the migration of all MASs in the system, enable Offline Access feature:

1. In the VMSC window, double-click **Messaging**, and then click the **Offline Access** tab.
2. Select the **Enable offline access to messages** check box.
3. Click the **Synchronize offline messages with remote store** check box.
4. Click **Browse** to select an existing, shared folder in the domain for the remote offline message store. The name *must* use the format `\\computername.privdom.local\sharename`, such as `\\mymas2.privdom.local\RemoteOfflineStore`. For more information, see [Creating the offline message share, if needed](#) on page 231.
5. Click **OK** to close this window.

Completing MSS administration

Complete the following tasks on the MSS:

- [Verify the MAS host information](#) on page 237
- [Placing the MSS in the Windows domain—MAS#1 only](#) on page 238

Verify the MAS host information

Repeat this task for each MAS you migrate.

MSS updates the host information, and then sends the updated information to all MASs in the Modular Messaging system as outlined in [Updating MAS host information](#) on page 107.

Verify that all servers that are currently in the Modular Messaging system are updated.

1. On the Messaging Administration web interface, click **Server Administration > MAS Host Send**.

The system displays the **Send MAS Host Information** page.

2. Click **Send**.

The system sends the host information to all MASs at the same time and reports whether the information was updated successfully.

Placing the MSS in the Windows domain—MAS#1 only

Do this task only once per each migration, after you migrate MAS#1.

Because you reloaded the software on MAS#1, you must add the MSS to the created Windows domain.

To add the MSS to the private Windows domain:

1. From the Server Administration menu, click **Windows Domain Setup**.

The system displays the Windows Domain Setup page.

2. Enter the following information in each field:

- a. In the **MSS NetBIOS Name** field, type the MSS private system name, which is *mss1*.
- b. In the **NetBIOS Domain Name** field, type the NetBIOS domain name for the private Windows domain that was created on MAS#1. For example, if the Fully Qualified Domain Controller name as shown in the DCT data file is *mymas1.privdom1.local*, enter *privdom1* in the **NetBIOS Domain Name** field.
- c. In the **Fully Qualified Domain Controller Name** field, type the full computer name for MAS#1 on the private network, such as *mymas1.privdom1.local*.

 **CAUTION:**

In the following step, you must enter the current account name and password for the MAS administrator or else MAS backups fails. You *must* use the same account to set up system backups on each MAS. For more information, see [Backing up the system](#) on page 145.

- d. In the **Account For Joining The Domain** field, type the domain administrator account name, such as *dom-admin*.
- e. In the **Password For Joining The Domain** field, type the password for this account.

Note:

At this time make sure that the **User Corporate LAN?** check box is clear.

If joining the MM system to the corporate Windows domain DO NOT select **Use Corporate LAN?** check box at this time. You need to return after completing the corporate Windows domain setup and check this field.

If the system will remain on the private Windows domain, ensure that the **Use Corporate LAN?** check box is clear.

3. Click **Save**.

The page displays the Windows domain setup status.

Restoring data on each MAS

Restore the backed-up data onto each MAS.

This section includes the following topics:

- [Stopping all MM services](#) on page 239
- [Restoring backed-up MAS data](#) on page 240
- [Restoring Caller Applications—MAS#1 only](#) on page 242 —required on MAS#1 only
- [Restarting Modular Messaging services](#) on page 242
- [Installing software updates](#) on page 243
- [Updating Microsoft Windows](#) on page 50
- [Performing acceptance tests for a migration](#) on page 244

Stopping all MM services

To stop all Modular Messaging services:

1. Switch the monitor to show the correct MAS.
2. Stop all Modular Messaging services as follows:
 - a. Click **Start** > **Run** to open the Run window.
 - b. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe

A command window displays the status of the Modular Messaging services shutdown. The script might take several minutes to complete.

Note:

This script also stops Intel Dialogic services and some Windows services.

3. Confirm that all Modular Messaging services are stopped:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. If the Monitor window was already open, refresh the screen.
 - d. In the right pane, scroll down to the list of installed Modular Messaging services. These all start with the abbreviation **MM**.
 - e. Verify that the **Status** column is blank. If any service is *not* stopped, repeat Steps 2 and 3.

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Restoring backed-up MAS data

Restore the data on the MAS from the most recent backup. Data includes any customized caller applications, prompts, and tone files.

To restore the backed-up MAS data:


1. Map to the backup drive for this MAS on the MSS:
 - a. On the desktop, right-click the **My Computer** icon and select **Map Network Drive**.

Note:
If you renamed the icon label, the computer icon shows the server name, such as *mymas1*.

 - b. In the Map Network Drive window, in the **Folder** field, type `\\mss1\masbackup`.
 - c. Clear the **Reconnect at logon** check box.
 - d. Click **Connect using a different user name**.
 - e. In the Connect As window, for **User name**, enter the private Windows domain name and the domain administrator account name in the format **domain\account name**. For example, type *privdom1\dom-admin*.
 - f. Enter the password for this account. Click **OK**.
 - g. In the Map Network Drive window, click **Finish**.

The system opens a window to the designated drive letter, such as Z:.
2. Double-click the **Backup** icon on the desktop.
3. In the Backup Utility window, on the **Welcome** tab, click **Restore Wizard**.
4. On the Welcome screen for the Restore Wizard, click **Next**.
5. On the What to Restore screen, click **Browse**.
 - a. In the Open Backup File window, click **Browse**.
 - b. In the Select file to catalog window, under **Look in**, navigate to the mapped drive.
 - c. Double-click the backup file for this MAS. For example, *MYMAS1DailyBackup.bkf*.
 - d. In the Open Backup File window, click **OK**.

The system returns to the What to Restore screen.
6. Verify that the system displays the full name of the MAS backup file in the right pane under **Media Location**. For example, *Z:\MYMAS1DailyBackup.bkf*.

7. In the left pane under **Items to restore**, expand **File**.
 - a. Expand the correct entry for the daily backup of this MAS. The file uses the naming convention from the previous software release, such as *Daily Backup of MYMAS1*.
 - b. Expand C:.
8. Select the folders and files to be restored:
 - a. Select the **Avaya_Support** check box. This folder includes the **Tone_Files** folder, which contains any custom tone files.
 - b. Expand the folders **Program Files > Avaya Modular Messaging > VServer**.
 - c. Select the **VServer** check box.
-  **CAUTION:**

Do *not* restore the System State! You also do not need to restore the hosts file, because you already resent the most current version from the MSS.
- d. Click **Next**.
9. On the Completing the Restore Wizard screen, click **Advanced**.
 - a. On the Where to Restore screen, select **Original location**. Click **Next**.
 - b. On the How to Restore screen, select **Replace existing files**. Click **Next**.
 - c. On the Advanced Restore Options screen, verify the following settings:
 1. Clear the **Restore security setting** check box and the **Restore junction points, not the folders and file data they reference** check box.
 2. Leave the **Preserve existing volume mount points** check box selected.
 3. Click **Next**.
10. On the **Completing the Restore Wizard** screen, review the restore information. Click **Finish**.

The **Restore Progress** window displays restore information.
11. When the data restoration is complete, close the **Restore Progress** window.
12. Close the **Backup Utility** window.
13. If the system asks if you want to restart, select to restart.
14. Close the mapped drive window, such as **Z:**.

 **CAUTION:**

You *must* disconnect the mapped drive, or automatic nightly backups might fail.

15. Disconnect the mapped drive:
 - a. On the desktop, right-click the **My Computer** icon and select **Disconnect Network Drive**.

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- b. In the Disconnect Network Drives window, under **Network Drives**, select `\\mss1\masbackup`. Click **OK**.

Restoring Caller Applications—MAS#1 only

Do this task only on MAS#1.

If Caller Applications were installed on the system, run the Caller Applications restore script:

1. Click **Start > Run** to open a Command prompt window.
2. In the Run window **Open** field, type the following and press **Enter**:

C:\Avaya_Support\CMD\CARestore.bat

A command window opens. The script shuts down all Modular Messaging services, and copies the Caller Applications to the server. The script takes a few seconds to run.

Note:

The system deploys Caller Applications automatically after migration. Restore the Caller Applications on MAS#1 before you migrate any subsequent MASs. The additional MASs then have the Caller Applications automatically.

Restarting Modular Messaging services

After you restore the data, you must restart the Modular Messaging services for this MAS.

1. To restart Modular Messaging services:
 - a. Click **Start > Run** to open the **Run** window.
 - b. In the **Open** field, enter the following text and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
The script takes a few seconds to run.
2. Verify that all the Modular Messaging services required for the MAS are started:
 - a. Double-click the **Monitor** icon on the desktop or from the command prompt run **services.msc**.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. If the **Monitor** window is already open, refresh the screen.
 - d. In the right pane, scroll down to the list of Modular Messaging services. All services start with the abbreviation **MM**. Verify that the **Status** column shows the correct state for each messaging service:
 - Services that are required for this server must show **Started** and a startup type of **Automatic**.

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- Services that are *not* required for this server must show a blank status and a startup type of **Disabled**. For more information, see [Restarting messaging services](#) on page 233.
- e. If the **Status** for any **MM** service that is required for this server is **Stopped** or blank, repeat Steps 1 and 2.
The system starts a messaging service startup.
- f. Track the startup progress as follows:
 1. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 2. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
- g. Close the **Monitor** window.

Installing software updates

The Modular Messaging Release 5.2 software is the most current version available at the time of release. However, you need to update the software after a migration to include the latest changes. Avaya provides these updates in the form of an Avaya Service Pack (SP) or a software patch.

Complete the following steps to update Modular Messaging software:

1. Locate any relevant Avaya software updates on the Avaya Support Web site at <http://www.avaya.com/support>. For complete steps, see [Getting software updates from the Web](#) on page 370.

Note:

- If you followed the procedure for [Downloading software updates](#) on page 12, you already downloaded any required software updates.
2. Follow the instructions provided in [Updating Modular Messaging software](#) on page 369 to update the system with the latest changes before you do acceptance testing.

Performing acceptance tests for a migration

To verify that the migrated system is working correctly:

1. Continue with [Running acceptance tests](#) on page 124.
2. Do all acceptance tests that are appropriate for each server. For example:
 - For an MAS, test that the server can send and receive calls.
 - For all servers, verify that the services installed on that server are working. For example, if Message Waiting Indication (MWI) or Tracing Service is installed on a server, verify that these services work.

If you have migrated all MASs and Supplementary servers, continue with [Completing the system migration](#) on page 245.

Completing the system migration

Complete the migration of Modular Messaging system as follows:

- [Running a DCT analyze on the migrated system](#) on page 245
- [Backing up the system](#) on page 245
- [Completing the Modular Messaging system migration](#) on page 250
- [Updating or installing client software](#) on page 251

Running a DCT analyze on the migrated system

Use the DCT to analyze the migrated system; see [Using the DCT to analyze the current configuration](#) on page 142.

Backing up the system

After the migration, back up the Modular Messaging system to save the new Release 5.2 data. First back up each MAS. Remove old backup files to free up space, and then back up the MSS.

Running backups on each MAS

Do this task on each MAS and the Supplementary server.

To back up the Release 5.2 data on each MAS:

1. Switch the monitor to show the correct MAS.
2. Double-click the **Scheduled Tasks** icon on the desktop.
3. In the Scheduled Tasks window, run an attended backup on this MAS:
 - a. Right-click the **MAS Backup** task that is already set up.
 - b. Select **Run**.

The system immediately starts to back up the data on this MAS to the MSS. The **Status** column shows **Running**. When the backup is complete, the **Status** column goes blank. This backup takes about one minute.

4. *Optional:* To verify the success of the backup:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 1. Refresh the window display periodically until you see the following events:
 - **ntbackup 8009, End Verify of C:**
 - **ntbackup 8019, End Operation: The operation was successfully completed.**

Note:

On MAS#1, the event viewer shows two sets of backup events because the backup program generates two files on the MSS: *MYMAS#1MASSingle.bkf* and *MYMAS#1MASAll.bkf*. Backups on subsequent MASs generate only the *MASAll.bkf* file for each MAS, so only one set of backup events is present.

- c. *If the backup fails to run*, verify the account settings:
 1. Double-click the task **MAS Backup** to view the properties window.
 2. In the MAS Backup window, click the **Task** tab. Verify that the account in the **Run as** field is the correct account that has permissions to run backups manually, such as *privdom1\dom-admin*. If the account is incorrect, type the correct value now. For more information, see [Placing the MSS in the Windows domain—MAS#1 only](#) on page 238.
 3. If you change the account, or to verify the password, click **Set password**. In the Set Password window, enter and confirm the password for the required account. Click **OK**.
 4. Click **OK** to close the MAS Backup window.
 5. Repeat Step 3a to run the backup again.
5. Close the **Scheduled Tasks** window.
6. Repeat this procedure for each MAS in the system.

Removing old backup files from the MSS

The Modular Messaging backup file names may have changed from the release that your system was running to Release 5.2. You must remove the old backup file from each MAS in the system so it does not use up valuable disk space on the MSS.

 **CAUTION:**

Do not remove the old backup files until you confirm that data restoration is complete and that the new MAS backup procedure is working.

To remove the old backup files from each MAS:

1. Switch the monitor to show the MAS.
2. Map to the backup drive on the MAS:
 - a. On the desktop, right-click the **My Computer** icon and select **Map Network Drive**.

Note:

If you renamed the label, the computer icon shows the server name, such as *mymas1*.

- b. In the Map Network Drive window, in the **Folder** field, type **\\mss1\masbackup**.
- c. Clear the **Reconnect at logon** check box.
- d. Click **Connect using a different user name**.
- e. In the **Connect As** window, in the **User name** field, enter the Windows domain name and the domain administrator account name in the format **domain\account name**. For example, type *privdom1\dom-admin*.
- f. Enter the password for this account. Click **OK**.
- g. In the Map Network Drive window, click **Finish**.

The system opens a window to the designated drive letter, such as Z:\.

3. In Windows Explorer, locate the backup file for the pre-migrated system on the MSS. The old backup file is at least 264 MB in size and uses the format *MYMASDailyBackup.bkf*, where *MYMAS* is the host name of the MAS.

 **CAUTION:**

The following backup files support Release 5.2. Do *not* delete any of the following files, where *MYMAS* is the host name of the MAS.

- *MYMAS#1MASSingle.bkf* contains deployed Caller Applications data for the system, the *.uma files. Only MAS#1 generates this file.
- *MYMAS#MASAll.bkf* contains tone files, custom prompts, and PBX configuration information. Each MAS in the system generates its own MASAll.bkf file.

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4. Delete the old backup file for this MAS:
 - a. Right-click the old backup file, such as *MYMASDailyBackup.bkf*. Select **Delete**.
 - b. When the system prompts you to confirm the deletion, click **Yes**.
 - c. Close the window to the mapped drive.
5. Disconnect the mapped drive:
 - a. On the desktop, right-click the **My Computer** icon and select **Disconnect Network Drive**.
 - b. In the Disconnect Network Drives window, under **Network Drives**, select **\\mss1\masbackup**. Click **OK**.

Note:

You *must* disconnect the mapped drive, or automatic nightly backups might fail.

6. Repeat this task for each MAS in the system.

Backing up the MSS

After you have run an attended backup of each MAS, run an attended backup on the MSS now. Make the first system backup to DVD-RAM.

1. Log on to the MSS server as **craft** using the appropriate password.

The system displays the Messaging Administration web interface.
2. Insert a labeled, writable DVD-RAM into the DVD drive for the system backup.
3. To run an attended backup, from the Backup/Restore menu, click **Backup**.

The system displays the Backup page.
4. Make a backup of the new Release 5.2 system data:
 - a. Because the system is not yet in service, you do not have to stop the voice system.
 - b. Verify that **Media Type** is set to **DVD-RAM**.
 - c. Set all the data fields to back up to **Yes**.
 - d. Click **Start Backup**.
 - e. If the system prompts you to continue, click **Continue**.
 - f. The system estimates the number of DVDs that it requires. Verify that you have the correct number of DVDs available. Click **Continue**.
 - g. When the system prompts you to insert the DVD, click **Continue**.

The system saves the new system configuration to the DVD. Allow about 30 minutes for each DVD.
 - h. Follow the prompts on the screen to track and complete the backup process. Scroll to the bottom of the page to see the most recent status messages. The message

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FULL-MANUAL BACKUP completed successfully indicates that the backup is complete.

5. After the backup is complete, restart the messaging service:
 - a. From the **Utilities** menu, click **Start Messaging**.
 - b. On the **Start Messaging Software** page, the system displays the status of starting the messaging system. Verify that voice messaging restarts.
6. After the backup is complete, leave the DVD-RAM backup medium in the DVD-RAM drive to support the next unattended backup.
7. Consult with the customer about the method to use at this site for running regular unattended (scheduled) backups of the system data.

The system supports backups to DVD-RAM or through the customer network using FTP/SFTP. For instructions, obtain "Backing up the MSS;" see [Downloading user documentation](#) on page 13. For overview information, see *Avaya Modular Messaging Concepts and Planning Guide*.

Completing the Modular Messaging system migration



Important:

S8800 server supports SAL *only*. If you are migrating from a system that uses SNMP, Modem Dialout or Internet alarming type, the system sets the **Alarming Origination** field to INACTIVE. You must configure the alarming type to SAL.

Use the following steps to complete the Modular Messaging system migration:

1. Review event and alarm logs and resolve any problems; see the *Modular Messaging with Avaya MSS - MAS Administration Guide*.
2. On the Messaging Administration web interface, complete the following:
 - a. Under the **Alarming** menu, click **Alarming Configuration**.
The system opens **Configure Alarms** page. The system sets the **Alarming Origination** field to INACTIVE.
 - b. In the **Alarm Origination** field, click **SAL**.
In the **Alarm Suppression** field, **INACTIVE** indicates that alarm origination capability is determined by the **Alarm Origination** field.
3. On the MAS, enable alarms:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Serviceability**.
 - c. On the **Serviceability** page, on the **General** tab, clear the **Suppress alarm notifications** check box to turn it on the alarm notifications options.
 - d. Close all windows.
4. If you are adding a new MAS to the system, install the new server now.
 - a. Print [Modular Messaging on Avaya MAS installation checklist](#) on page 302 or [Modular Messaging on a customer-provided MAS installation checklist](#) on page 308 as appropriate and use as a guide.
 - b. Install the new server. For more information, see *Installing the Avaya S8800 1U Server for Modular Messaging* guide.
 - c. Update the DCT data file, configure the new server, and redistribute the Modular Messaging services to all installed servers.
 - d. Send a copy of the most current DCT data file to the appropriate technical support group. Afterwards, erase the data file from your storage device for security purposes.

Updating or installing client software

After the Modular Messaging system migration is complete, you might need to update or install new client software. Client software includes:

- Modular Messaging Web Client—*must* be on its own server, *not* on an MAS or a Supplementary server
- Modular Messaging Web Subscriber Options, if installed on a non-MAS server
- Avaya Modular Messaging Notes Client
- Avaya Modular Messaging Outlook Client, Avaya Modular Messaging Outlook Restricted Client, Subscriber Options.

Note:

The ***Subscriber Options components*** are installed automatically on the MAS as part of the migration to Release 5.2. *Do not* manually install or delete any MM Clients, including Subscriber Options. For more information, see the *Avaya Modular Messaging Subscriber Options User Guide*; see [Downloading configuration notes](#) on page 12.

Reducing number of servers

S8800 1U supports *only* SIP based switch integration and does not support Dialogic port boards.

This migration scenario is *only* an example that describes how to reduce the number of MASs in your VMD by replacing S3400-family servers with S8730 family servers.

The Modular Messaging system in this example has four S3400-family server MASs, each running 23 ports of T1 QSIG. Since S8730 server has more port capacity, you need only two S8730 servers, each running 46 ports of T1 QSIG.

Note:

Ensure that the current system is in a like-for-like state prior to the upgrade in terms of the number of MASs, boards, and port configurations or the upgrade fails. Which means you must consolidate and configure the T1 QSIG port boards into two MASs for the current S3400-family servers.

1. Move and configure the T1 QSIG port boards:
 - a. Move the T1 QSIG board from S3400 MAS#3 to S3400 MAS#1.
 - b. Configure the boards using DCM; see [Configuring port boards](#) on page 326.
 - c. Double-click the **Monitor** icon on the DCM.
 - d. Click **Services (Local)** in the left pane, if the item is not already selected.
 - e. In the right pane, scroll down to **MM Messaging Application Server**.
 - f. Right-click **MM Messaging Application Server** and select **Start**.
 - g. Using VMSC, increase the number of ports in S3400 MAS#1 to 46 and allocate the ports to the required port groups.
 - h. Restart the Message Application service on the S3400 MAS#1.
 - i. Repeat this process to move the T1 QSIG board from S3400 MAS#4 to S3400 MAS#2.
 - j. Confirm that all of the ports in each server are working properly.
 - k. Convert the port boards to SIP as outlined in [Changing switch integration to SIP](#) on page 212.
2. Remove MAS#3 and MAS#4 as Trusted Servers from the MSS:
 - a. At the MSS prompt, log on as **craft**.

The server displays the Messaging Administration web interface.
 - b. Click **Trusted Servers**.
 - c. On the Manage Trusted Servers page, click **Delete the Selected Trusted Server** to remove the Trusted Server information for MAS#3 and MAS#4.
3. Remove the MAS host information for MAS#3 and MAS#4:

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- a. From the Server Administration menu, click **MAS Host Setup**.
 - b. Click **Remove** to remove the Host information for MAS#3 and MAS#4.
4. Remove MAS#3 and MAS#4 from the VMD:
- a. Sign onto MAS#3 as **craft**.
 - b. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration** to open the VMSC window.
 - c. In the VMSC window, double-click **Message Application Servers**.
 - d. Right-click MAS#3 and from the pop-up menu, click **Remove**.
 - e. Repeat this process for MAS#4.
 - f. Shutdown the MAS#3 and MAS#4 S3400-family servers.

 **CAUTION:**

Do not use the DCT to move services from one MAS to another during the migration! Moving services might require changes elsewhere in the system, such as on the MSS and in the VMSC. Move Modular Messaging services only after the migration is complete.

5. Obtain and run the DCT (mmdct.exe) to collect data and analyze the remaining S3400 MASs; see [Using the DCT to collect information from an MAS](#) on page 213.
6. Continue with the migration to Release 5.2; see [Migrating MSS and MAS to the S8800 1U-family server](#) on page 217.

Moving to the corporate Windows domain after migration

After you migrate to Release 5.2, you can move the Avaya Modular Messaging system to the customer's corporate Windows domain. This option is beneficial to customers who do not want a separate private Windows domain within their network. For complete procedure to move the Avaya Modular Messaging system to the corporate Windows domain, see [Moving to the corporate Windows domain after upgrade](#) on page 193.

Chapter 10: Migrating to Modular Messaging Release 5.2 on HP DL360 G7 server

The chapter describes how to migrate from Modular Messaging Release 3.x, Release 4.0, Release 5.0 or Release 5.1 that runs on an S3400, S3500, S8730, S8800 or customer-provided server to Modular Messaging Release 5.2 system that runs on HP DL360 G7 server.

If you are upgrading to Release 5.2, and still use the S3500 or S8730 server, use the procedures described in [Upgrading to Modular Messaging Release 5.2](#) on page 151.

If you are performing a staged upgrade, see *Avaya Modular Messaging Staged Upgrades for the Avaya Message Store Server (MSS) Release 5.0* guide.

If you are moving the Modular Messaging system to the corporate Windows domain, first complete the entire migration and then move the system to the corporate Windows domain. See [Moving to the corporate Windows domain after migration](#) on page 300 for more information.

You may need to change the switch integration to SIP as migration to Modular Messaging Release 5.2 supports *only* SIP based switch integration. For more information, see [Changing switch integration to SIP](#) on page 258.

Topics in this chapter include:

- [Migration requirements](#) on page 256
- [Preparing for the migration](#) on page 257
- [Migrating MSS and MAS to the HP DL360 G7 server](#) on page 263
- [Migrating each MAS](#) on page 268
- [Completing MSS administration](#) on page 283
- [Restoring data on each MAS](#) on page 285
- [Completing the system migration](#) on page 291
- [Reducing number of servers](#) on page 298
- [Using the DCT to collect information from an MAS](#) on page 259
- [Moving to the corporate Windows domain after migration](#) on page 300.

Migration requirements

To successfully migrate a Modular Messaging system, you need:

- Planning forms for the system that runs on Release 3.x or the original DCT file for the system that runs on Release 4.0, Release 5.0 or Release 5.1.
- The latest analyzed DCT file for the system.
- The following information and software from the Avaya Support Web site at <http://www.avaya.com/support>. For more information about how to access these items on the Web site, see [Downloading required software and documentation](#) on page 11.
 - The most current copy of the configuration notes for this switch integration.
 - The Avaya Modular Messaging MSS Pre-upgrade and Backup Verification Tool. For more information, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 258.
 - The latest version of **MMDCT.exe** file.
 - Any Avaya software updates required to bring the Avaya Modular Messaging software up to date after the migration is complete. Download this software to a USB storage device such as a flash drive, memory stick, or equivalent.
- To ensure that the Modular Messaging system is at minimum Service Pack and Patch level as provided in the table.

Table 11: Minimum required Service Pack and patch level

MM Release Number	Minimum SP level required	Minimum Patch on SP required
3.0	SP7	Patch 4
3.1 ¹	Avaya does not recommend any specific SP or Patch level	
4.0	SP7	Patch 2
5.0	Avaya does not recommend any specific SP level	Patch 15 and RFU M7025pt+a for the MSS
5.1	SP2	Patch 1

1. However, if the Modular Messaging Release 3.1 system is at SP9, you *must* remove the M7040rf+k on the MSS as instructed in step 4 c in [Preparing for the upgrade](#) on page 157.

- Print the migration checklist from [Modular Messaging Release 5.2 system migration checklist](#) on page 316. Use the checklist to track your progress.

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- Obtain a new license file and apply it on the WebLM server. For additional information, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.

Preparing for the migration

This section describes how to prepare the Modular Messaging system that runs on S3400, S3500 or an S8730 server while you migrate to Modular Messaging Release 5.2, that runs on HP DL360 G7 server.

HP DL360 G7 servers are supplied with MSS and MAS software pre-loaded on them.

When migrating from S3400 hardware, you may reduce the number of MASs in your VMD. For complete procedures to reduce MASs, see [Reducing number of servers](#) on page 298.

Perform the following tasks to prepare the Modular Messaging system for the migration:

- [Performing pre-upgrade tasks](#) on page 257
- [Using the DCT to collect information from an MAS](#) on page 259.

Performing pre-upgrade tasks

Perform the following tasks before you migrate the system:

- [Installing the Pre-upgrade and Backup Verification tool](#) on page 258
- [Running the Pre-upgrade tool](#) on page 258
- [Changing switch integration to SIP](#) on page 258
- [Using the DCT to collect information from an MAS](#) on page 259.
- [Completing pre-migration tasks](#) on page 259

Installing the Pre-upgrade and Backup Verification tool

Install the MSS Pre-upgrade and Backup Verification Tool as outlined in [Installing the Pre-upgrade and Backup Verification tool](#) on page 159.

Running the Pre-upgrade tool

A member of the Avaya or business partner installation team uses the Pre-upgrade tool to identify potential pitfalls and plan for the migration. Run the Pre-upgrade tool using the steps outlined in [Running the Pre-upgrade tool](#) on page 159.

Changing switch integration to SIP

The switch integrations may use different Dialogic port boards or may not use a Dialogic port board. If you are migrating to HP DL360 G7 server, irrespective of the switch integration type you use, you must convert to SIP based switch integration. Modular Messaging Release 5.2 running on HP DL360 G7 supports only SIP based switch integration.

Use the following procedures as appropriate:

[Changing from DSE, Analog or QSIG to SIP](#) on page 258

[Changing from H.323 to SIP](#) on page 259

Changing from DSE, Analog or QSIG to SIP

1. Using VMSC, change the Switch Integration type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
2. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
3. Restart the messaging service and set all services to **Automatic**; see [Restarting Modular Messaging services](#) on page 288.
4. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigureMMIPSEC\ConfigureMMIPSEC.exe`
5. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
6. Shut down the MAS.
7. Remove the Dialogic boards from the MAS.

See *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions* guide or *Maintaining the Avaya S8730 Server for Modular Messaging* guide as appropriate for information on how to remove the port board.

8. Start the MAS without any Dialogic boards installed.

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9. Make sure that all MM Services start up properly.
10. Repeat the steps for each MAS you plan to move to the SIP integration.

Changing from H.323 to SIP

For changing the H.323 to SIP, you need to:

1. Using VMSC, change the **Switch Integration** type to SIP for the MAS (start with MAS#1) and make all VMSC configuration changes as documented in the SIP Switch Integration Configuration notes (for notes information, see the Avaya Support Web site at <http://www.avaya.com/support>).
2. Using VMSC, change the number of ports for the MAS to the number of ports required with your SIP integration.
3. Restart the messaging service and set all services to **Automatic**; see [Restarting Modular Messaging services](#) on page 288.
4. After the messaging service has restarted and the system has produced the NT Application 1241 event, run the utility `C:\Avaya_Support\Tools\ConfigureMMIPSEC\ConfigureMMIPSEC.exe`
5. Test the SIP integration; see [Verifying call-handling capability](#) on page 82.
6. Repeat the steps for each MAS in the VMD you plan to move to the SIP integration.

Completing pre-migration tasks

Complete the tasks outlined in [Completing pre-upgrade tasks](#) on page 161, *before* you start migrating to Release 5.2.

Adding a new server

If you are adding a new MAS to an existing Modular Messaging system, *first* migrate the system. *After* the migration is complete, install the new MAS. See [Adding an MAS or a Supplementary server to an existing system](#) on page 387.

Using the DCT to collect information from an MAS

Use the Avaya Modular Messaging Data Collection Tool (DCT) to collect information from each MAS and Supplementary server. The tool puts the server system information into a data file. This allows you to easily configure the servers.

Always check the Avaya Support Web site at <http://www.avaya.com/support> to obtain the most recent version of the DCT program. Download the **mmdct.exe** file to a storage device and use the latest version rather than the one on the applications DVD.

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Collecting DCT data

Run a DCT analyze on each MAS and Supplementary server to collect system data as instructed in [Using the DCT to analyze the current configuration](#) on page 142.

Verifying DCT data

After analyzing the last MAS to be migrated, the Avaya Modular Messaging Data Collection Tool (DCT) window displays the results of the last analysis. The DCT collects the information that the system requires to migrate an MAS to Release 5.2. However, you must enter some data manually, and verify the information as described in this section.

For more information about completing the DCT screens, click the **Help** button in the Avaya Modular Messaging Data Collection Tool window. You can also use the printed document, *Avaya Modular Messaging Data Collection Tool Online Help*; see [Downloading user documentation](#) on page 13.

Do not change the data that was populated by the DCT.

Important:

If the DCT left pane shows a red **X** for any item, the data is either incomplete or incorrect on that screen. Click each flagged item and correct the problem before you proceed. Information must be complete and valid to continue with the migration. If you cannot fix a bad entry, do not proceed with the migration.

All account names and passwords must conform to Windows 2003 R2 security rules. If your account names and passwords do not conform to the new rules, you must change them before you analyze your system with the DCT executable file (MMDCT.exe). If you must change your Modular Messaging account names or passwords, contact your support organization for more information.

1. On the DCT window, click **Customer details** screen. The system opens the **Customer details** page:
 - a. Complete all of the fields on this screen.
 - b. Click **Next**.
2. Verify the settings on the **Regional settings** page. Click **Next**.
3. Verify that the message store is **MSS with Avaya MAS servers**. Click **Next**.
4. On the **Voice Mail Domain** screen:
 - a. Verify the name for the voice mail domain (VMD).
 - b. Verify the number of MASs in the voice mail domain.
 - c. Click **Next**.
5. Verify the setting on the **Corporate network details** page. Click **Next**.

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6. On the **Corporate MM server networking details** screen:
 - a. Verify the server names and other settings, depending on the connection type. If necessary, fill in the IP address and the Full computer name fields.
The DCT updates this information with each MAS that it analyzes.
 - b. Click **Next**.
7. On the Corporate network details screen:
 - a. Verify the domain name server (DNS), corporate default gateway, and WINS values. If the WINS field shows 127.0.0.0, change it to the correct value.
 - b. Click **Next**.
8. On the **Private network** screen, verify that all the settings are correct. Click **Next**.
9. On the **Exchange message store** screen, click **Next**.
10. On the **Domino message store** screen, click **Next**.
11. On the **MSS message store** screen:
 - a. Select **Join the Private Windows Domain (default configuration)**.
If the customer wants the system to move to the corporate domain, you complete this move AFTER you migrate the system. For more information, see [Moving to the corporate Windows domain after migration](#) on page 300.
 - b. In the **Private Windows Domain name** field you can enter a new name if needed. To change the name, first select the **Change default information** check box and then type the new name in the field.
 - c. Ignore the **Corporate Windows Domain** field.
 - d. Click **Next**.
12. Verify the MSS trusted server passwords are populated.
13. Click **Next**.
14. On the **MAS accounts and passwords** screen:
 - a. Enter the correct logon name for each MAS administration account.
 - b. Enter the password for each account. By default, the DCT tool does not automatically insert passwords.
 - c. Click **Next**.
15. On the Logon accounts and passwords screen:
 - a. Enter the correct logon name and password for the technical support account and the customer administration account. The names and passwords must comply with the security standards.
 - b. Click **Next**.

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16. On the MAS service account screen, verify that **Run MAS services using LocalSystem** is selected. Click **Next**.
17. On the **TTS and announcements** screen, click **Next**.
18. On the MM service selection screen:

 **CAUTION:**

Do not use the DCT to try to move services from one MAS to another during the migration! Moving services might require changes elsewhere in the system, such as on the MSS and in the VMSC. Move Modular Messaging services only after the migration is complete.

- a. Verify that the correct services are selected for each server.
 - b. To activate the Web Subscriber Options (WSO) application on an MAS, click the appropriate column.
You can activate Web Subscriber Options only once per voice mail domain.
 - c. Click **Next**.
19. On the WebLM Server screen, complete the WebLM settings:
 - a. Select the server on which you install the WebLM server:
 - On an MAS or Supplementary server
 - On an Avaya optional server or customer provided equipment
 - b. MAS Number
 - c. WebLM Server URL
 - d. Click **Next**.
 20. On the Switch Integration screen, do not change the settings. Click **Next**.

 **CAUTION:**

When you are migrating a Modular Messaging system, you must complete the migration with the same PBX integration used for the previous release. Changes to the PBX integration can be made only after you complete the migration. For more information, see [Using the DCT to collect information from an MAS](#) on page 259.

21. After you have opened each DCT screen and cleared any red-flagged items, the **Cancel** button changes to a **Complete** button. After you have entered and verified all required data, click **Complete**. A **Save** window appears.
22. Save the *mmdct* data file to the storage device.
After you save the file, the system closes the Data Collection Tool window.
23. Remove the storage device from the server to prevent damage to the data file.

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Migrating MSS and MAS to the HP DL360 G7 server

Migrate the Message Storage Server (MSS) before you migrate any other server in the Modular Messaging system. The MSS Release 5.2 migration involves:

- [Preparing MAS#1 for the migration](#) on page 263
- [Backing up each MAS](#) on page 264
- [Backing up the MSS](#) on page 264
- [Running the Backup Verification tool](#) on page 264
- [Migrating the MSS hardware](#) on page 264
- [Restoring data on the MSS](#) on page 265

Preparing MAS#1 for the migration

Before you start the process of migration, the current Modular Messaging system must be made non-operational. Backup the data on each MAS and then backup the data on MSS.

You must prepare the first MAS for the migration before you start to migrate the MSS. These tasks are essential for a successful migration.

Busying out ports on MAS

You must not take calls during the migration. To achieve this, busyout the ports on each MAS and on the switch before you start the migration. Otherwise, messages spool on the MAS. Any spooled messages that have not been delivered to the MSS prior to performing the MSS backup gets lost. Perform the tasks as outlined in [Busying out ports on each MAS](#) on page 165 to busyout ports on the first and the subsequent MASs. This process makes the entire system inactive.

Checking the spool folder on each MAS

Before you migrate the MAS, verify that any spooled messages are delivered to the MSS:

1. Switch the monitor to show the applicable MAS.
2. Open Windows Explorer.
3. Navigate to the folder *C:\Program Files\Avaya Modular Messaging\VServer\Spool*.
4. Verify that the Spool folder contains no message files.

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 **CAUTION:**

If the folder contains spooled messages, wait for the system to deliver them, which can take awhile.

5. When the *Spool* folder is empty, continue with the process of migration of MASs.

Backing up each MAS

You must back up the data on each MAS in the system before you back up the MSS.

To back up all the data on the Modular Messaging system, first send backup data from each MAS to the MSS. The MAS information will be backed up with the MSS system data on the DVD-RAM disks. Perform the tasks outlined in [Backing up each MAS](#) on page 166.

Backing up the MSS

You must stop the voice system completely and backup all data from MSS to the DVD as instructed in [Backing up the MSS](#) on page 167. You must then leave the voice system out of service so that the subscribers cannot access the MSS. This is because any changes you make to mailbox or message after you take the backup will get lost.

Note:

Do not shut down the entire system until you complete verifying the backup data as described in [Running the Backup Verification tool](#) on page 264.

Running the Backup Verification tool

Use the Backup Verification tool after a pre-upgrade backup before you continue with the migration. To install the Backup Verification tool, see [Installing the Pre-upgrade and Backup Verification tool](#) on page 258. For more information on running the tool, see [Running the Backup Verification tool on page 169](#).

Run the Backup Verification tool on the day you want to migrate. After you verify that every backup DVD is successful, return to the MSS main menu.

Migrating the MSS hardware

Avaya supports the following hardware migrations to HP DL360 G7 server:

- S3400, S3500 or S8730, S8800-family Avaya Message Storage Server High Availability version (MSS-H) to HP DL360 G7 server

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- S3400, S3500 or S8730, S880-family Avaya Message Storage Server Standard Availability version (MSS-S) to HP DL360 G7 server
- S8730-family six-disk server to the HP DL360 G7 four-disk server

Note:

For complete procedures to do a staged upgrade, see *Avaya Modular Messaging Staged Upgrades for the Avaya Message Store Server (MSS)* guide.

To migrate your existing MSS to HP DL360 G7 MSS:

1. Turn off the existing MSS server.
2. Label all cables so you can easily reconnect them.
3. Unplug all cables to the old server.
4. Remove the existing MSS server from the stacked configuration or customer cabinet.
5. Install the HP DL360 G7 MSS. For more information, see *Installing the HP DL360 G7 Server* guide.

Restoring data on the MSS

You must restore the customer data on to Modular Messaging system Release 5.2 running on HP DL360 G7 server.

 **CAUTION:**

A software restoration after a migration takes longer than a usual restore procedure, because the software does additional steps to migrate the data. Do not reboot the server until the software restoration is complete, or you will have to reload the software and restore the data again. The time required for the data restoration to complete depends on the number of subscribers in the system.

To restore data on the MSS:

1. Stop the messaging service:
 - a. From the **Utilities** menu, click **Stop Messaging**.
 - b. On the Stop Messaging Software page, click **Stop**.The system displays the status of stopping the messaging system.
2. After the system reports that the voice system has completely stopped, insert the DVD-RAM backup disk with the full manual backup in the DVD drive of the new hardware.

Note:

HP DL360 G7 server does not support reading the DVD-RAM disk when it is still inside the cartridge. If you are migrating from a system that uses a cartridge DVD-RAM disk, you *must* remove the disk from the cartridge to restore the backed up data onto the new server. If you have multiple backup disks, get them labeled with the correct number in sequence. Data is recorded on the imprinted side of the disk. Do not touch the imprinted side of the disk.

Complete the following steps to safely remove the disk from the cartridge without damaging the data:

- a. Using a pointed object, break the disk locking pin. Depending on the type of disk, you might have more than one locking pin.
 - b. Remove the locking pin (or pins).
 - c. Unlatch the cover by using the pointed object to press the indentation on the front left-hand corner of the cartridge.
 - d. Remove the disk.
 - e. When placing the disk into the cartridge, ensure that the printed side of the cartridge and the printed side of the disk face the same direction.
3. Start the data restoration:
- a. From the **Backup/Restore** menu, click **Restore**.
 - b. On the Restore page, set all the data types to **Yes**.
 - c. Click **Start Restore**. When you see the overwrite warning, click **OK**.
 - d. On the Restore status screen, when the system prompts you to insert the first DVD, click **Continue**.

You may get the following warning message:

The following package needs to be installed before continuing:

pubvt Pre-Upgrade and Backup Verification Tools for Avaya Modular Messaging

- e. If the system displays the following message:
 1. Would you like to stop the restore and install the missing software now? [n]:, click **Continue**.
 2. Attempt to continue without updating or installing software? [Y.]:, click **Continue**.

The system starts restoring all data to the system. Allow up to 40 minutes for the system to restore the data from each backup DVD. To follow the progress of the data restoration, press **Page Down** or scroll down to see the bottom of the screen.

4. After the restore is complete, reboot the system.
 - a. From the Utilities menu, click **Reboot Server**.
 - b. On the Reboot Server page, click **Reboot**.

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- c. At the prompt that you will lose access to the system, click **OK**.
The reboot starts. The system displays several login prompts.
 - d. Ignore all login prompts until you see **Press Enter to return to prompt...**
 - e. Press **Enter**.
The login prompt appears.
5. Prepare for the next system backup:
 - a. Remove the DVD-RAM backup medium from the drive. File the pre-upgrade backup DVDs in a safe place.
 - b. Insert a new, writable DVD-RAM in the drive to support a Release 5.2 attended backup.
 6. At the prompt, log on to the MSS as **craft**.
The server displays the Messaging Administration web interface.
 7. As a sanity check, display the Configure Network Addressing page:
 - a. From the Server Administration menu, click **TCP/IP Network Configuration**.
 - b. Verify the settings on this page. See [Setting up network addressing](#) on page 28. Verify that the corporate and private LANs are not backward.
 8. From the Messaging Administration web interface, click **Subscriber Management**:
 - a. Verify that the correct number of subscribers is restored. You recorded this number before backing up the MSS.
 - b. On the **Manage Classes-of-Service** page, verify that the classes of service are correctly restored.
 9. The system does *not* back up passwords for the remote-access login accounts. You must re-enter the correct passwords to enable remote access.
 - a. From the Security menu, click **Local Administrators**.
The system displays the Manage Local Administration Accounts page.
 - b. Select an account, such as *sa* or *vm*, and then click **Edit the Selected Admin**.
The system displays the Edit Local Administration Account page.
 - c. From the **Local Authentication Enabled?** drop-down menu, select **yes** (if it is not already selected).
 - d. In the **Password** field, enter the appropriate password.
 - e. In the **Confirm Password** field, enter the password again for verification.
 - f. Click **Save**.
 - g. Repeat Step b for each additional login that you must administer.
 - h. Set the administrative password defaults (**sa** and **vm**) and give the passwords to the customer.

Migrating each MAS

Do this procedure on each MAS.

After you complete the migration of the MSS, you must migrate each MAS. Server migrations involve:

- [Starting the MAS migration](#) on page 268
- [Preparing the new server](#) on page 271
- [Updating settings in VMSC](#) on page 274
- [Continuing the MAS migration](#) on page 282

Starting the MAS migration

To start migrating the MAS server:

1. Insert the storage device that contains the analyzed DCT file from your existing server into the HP DL360 G7 server. You must start with MAS #1.
2. To boot the MAS, press the power button.
The Avaya Modular Messaging Configuration wizard runs automatically.
3. On the Welcome screen, click **Next**.
4. If the data file (such as *sitfile.mmdct*) is on the **Locate Configuration Data** screen, highlight the file and then click **Next**; otherwise, do the following:
 - a. Click **Browse**.
 - b. In the Open window, click the drop-down list next to **Look in**.
 - c. Select the storage device, and navigate to the appropriate folder that contains the data file for this site. If the server fails to recognize the storage device, do one of the following:
 1. In the Open window, click **My Computer** in the left pane. After the **Look in** field shows **My Computer**, press **F5** to refresh the screen.
 2. If the storage device still fails to appear, remove and then insert the device again.
 - d. Double-click the analysed DCT file you have edited earlier for this site, such as *sitfile.mmdct*.
 - e. On the Locate Configuration Data screen, select the correct data file.
 - f. Click **Next**.
5. When the system prompts you to confirm the data file, click **Yes**.
The system opens Avaya Modular Messaging Data Collection Tool window.

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- a. If desired, page through each screen to verify the data. Click **Next** on each screen.

Note:

For more information about completing or verifying the data on each screen, see [Verifying DCT data](#) on page 260.

- b. To continue the configuration process, click **Complete**.

The system automatically saves the updated data to the MISCM folder on the server.

 **CAUTION:**

Be sure to save the file back to the storage device, irrespective of whether you updated any information in the DCT data file or not. You need a current copy for technical support and for subsequent server migrations.

The system returns you to the Avaya Modular Messaging Configuration Wizard.

6. On the **Messaging Application Server Number** screen, verify that the **MAS number** field shows the correct number for this server.

- Start with MAS#1.
- If required, change the **MAS number** field to show the correct number for this server.

7. Click **Next**.

The Configuring System screen shows the MAS configuration starting. The Sysprep window opens. The server then reboots.

8. After the reboot, a Windows Setup wizard runs. To complete the wizard:

- a. On the License Agreement screen, select **I accept this agreement**. Click **Next**.
- b. On the Your Product Key screen, type the Windows product key for this server.

Note:

Each Windows computer has a unique product key for the Windows 2003 R2 operating system. Enter the number exactly as shown. Record the product key.

- For the HP DL360 G7 server, the product key sticker is located on top of the server chassis.
- Use only the new Windows product key received with the HP DL360 G7, do not use the Windows product key from S3400, S3500 or S8730.

- c. Click **Next**.

The Avaya Modular Messaging Configuration Wizard displays its configuration status on the Configuring System screen. The server reboots several times, but you do not need to log on manually. The entire process takes about 30 minutes.

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9. If the system displays a Configuration Credential LDAP failure, verify that the MSS is running. The MSS must be available during the MAS configuration process. If the MSS is running, try the following:
 - Verify that LDAP passwords in the DCT data file and on the MSS match. See [Setting up the MSS local machine](#) on page 32.
 - Verify that the private network LAN cable is connected.
 - If the above doesn't work, contact support.
10. When the server configuration is complete, the progress bar stretches across the screen and the **Next** button becomes active. Click **Next**.

Note:

If you leave the server unattended, the server can time out. If you see a message indicating that the computer is locked, press **Ctrl+Alt+Del** to log on.

11. On the Avaya Modular Messaging Wizard Completed screen, click **Finish**.

 **CAUTION:**

Do not run the Avaya Modular Messaging Configuration Wizard on any subsequent server until you complete the configuration of each server in turn.

Preparing the new server

This section describes how to update and protect the new server. To prepare a new server, complete the following procedures:

- [Installing the WebLM server](#) on page 271
- [Obtaining and applying the license file](#) on page 271
- [Importing certificates and configuring the WebLM URL in VMSC](#) on page 271
- [Installing and administering anti-virus software](#) on page 272
- [Updating Microsoft Windows](#) on page 272
- [Reapply the remote access settings for each MAS](#) on page 273.

Installing the WebLM server

Install the WebLM server using *one* of the following methods:

- On an MAS, a Supplementary server or a standalone server as outlined in [Installing WebLM server on an MAS](#) on page 62. For more information on WebLM, licensing, see *Installing and configuring Avaya WebLM server*.
- If you already have a WebLM server that you are using for licensing other Avaya products, proceed with [Obtaining and applying the license file](#) on page 271.

Obtaining and applying the license file

You **must** obtain the new license file and apply it on the WebLM server for your system. For instructions to obtain and apply the license, see [Obtaining the license file](#) on page 63 and [Applying license file on the WebLM server](#) on page 63.

Importing certificates and configuring the WebLM URL in VMSC

Complete the following procedures:

- Import the license file in VMSC to apply the certificates to your VMD as outlined in [Importing certificates from license](#) on page 64.
- Configure the URL for the WebLM server in VMSC on the MAS as outlined in [Configuring the WebLM URL in VMSC](#) on page 64.

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Installing and administering anti-virus software

Avaya strongly recommends that anti-virus software be installed on any Microsoft Windows computer that runs Avaya Modular Messaging software. The anti-virus software used and the method of installation depends on customer requirements and the local implementation. To install the anti-virus software, use the instructions in

For more information about anti-virus software, obtain “Modular Messaging and security;” see [Downloading user documentation](#) on page 13.

Updating Microsoft Windows

A new Avaya MAS contains the most current Microsoft Windows software at the time it is shipped. After installation, you must install the latest updates for Microsoft Windows, including operating system updates and security patches. These software updates protect the system from known security weaknesses. Check with the appropriate Windows administrator for the software update procedures to use at this site.

Note:

Avaya technical support representatives must follow the specified internal procedures to verify the software that is installed. If required, the support representative must update the software with the latest patches as instructed.

Reapply the remote access settings for each MAS

Important:

New installations and migrations of Modular Messaging support SAL only.

Do this task on each MAS.

Enter the IP addresses on each MAS to allow remote access:

1. Double-click the **Configure** icon on the desktop.
2. In the left pane of the Configure window:
 - a. Expand **Routing and Remote Access**.
 - b. Expand the server name, such as *MYMAS1*.
3. Set up a static IP address pool as follows:
 - a. In the left pane, right-click the server name, such as *MYMAS1*. Select **Properties**.
 - b. In the local Properties window for the server, click the **IP** tab.
 - c. Under **IP address assignment**, select **Static address pool**.
 - d. Add or edit the address range as follows:
 - If the window shows an incorrect IP address range, select the displayed range and click **Edit**. For example, the range might show all zeroes or start with *192.168.2*.

CAUTION:

If Avaya is to support this server, do *not* use the preprogrammed IP addresses, such as *192.168.2.200*. You must **Edit** or **Remove** these addresses for Avaya remote access to work.

- If no address range is already entered, click **Add**.
- e. In the Address Range window, enter the start and end IP addresses for this server.
 - f. Verify that the number of addresses is **2**.
 - g. Click **OK**.
 - h. For the **Adapter** field, select **Allow RAS to select adapter**.
 - i. Click **OK** to close the properties window.
4. Close the Configure window.

Updating settings in VMSC



Important:

HP DL360 G7 supports SIP based switch integration *only*.

After the migration, you must verify and update certain key settings in the Voice Mail System Configuration (VMSC) program, as described in this section.

Note:

The system prompts you to restart service several times during this procedure. You need to restart service only when this guide instructs you. You must restart service before entering the port board extension numbers in [Configuring MAS-specific parameters](#) on page 76. You must restart service again at the end, when configuration is complete.

Use the following steps to verify and update the following key settings:

1. In the **Voice Mail System Configuration** window, double-click the appropriate voice mail domain.
2. Verify key settings such as TUI settings, switch integration settings, and port board extensions.
3. Verify port board settings and port groups using the following steps:
 - a. Double-click **Message Application Servers**.

Note:

These values are already be set. Use the most current configuration notes for this PBX integration.

- b. Expand the appropriate MAS, such as *MYMAS1*.
- c. Double-click **Telephony Interface**. Verify the port board settings for this MAS. Use the configuration notes, download the configuration notes as instructed in see [Downloading configuration notes](#) on page 12.

Note:

To verify Dialogic board configuration settings, see [Appendix B: Configuring and testing port boards](#) on page 323.

4. Update the access permissions for the Modular Messaging system:
 - a. In the Voice Mail System Configuration window, expand **Security Roles**.

 **CAUTION:**

You must complete all updates to permissions in steps b and c before you exit the VMSC. Otherwise, you can lose access to the system, and you must start over from [Migrating each MAS](#) on page 268.

- b. Double-click **System Administrator**.
 1. Add the appropriate Modular Messaging logon accounts.

In an MSS configuration, the Microsoft Windows **Domain Admins** account includes the other logon accounts. To add the **Domain Admins** account:

 - In the **Permissions for System Administration** window, click **Add**.
 - In the **Select Users, Computers, or Groups** window, type the first letter of the account to add in the **Enter the object names to select** box. For example, type **d** for **Domain Admins**. Click **Check Names**.
 - In the **Multiple Names Found** window, double-click the correct account.
 - Verify that the account is underlined in the list box. Click **OK**.
 - *Optional:* Repeat this task to add other logon accounts, if required.
 2. Add the Modular Messaging local service account for each server in the system.
 - In the Permissions for System Administration window, click **Add**.
 - In the Select Users, Computers, or Groups window, click **Object Types**.
 - In the Object Types window, select **Computers** so the box is checked. Click **OK**.
 - In the Select Users, Computers, or Groups window, type the first letter of the server name in the **Enter the object names to select** box. For example, type **m** for **mymas1**. Click **Check Names**.
 - In the Multiple Names Found window, double-click the server name. The **Logon Name** field shows the local account for this server in the form **MASNAME\$(privdom1\masname\$)**, such as **MYMAS1\$(PRIVDOM1\WYMAS#1\$)**.
 - Verify that the local server name is listed and underlined in the list box. Click **OK**.
 - Repeat this procedure to add the local service account for each MAS and the Supplementary server in the VMD to the System Administration ACL.
 3. Select each **Account Unknown** entry. Click **Remove**.
 4. Select the **Everyone** account. Click **Remove**.
 5. Click **OK** to close the permissions window.

 **CAUTION:**

You must complete all updates to access permissions in Steps b and c before you exit the VMSC. Otherwise, you can lose access to the system, and you must start over from [Migrating each MAS](#) on page 268.

c. Double-click **Subscriber Administration**.

In the **Permissions for Subscriber Administration** window:

1. Add the same Modular Messaging logon accounts as you did in Step 4-b.
2. Add the local account for each server in the system, as you did in Step 4-b.
3. Select each **Account Unknown** entry. Click **Remove**.
4. Select the **Everyone** account. Click **Remove**.
5. Click **OK** to close the permissions window.

5. Double-click **Audio Encoding**.

a. In the Audio Encoding window, change the **Default Audio Encoding Format** to:

- **G.711 μ -Law** (mu-Law) for the United States and Japan
- **G.711 A-Law** for other countries, particularly Europe

Note:

HP DL360 G7 supports SIP only. The default Microsoft GSM encoding produces smaller files but poorer voice quality. Update the audio encoding to provide better sound quality, especially for H.323 and SIP integrations. G.711 encoding is required to support TTY/TDD devices.

b. Click **OK** to close this window.

6. In a multiple-MAS system, disable the Offline Access feature until all the servers are migrated. Otherwise, errors occur as the system searches for the missing offline store.

- a. For MAS#1, in the **Voice Mail System Configuration** window, double-click **Messaging**.
- b. Click the **Offline Access** tab.
- c. Clear the **Enable offline access to messages** check box and click **OK**.

You must enable the Offline Access feature only after you complete the migration of all MASs as described in [Enabling Offline Access to messages](#) on page 282.

7. Only on the system running Modular Messaging Release 3.x, complete the following steps to verify all Personal Operator Schedules:

- a. In the **Voice Mail System Configuration** window, double-click the appropriate voice mail domain.
- b. Double-click **Telephone User Interface**.
- c. Select the **Personal Operator Schedules** tab.

- d. Verify that all Personal Operator Schedules recorded before the migration are included in the list. If a schedule is missing, complete the following steps:
 1. Click **Add**.
 2. In the **Enter Personal Operator Schedule Name** dialog box in the **Schedule Name** field, enter the name of the missing schedule.
 3. Click **OK** to return to the **Personal Operator Schedules** tab.
 4. In the schedule grid, enter the schedule times.
- e. Click each Personal Operator Schedule in the schedule list and verify that the schedule times correspond to the times recorded before the migration. Correct any discrepancies in the schedule grid.
- f. Close all windows.

Creating the offline message share, if needed

Do this task only on the server that is to host the Offline Message Store.

In a multiple-MAS system that uses the Offline Access feature, the system requires an offline message store to synchronize messages among the MASs. If the folder for offline message access is to be located on this server, you must first create the shared folder for the offline messages. The folder must be available before you can administer the Offline Access feature.

To create a shared folder for offline messages with the correct permissions:

1. Using Windows Explorer, create a new folder on this server. For example, create *RemoteOfflineStore* on the C: drive.
2. Right-click the folder name and select **Sharing and Security**.
3. In the Properties window, on the **Sharing** tab:
 - a. Select **Share this folder**.
 - b. Verify the **Share name**, such as *RemoteOfflineStore*.
 - c. Click **Permissions**.
- d. In the Permissions window, verify that the **Everyone** account exists. If it does exist, continue with step 4. If the **Everyone** account does not exist, do the following to add it:
 1. In the Permissions window, click **Add**.
 2. In the Select Users, Computers, or Groups window, type the first letter of the account to add in the **Enter the object names to select** box.
For example, type **e** for **Everyone**.
 3. Click **Check Names**.
 4. In the Multiple Names Found window, double-click the correct account.
 5. Verify that the account is listed and underlined in the list box.

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6. Click **OK**.
 7. *Optional*: Repeat this task to add other logon accounts, if required.
 8. Give the correct share permissions to the accounts. In the Permissions window:
 - Select each account in turn.
 - In the **Permissions** box, under **Allow**, select the permissions **Change** and **Read**, so the boxes are checked.
 - Repeat this task for each logon account.
 9. Click **OK** to close the Permissions window.
4. In the **Properties** window, click the **Security** tab.
 - a. Click **Add** and add all Modular Messaging computer accounts that will access the offline storage server:
 1. In the Select Users, Computers, or Groups window, click **Object Types**.
 2. In the Object Types window, select **Computers** so the box is checked. Click **OK**.
 3. In the Select Users, Computers, or Groups window, type the first letter of the server name in the Enter the object names to select box. For example, type **m** for mymas1.
 4. Click **Check Names**.
 5. In the Multiple Names Found window, double-click the server name.

The Logon Name field shows the local account for this server in the form MASNAME\$(privdom1\masname\$), such as MYMAS1\$(PRIVDOM1\MYMAS#1\$).
 6. Verify that the local server name is listed and underlined in the list box. Click **OK**.
 7. Repeat this procedure to add a local service account for each server in the system.
 - b. Give the correct share permissions to these accounts. In the **Properties** window:
 1. Select each account in turn.
 2. In the **Permissions** box, under **Allow**, select the following permissions so the boxes are checked:
 - Modify
 - Read & Execute
 - List Folder Contents
 - Read
 - Write
 3. Repeat this task for each logon account and each MAS computer account.
5. Click **OK** to close the **Properties** window.
 6. Reboot each MAS in the system for the offline access permissions to take effect.

Restarting messaging services

After you verify and update all required settings, you must restart the messaging service for the configuration changes to take effect. Verify that the system is working.

To restart messaging service:

1. Double-click the **Monitor** icon on the desktop.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. Restart messaging service to accept any changes you made in the VMSC:
 - a. In the right pane of the Monitor window, scroll down to **MM Messaging Application Server**. Right-click it and select **Stop**.

 **CAUTION:**

Do not select the **Restart** option. Always stop, and then start, as described.

- b. When service is stopped, right-click **MM Messaging Application Server** again and select **Start**.

The system restarts the messaging service.

Note:

When you restart messaging service, the Monitor window displays the status of the service as **Started**. However, the service might take several minutes to start, depending on the number of port boards installed and the integration method.

- c. Track the startup progress as follows:
 1. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 2. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
4. Verify that the correct messaging services required for this MAS are started.
 - a. In the Monitor window, click **Services (Local)** in the left pane, if the item is not already selected.
 - b. In the right pane, scroll down to the list of Modular Messaging services. These services start with the abbreviation **MM**. Verify that the **Status** column shows the correct state for each messaging service:
 - The following services, see [Table 12](#), are automatically installed on every MAS. Enable them based on the information in the table.
 - Services that are required for this server must show **Started** and a startup type of **Automatic**.

- Services that are *not* required on this server must show a blank status and a startup type of **Disabled**.

Table 12: Enabling Modular Messaging services in a VMD

Modular Messaging service name	Condition for enabling service
MM Messaging Application Server MM Service Connector Apache Tomcat ¹ Avaya Diagnostic Tools Avaya SPIRIT MM Alarming Server MM Audit Service MM Event Monitor Server MM Fault Monitor MM Performance Monitor Server MM Process Monitor Server	Enable on each MAS and on the Supplementary server.
MM Call Me ² MM Fax Sender ³ MM Mailbox Monitor ² MM MWI ² MM Tracing Service	Enable on <i>only one server</i> in each VMD, either on an MAS or the Supplementary server. See the <i>Avaya Modular Messaging Concepts and Planning Guide</i> for the recommended load balancing of services between multiple servers.

1. Apache Tomcat service must be enabled on the server on which WebLM server is installed. Apache Tomcat is not a Modular Messaging service.
2. The Call Me, MWI, and Mailbox Monitor services must always be enabled on the same server.
3. IP H.323 switch integration does not support fax service.

c. If the **Startup Type** for any **MM** service that is *not* required for this server is **Manual**:

1. Double-click the service to open the Properties window.
2. Set the **Startup type** to **Disabled**.
3. Click **OK**.
4. Refresh the screen to verify that all **MM** services *not* required for this server are **Disabled**. Repeat Step c as needed.



CAUTION:

All **MM** services that are *not* required for this server must be set to **Disabled** before you do Step d. Serious problems occur if you activate a service that is supposed to run on only one server in the VMD on multiple servers.

- d. If the **Status** for any **MM** service that is required for this server is **Stopped** or blank:
 1. Click **Start > Run** to open the Run window.
 2. In the **Open** field, type the following and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
 The script takes a few seconds to run. The program sets up all **MM** services correctly.
 3. Refresh the screen to verify that all **MM** services required for this server are **Started** and set to **Automatic**.
 4. If any required **MM** services are not set up correctly, repeat Step d.
5. When configuration is complete, close all open windows.
6. *For a multiple-MAS system*, after you configure the last MAS, restart MM services on all servers in the VMD. A restart ensures that the voice mail domain-wide properties are consistent across the VMD. To restart MM services on all MASs in the voice mail domain:
 - a. Switch the monitor to show the next MAS in the system.
 - b. Repeat steps 3 through 5 under [Restarting messaging services](#) on page 279 to restart messaging service.
 - c. Repeat step 6 for each MAS in the system.

Completing VMSC setup

Complete the following for the current MAS:

1. Enter product IDs for the current MAS; see [Entering Product ID for current MAS](#) on page 65.
2. Configure the SAL destinations and community details using the **Serviceability - Voice Mail Domain** window of the Voice Mail System Configuration program. Enter the SAL destination and community information you recorded before beginning the migration. For additional information, see [Configuring serviceability settings on MAS#1](#) on page 59.
3. Configure the following services as applicable:
 - MM Audit Service; see [Configuring MM Audit Service](#) on page 69.
 - MM Fax Sender server; see [Configuring the MM Fax Sender server](#) on page 70.
4. Verify each service:
 - MM Audit Service; see [Verifying Audit service](#) on page 85.
 - MM Fax Sender server; see [Creating and printing a fax message](#) on page 131.

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Continuing the MAS migration

After you migrate an MAS, continue as appropriate:

- For MAS#1, continue the migration all the way through [Completing MSS administration](#) on page 283. If you restore the data onto MAS#1 and redeploy the caller applications, all subsequent MASs automatically get the deployed Caller Applications.
- For subsequent MASs and Supplementary server:
 1. Ensure that the most current data file is on the storage device.

 **CAUTION:**

When you update any information in the DCT data file, save the updated file to the storage device. You must use the most current copy for subsequent server migrations. Copy the most recent DCT data file to the storage device.

2. Configure each MAS:
 - If you have another MAS or Supplementary server, continue with [Migrating each MAS](#) on page 268.
 - If all MASs and Supplementary servers are now migrated, continue with [Restoring data on each MAS](#) on page 285.

Enabling Offline Access to messages

After you complete the migration of all MASs in the system, enable Offline Access feature:

1. In the VMSC window, double-click **Messaging**, and then click the **Offline Access** tab.
2. Select the **Enable offline access to messages** check box.
3. Click the **Synchronize offline messages with remote store** check box.
4. Click **Browse** to select an existing, shared folder in the domain for the remote offline message store. The name *must* use the format `\\computername.privdom.local\sharename`, such as `\\mymas2.privdom.local\RemoteOfflineStore`. For more information, see [Creating the offline message share, if needed](#) on page 277.
5. Click **OK** to close this window.

Completing MSS administration

Complete the following tasks on the MSS:

- [Verify the MAS host information](#) on page 283
- [Placing the MSS in the Windows domain—MAS#1 only](#) on page 284

Verify the MAS host information

Repeat this task for each MAS you migrate.

MSS updates the host information, and then sends the updated information to all MASs in the Modular Messaging system as outlined in [Updating MAS host information](#) on page 107.

Verify that all servers that are currently in the Modular Messaging system are updated.

1. On the Messaging Administration web interface, click **Server Administration > MAS Host Send**.

The system displays the **Send MAS Host Information** page.

2. Click **Send**.

The system sends the host information to all MASs at the same time and reports whether the information was updated successfully.

Placing the MSS in the Windows domain—MAS#1 only

Do this task only once per each migration, after you migrate MAS#1.

Because you reloaded the software on MAS#1, you must add the MSS to the created Windows domain.

To add the MSS to the private Windows domain:

1. From the Server Administration menu, click **Windows Domain Setup**.

The system displays the Windows Domain Setup page.

2. Enter the following information in each field:

- a. In the **MSS NetBIOS Name** field, type the MSS private system name, which is *mss1*.
- b. In the **NetBIOS Domain Name** field, type the NetBIOS domain name for the private Windows domain that was created on MAS#1. For example, if the Fully Qualified Domain Controller name as shown in the DCT data file is *mymas1.privdom1.local*, enter *privdom1* in the **NetBIOS Domain Name** field.
- c. In the **Fully Qualified Domain Controller Name** field, type the full computer name for MAS#1 on the private network, such as *mymas1.privdom1.local*.

 **CAUTION:**

In the following step, you must enter the current account name and password for the MAS administrator or else MAS backups fails. You *must* use the same account to set up system backups on each MAS. For more information, see [Backing up the system](#) on page 145.

- d. In the **Account For Joining The Domain** field, type the domain administrator account name, such as *dom-admin*.
- e. In the **Password For Joining The Domain** field, type the password for this account.

Note:

At this time make sure that the **User Corporate LAN?** check box is clear.

If joining the MM system to the corporate Windows domain DO NOT select **Use Corporate LAN?** check box at this time. You need to return after completing the corporate Windows domain setup and check this field.

If the system will remain on the private Windows domain, ensure that the **Use Corporate LAN?** check box is clear.

3. Click **Save**.

The page displays the Windows domain setup status.

Restoring data on each MAS

Restore the backed-up data onto each MAS.

This section includes the following topics:

- [Stopping all MM services](#) on page 285
- [Restoring backed-up MAS data](#) on page 286
- [Restoring Caller Applications—MAS#1 only](#) on page 288 —required on MAS#1 only
- [Restarting Modular Messaging services](#) on page 288
- [Installing software updates](#) on page 289
- [Updating Microsoft Windows](#) on page 50
- [Performing acceptance tests for a migration](#) on page 290

Stopping all MM services

To stop all Modular Messaging services:

1. Switch the monitor to show the correct MAS.
2. Stop all Modular Messaging services as follows:
 - a. Click **Start** > **Run** to open the Run window.
 - b. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe

A command window displays the status of the Modular Messaging services shutdown. The script might take several minutes to complete.

Note:

This script also stops Intel Dialogic services and some Windows services.

3. Confirm that all Modular Messaging services are stopped:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. If the Monitor window was already open, refresh the screen.
 - d. In the right pane, scroll down to the list of installed Modular Messaging services. These all start with the abbreviation **MM**.
 - e. Verify that the **Status** column is blank. If any service is *not* stopped, repeat Steps 2 and 3.

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Restoring backed-up MAS data

Restore the data on the MAS from the most recent backup. Data includes any customized caller applications, prompts, and tone files.

To restore the backed-up MAS data:

1. Map to the backup drive for this MAS on the MSS:

a. On the desktop, right-click the **My Computer** icon and select **Map Network Drive**.

Note:

If you renamed the icon label, the computer icon shows the server name, such as *mymas1*.

b. In the Map Network Drive window, in the **Folder** field, type `\\mss1\masbackup`.

c. Clear the **Reconnect at logon** check box.

d. Click **Connect using a different user name**.

e. In the Connect As window, for **User name**, enter the private Windows domain name and the domain administrator account name in the format **domain\account name**. For example, type *privdom1\dom-admin*.

f. Enter the password for this account. Click **OK**.

g. In the Map Network Drive window, click **Finish**.

The system opens a window to the designated drive letter, such as Z:

2. Double-click the **Backup** icon on the desktop.

3. In the Backup Utility window, on the **Welcome** tab, click **Restore Wizard**.

4. On the Welcome screen for the Restore Wizard, click **Next**.

5. On the What to Restore screen, click **Browse**.

a. In the Open Backup File window, click **Browse**.


b. In the Select file to catalog window, under **Look in**, navigate to the mapped drive.

c. Double-click the backup file for this MAS. For example, *MYMAS1DailyBackup.bkf*.

d. In the Open Backup File window, click **OK**.

The system returns to the What to Restore screen.

6. Verify that the system displays the full name of the MAS backup file in the right pane under **Media Location**. For example, *Z:\MYMAS1DailyBackup.bkf*.

7. In the left pane under **Items to restore**, expand **File**.
 - a. Expand the correct entry for the daily backup of this MAS. The file uses the naming convention from the previous software release, such as *Daily Backup of MYMAS1*.
 - b. Expand C:.
8. Select the folders and files to be restored:
 - a. Select the **Avaya_Support** check box. This folder includes the **Tone_Files** folder, which contains any custom tone files.
 - b. Expand the folders **Program Files > Avaya Modular Messaging > VServer**.
 - c. Select the **VServer** check box.
-  **CAUTION:**

Do *not* restore the System State! You also do not need to restore the hosts file, because you already resent the most current version from the MSS.
- d. Click **Next**.
9. On the Completing the Restore Wizard screen, click **Advanced**.
 - a. On the Where to Restore screen, select **Original location**. Click **Next**.
 - b. On the How to Restore screen, select **Replace existing files**. Click **Next**.
 - c. On the Advanced Restore Options screen, verify the following settings:
 1. Clear the **Restore security setting** check box and the **Restore junction points, not the folders and file data they reference** check box.
 2. Leave the **Preserve existing volume mount points** check box selected.
 3. Click **Next**.
10. On the **Completing the Restore Wizard** screen, review the restore information. Click **Finish**.

The **Restore Progress** window displays restore information.
11. When the data restoration is complete, close the **Restore Progress** window.
12. Close the **Backup Utility** window.
13. If the system asks if you want to restart, select to restart.
14. Close the mapped drive window, such as **Z:**.

 **CAUTION:**

You *must* disconnect the mapped drive, or automatic nightly backups might fail.

15. Disconnect the mapped drive:
 - a. On the desktop, right-click the **My Computer** icon and select **Disconnect Network Drive**.

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- b. In the Disconnect Network Drives window, under **Network Drives**, select `\\mss1\masbackup`. Click **OK**.

Restoring Caller Applications—MAS#1 only

Do this task only on MAS#1.

If Caller Applications were installed on the system, run the Caller Applications restore script:

1. Click **Start > Run** to open a Command prompt window.
2. In the Run window **Open** field, type the following and press **Enter**:

C:\Avaya_Support\CMD\CARestore.bat

A command window opens. The script shuts down all Modular Messaging services, and copies the Caller Applications to the server. The script takes a few seconds to run.

Note:

The system deploys Caller Applications automatically after migration. Restore the Caller Applications on MAS#1 before you migrate any subsequent MASs. The additional MASs then have the Caller Applications automatically.

Restarting Modular Messaging services

After you restore the data, you must restart the Modular Messaging services for this MAS.

1. To restart Modular Messaging services:
 - a. Click **Start > Run** to open the **Run** window.
 - b. In the **Open** field, enter the following text and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
The script takes a few seconds to run.
2. Verify that all the Modular Messaging services required for the MAS are started:
 - a. Double-click the **Monitor** icon on the desktop or from the command prompt run **services.msc**.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. If the **Monitor** window is already open, refresh the screen.
 - d. In the right pane, scroll down to the list of Modular Messaging services. All services start with the abbreviation **MM**. Verify that the **Status** column shows the correct state for each messaging service:
 - Services that are required for this server must show **Started** and a startup type of **Automatic**.

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- Services that are *not* required for this server must show a blank status and a startup type of **Disabled**. For more information, see [Restarting messaging services](#) on page 279.
- e. If the **Status** for any **MM** service that is required for this server is **Stopped** or blank, repeat Steps 1 and 2.
The system starts a messaging service startup.
- f. Track the startup progress as follows:
 1. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 2. Refresh the window display periodically until you see **Telephony User Interface** event 1241, **TUI service has been enabled**. You can then proceed.
- g. Close the **Monitor** window.

Installing software updates

The Modular Messaging Release 5.2 software is the most current version available at the time of release. However, you need to update the software after a migration to include the latest changes. Avaya provides these updates in the form of an Avaya Service Pack (SP) or a software patch.

Complete the following steps to update Modular Messaging software:

1. Locate any relevant Avaya software updates on the Avaya Support Web site at <http://www.avaya.com/support>. For complete steps, see [Getting software updates from the Web](#) on page 370.

Note:

- If you followed the procedure for [Downloading software updates](#) on page 12, you already downloaded any required software updates.
2. Follow the instructions provided in [Updating Modular Messaging software](#) on page 369 to update the system with the latest changes before you do acceptance testing.

Performing acceptance tests for a migration

To verify that the migrated system is working correctly:

1. Continue with [Running acceptance tests](#) on page 124.
2. Do all acceptance tests that are appropriate for each server. For example:
 - For an MAS, test that the server can send and receive calls.
 - For all servers, verify that the services installed on that server are working. For example, if Message Waiting Indication (MWI) or Tracing Service is installed on a server, verify that these services work.

If you have migrated all MASs and Supplementary servers, continue with [Completing the system migration](#) on page 291.

Completing the system migration

Complete the migration of Modular Messaging system as follows:

- [Running a DCT analyze on the migrated system](#) on page 291
- [Backing up the system](#) on page 291
- [Completing the Modular Messaging system migration](#) on page 296
- [Updating or installing client software](#) on page 297

Running a DCT analyze on the migrated system

Use the DCT to analyze the migrated system; see [Using the DCT to analyze the current configuration](#) on page 142.

Backing up the system

After the migration, back up the Modular Messaging system to save the new Release 5.2 data. First back up each MAS. Remove old backup files to free up space, and then back up the MSS.

Running backups on each MAS

Do this task on each MAS and the Supplementary server.

To back up the Release 5.2 data on each MAS:

1. Switch the monitor to show the correct MAS.
2. Double-click the **Scheduled Tasks** icon on the desktop.
3. In the Scheduled Tasks window, run an attended backup on this MAS:
 - a. Right-click the **MAS Backup** task that is already set up.
 - b. Select **Run**.

The system immediately starts to back up the data on this MAS to the MSS. The **Status** column shows **Running**. When the backup is complete, the **Status** column goes blank. This backup takes about one minute.

4. *Optional:* To verify the success of the backup:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. In the left pane, expand **Event Viewer (Local)**, and then click **Application**.
 1. Refresh the window display periodically until you see the following events:
 - **ntbackup 8009, End Verify of C:**
 - **ntbackup 8019, End Operation: The operation was successfully completed.**

Note:

On MAS#1, the event viewer shows two sets of backup events because the backup program generates two files on the MSS: *MYMAS#1MASSingle.bkf* and *MYMAS#1MASAll.bkf*. Backups on subsequent MASs generate only the *MASAll.bkf* file for each MAS, so only one set of backup events is present.

- c. *If the backup fails to run*, verify the account settings:
 1. Double-click the task **MAS Backup** to view the properties window.
 2. In the MAS Backup window, click the **Task** tab. Verify that the account in the **Run as** field is the correct account that has permissions to run backups manually, such as *privdom1\dom-admin*. If the account is incorrect, type the correct value now. For more information, see [Placing the MSS in the Windows domain—MAS#1 only](#) on page 284.
 3. If you change the account, or to verify the password, click **Set password**. In the Set Password window, enter and confirm the password for the required account. Click **OK**.
 4. Click **OK** to close the MAS Backup window.
 5. Repeat Step 3a to run the backup again.
5. Close the **Scheduled Tasks** window.
6. Repeat this procedure for each MAS in the system.

Removing old backup files from the MSS

The Modular Messaging backup file names may have changed from the release that your system was running to Release 5.2. You must remove the old backup file from each MAS in the system so it does not use up valuable disk space on the MSS.

 **CAUTION:**

Do not remove the old backup files until you confirm that data restoration is complete and that the new MAS backup procedure is working.

To remove the old backup files from each MAS:

1. Switch the monitor to show the MAS.
2. Map to the backup drive on the MAS:
 - a. On the desktop, right-click the **My Computer** icon and select **Map Network Drive**.

Note:

If you renamed the label, the computer icon shows the server name, such as *mymas1*.

- b. In the Map Network Drive window, in the **Folder** field, type **\\mss1\masbackup**.
- c. Clear the **Reconnect at logon** check box.
- d. Click **Connect using a different user name**.
- e. In the **Connect As** window, in the **User name** field, enter the Windows domain name and the domain administrator account name in the format **domain\account name**. For example, type *privdom1\dom-admin*.
- f. Enter the password for this account. Click **OK**.
- g. In the Map Network Drive window, click **Finish**.

The system opens a window to the designated drive letter, such as Z:\.

3. In Windows Explorer, locate the backup file for the pre-migrated system on the MSS. The old backup file is at least 264 MB in size and uses the format *MYMASDailyBackup.bkf*, where *MYMAS* is the host name of the MAS.

 **CAUTION:**

The following backup files support Release 5.2. Do *not* delete any of the following files, where *MYMAS* is the host name of the MAS.

- *MYMAS#1MASSingle.bkf* contains deployed Caller Applications data for the system, the *.uma files. Only MAS#1 generates this file.
- *MYMAS#MASAll.bkf* contains tone files, custom prompts, and PBX configuration information. Each MAS in the system generates its own MASAll.bkf file.

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4. Delete the old backup file for this MAS:
 - a. Right-click the old backup file, such as *MYMASDailyBackup.bkf*. Select **Delete**.
 - b. When the system prompts you to confirm the deletion, click **Yes**.
 - c. Close the window to the mapped drive.
5. Disconnect the mapped drive:
 - a. On the desktop, right-click the **My Computer** icon and select **Disconnect Network Drive**.
 - b. In the Disconnect Network Drives window, under **Network Drives**, select **\\mss1\masbackup**. Click **OK**.

Note:

You *must* disconnect the mapped drive, or automatic nightly backups might fail.

6. Repeat this task for each MAS in the system.

Backing up the MSS

After you have run an attended backup of each MAS, run an attended backup on the MSS now. Make the first system backup to DVD-RAM.

1. Log on to the MSS server as **craft** using the appropriate password.

The system displays the Messaging Administration web interface.
2. Insert a labeled, writable DVD-RAM into the DVD drive for the system backup.
3. To run an attended backup, from the Backup/Restore menu, click **Backup**.

The system displays the Backup page.
4. Make a backup of the new Release 5.2 system data:
 - a. Because the system is not yet in service, you do not have to stop the voice system.
 - b. Verify that **Media Type** is set to **DVD-RAM**.
 - c. Set all the data fields to back up to **Yes**.
 - d. Click **Start Backup**.
 - e. If the system prompts you to continue, click **Continue**.
 - f. The system estimates the number of DVDs that it requires. Verify that you have the correct number of DVDs available. Click **Continue**.
 - g. When the system prompts you to insert the DVD, click **Continue**.

The system saves the new system configuration to the DVD. Allow about 30 minutes for each DVD.
 - h. Follow the prompts on the screen to track and complete the backup process. Scroll to the bottom of the page to see the most recent status messages. The message

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FULL-MANUAL BACKUP completed successfully indicates that the backup is complete.

5. After the backup is complete, restart the messaging service:
 - a. From the **Utilities** menu, click **Start Messaging**.
 - b. On the **Start Messaging Software** page, the system displays the status of starting the messaging system. Verify that voice messaging restarts.
6. After the backup is complete, leave the DVD-RAM backup medium in the DVD-RAM drive to support the next unattended backup.
7. Consult with the customer about the method to use at this site for running regular unattended (scheduled) backups of the system data.

The system supports backups to DVD-RAM or through the customer network using FTP/SFTP. For instructions, obtain "Backing up the MSS;" see [Downloading user documentation](#) on page 13. For overview information, see *Avaya Modular Messaging Concepts and Planning Guide*.

Completing the Modular Messaging system migration



Important:

HP DL360 G7 server supports SAL *only*. If you are migrating from a system that uses SNMP, Modem Dialout or Internet alarming type, the system sets the **Alarming Origination** field to INACTIVE. You must configure the alarming type to SAL.

Use the following steps to complete the Modular Messaging system migration:

1. Review event and alarm logs and resolve any problems; see the *Modular Messaging with Avaya MSS - MAS Administration Guide*.
2. On the Messaging Administration web interface, complete the following:
 - a. Under the **Alarming** menu, click **Alarming Configuration**.
The system opens **Configure Alarms** page. The system sets the **Alarming Origination** field to INACTIVE.
 - b. In the **Alarm Origination** field, click **SAL**.
In the **Alarm Suppression** field, **INACTIVE** indicates that alarm origination capability is determined by the **Alarm Origination** field.
3. On the MAS, enable alarms:
 - a. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
 - b. Under the voice mail domain name, double-click **Serviceability**.
 - c. On the **Serviceability** page, on the **General** tab, clear the **Suppress alarm notifications** check box to turn it on the alarm notifications options.
 - d. Close all windows.
4. If you are adding a new MAS to the system, install the new server now.
 - a. Print [Modular Messaging on Avaya MAS installation checklist](#) on page 302 or [Modular Messaging on a customer-provided MAS installation checklist](#) on page 308 as appropriate and use as a guide.
 - b. Install the new server. For more information, see *Installing the HP DL360 G7 Server* guide.
 - c. Update the DCT data file, configure the new server, and redistribute the Modular Messaging services to all installed servers.
 - d. Send a copy of the most current DCT data file to the appropriate technical support group. Afterwards, erase the data file from your storage device for security purposes.

Updating or installing client software

After the Modular Messaging system migration is complete, you might need to update or install new client software. Client software includes:

- Modular Messaging Web Client—*must* be on its own server, *not* on an MAS or a Supplementary server
- Modular Messaging Web Subscriber Options, if installed on a non-MAS server
- Avaya Modular Messaging Notes Client
- Avaya Modular Messaging Outlook Client, Avaya Modular Messaging Outlook Restricted Client, Subscriber Options.

Note:

The ***Subscriber Options components*** are installed automatically on the MAS as part of the migration to Release 5.2. *Do not* manually install or delete any MM Clients, including Subscriber Options. For more information, see the *Avaya Modular Messaging Subscriber Options User Guide*; see [Downloading configuration notes](#) on page 12.

Reducing number of servers

HP DL360 G7 supports *only* SIP based switch integration and does not support Dialogic port boards.

This migration scenario is *only* an example that describes how to reduce the number of MASs in your VMD by replacing S3400-family servers with S8730 family servers.

The Modular Messaging system in this example has four S3400-family server MASs, each running 23 ports of T1 QSIG. Since S8730 server has more port capacity, you need only two S8730 servers, each running 46 ports of T1 QSIG.

Note:

Ensure that the current system is in a like-for-like state prior to the upgrade in terms of the number of MASs, boards, and port configurations or the upgrade fails. Which means you must consolidate and configure the T1 QSIG port boards into two MASs for the current S3400-family servers.

1. Move and configure the T1 QSIG port boards:
 - a. Move the T1 QSIG board from S3400 MAS#3 to S3400 MAS#1.
 - b. Configure the boards using DCM; see [Configuring port boards](#) on page 326.
 - c. Double-click the **Monitor** icon on the DCM.
 - d. Click **Services (Local)** in the left pane, if the item is not already selected.
 - e. In the right pane, scroll down to **MM Messaging Application Server**.
 - f. Right-click **MM Messaging Application Server** and select **Start**.
 - g. Using VMSC, increase the number of ports in S3400 MAS#1 to 46 and allocate the ports to the required port groups.
 - h. Restart the Message Application service on the S3400 MAS#1.
 - i. Repeat this process to move the T1 QSIG board from S3400 MAS#4 to S3400 MAS#2.
 - j. Confirm that all of the ports in each server are working properly.
 - k. Convert the port boards to SIP as outlined in [Changing switch integration to SIP](#) on page 258.
2. Remove MAS#3 and MAS#4 as Trusted Servers from the MSS:
 - a. At the MSS prompt, log on as **craft**.

The server displays the Messaging Administration web interface.
 - b. Click **Trusted Servers**.
 - c. On the Manage Trusted Servers page, click **Delete the Selected Trusted Server** to remove the Trusted Server information for MAS#3 and MAS#4.
3. Remove the MAS host information for MAS#3 and MAS#4:

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

- a. From the Server Administration menu, click **MAS Host Setup**.
 - b. Click **Remove** to remove the Host information for MAS#3 and MAS#4.
4. Remove MAS#3 and MAS#4 from the VMD:
- a. Sign onto MAS#3 as **craft**.
 - b. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration** to open the VMSC window.
 - c. In the VMSC window, double-click **Message Application Servers**.
 - d. Right-click MAS#3 and from the pop-up menu, click **Remove**.
 - e. Repeat this process for MAS#4.
 - f. Shutdown the MAS#3 and MAS#4 S3400-family servers.

 **CAUTION:**

Do not use the DCT to move services from one MAS to another during the migration! Moving services might require changes elsewhere in the system, such as on the MSS and in the VMSC. Move Modular Messaging services only after the migration is complete.

5. Obtain and run the DCT (mmdct.exe) to collect data and analyze the remaining S3400 MASs; see [Using the DCT to collect information from an MAS](#) on page 259.
6. Continue with the migration to Release 5.2; see [Migrating MSS and MAS to the HP DL360 G7 server](#) on page 263.

Moving to the corporate Windows domain after migration

After you migrate to Release 5.2, you can move the Avaya Modular Messaging system to the customer's corporate Windows domain. This option is beneficial to customers who do not want a separate private Windows domain within their network. For complete procedure to move the Avaya Modular Messaging system to the corporate Windows domain, see [Moving to the corporate Windows domain after upgrade](#) on page 193.

Appendix A: Installation, upgrade and migration checklists

This appendix provides checklists to help guide you through the various installation, upgrades and migration tasks.

- Before you start a new Modular Messaging installation or upgrade, print the checklist relevant to the procedure that you must do.
- Check off the steps as you complete to ensure that you do not miss any important task.

Note:

If you want to add a new MAS to an existing Modular Messaging system, upgrade the software *first* if one is required. Install the new MAS using the new installation checklist.

The checklists include:

- New Installation
 - [Modular Messaging on Avaya MAS installation checklist](#) on page 302
 - [Modular Messaging on a customer-provided MAS installation checklist](#) on page 308
- Upgrades and migration
- [Modular Messaging Release 5.2 upgrade and migration checklists](#) on page 312
 - [Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist](#) on page 312
 - [Modular Messaging Release 5.2 system migration checklist](#) on page 316
- Moving Modular Messaging system after an upgrade or migration
 - [Moving the Modular Messaging system to the corporate Windows domain checklist](#) on page 321

Modular Messaging on Avaya MAS installation checklist

Use the following checklist to install a new Avaya Modular Messaging system. As you complete a task, make a check mark in the ✓ column.

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
Complete preinstallation planning:			
	If Avaya is to maintain this system, pre-register each MAS to obtain the server product ID and IP addresses for remote access.		You can obtain the required information for each MAS in advance.
	Obtain the DCT data file for this site.	11	Local procedures vary.
	Assemble and review the required documentation.	11	Web access required.
	Download any required Avaya software updates (including Outlook Client, DCT Tool, and the Pre-upgrade and Backup Verification Tool).	12	Web access required.
	Obtain user documentation.	13	
	Review security considerations.	15	
	Obtain the required anti-virus software for the MAS.	16	Customer provides the needed software.
	Collect any software media that is needed for the installation, such as Microsoft Windows updates.	16	Leave customer DVDs on-site.
	Gather the necessary test equipment.	16	
	Gather the necessary tools for installation.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide
	Arrange for LAN administration of the Modular Messaging system. Register MAS and MSS corporate computer names on the DNS.	17	See LAN administrator.
	Verify that the PBX or switch is administered.	17	See switch administrator.
Prepare for corporate Windows domain installs— perform this section only if the Modular Messaging system is joining the corporate Windows domain:			
	Create user accounts in the corporate Windows domain. Performed by the corporate domain admin	19	Only for systems that join the corporate Windows domain.
Table page 1 of 6			

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
	Create computer accounts in the corporate Windows domain. Performed by the corporate domain admin	20	Only for systems that join the corporate Windows domain.
	Review preinstallation site requirements, including: <ul style="list-style-type: none"> ● Environmental requirements ● Weight and space considerations ● Customer-provided cabinet requirements ● Installation area requirements ● Power and grounding requirements ● Demarcation points 		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide.
<p>Install the hardware: For complete information on how to install Avaya S8800 1U server and its accessories and HP DL360 G7 server and its accessories, see <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide and <i>Installing the HP DL360 G7 server for Modular Messaging</i> guide.</p>			
	Identify each S8800 1U-family server and HP DL360 G7 server in the system.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Unpack the Modular Messaging system hardware and peripheral components.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Attach mounting brackets and handles to the UPS and any EBM (extended battery module) units as needed, and then cable the units together.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Attach rails for rack-mount or rubber spacers for stackable configuration to each Avaya server.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Connect the power cables for the system.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Set up the MSS and MAS private LAN using an Ethernet crossover cable. Connect each server to the corporate LAN.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
Table page 2 of 6			

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
	Connect a multiple-MAS system using an Ethernet switch: <ul style="list-style-type: none"> ● Connect the MSS and first MAS only to the Ethernet switch for the private LAN. ● Connect each server to the corporate LAN. 		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Install an optional KVM switch.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Set up the optional external modem for the MSS.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
	Turn on the Modular Messaging system and peripheral components.		See <i>Installing the Avaya S8800 1U Server for Modular Messaging</i> guide or <i>Installing the HP DL360 G7 Server</i> guide.
Do initial MSS administration:			
	Log on to the MSS.	24	
	Adjust the monitor settings if needed.	25	
	Start the MSS configuration using a DCT data file. If you want to configure the MSS manually, use procedures in 28 .	26	
	Set the time and date	31	Must do manually before configuring an MAS
Configure the MAS—repeat this section for each MAS and the Supplementary server:			
	Switch the monitor to show the correct MAS.	42	
	Complete MAS configuration prerequisites.	42	
	In the Modular Messaging configuration wizard, locate the data file for the Data Collection Tool (DCT).	45	
	Enter or verify the data in the DCT data file.	45	Do if required.
	Install and administer anti-virus software.	49	Local procedures vary.
	Install the latest Avaya-approved updates for Microsoft Windows: system updates and security patches.	50	Local procedures vary.
	Enter the correct RAS IP addresses to allow remote access.	51	
Table page 3 of 6			

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
	Specify the preferred language for administration.	55	
	Verify that Modular Messaging services are started.	56	
	Use the Voice Mail System Configuration (VMSC) program to configure required domain-wide settings on MAS#1: <ul style="list-style-type: none"> ● TUI and administration access settings ● Serviceability settings for SAL ● For MultiSite specific configuration, see Voice Mail System Configuration section in <i>Modular Messaging with Avaya MSS - MAS Administration Guide</i>. For information on MultiSite concepts and requirements, see <i>Modular Messaging MultiSite Guide</i>. 	57	Do these tasks on MAS#1.
	Install and configure the WebLM server on one of the following: <ul style="list-style-type: none"> ● an MAS or Supplementary server ● a standalone server If you already have a WebLM server that you are using for licensing other Avaya products, proceed with Obtaining the license file on page 63.	61	
	Obtain the license file and apply it on the WebLM server.	63	
	Configure the WebLM server	64	
	Enter Product ID for current MAS.	65	
	Configure the Call Me, Notify Me, MWI, Audit, Fax, language or TTS, and offline access (configure OLA only after you configure the last server). Reconfigure any of these services that are not enabled or are enabled on the wrong server.	66	Set up the features and services that are required on each MAS or on the Supplementary server.
	Configure specific parameters for this MAS, including: <ul style="list-style-type: none"> ● SAL alarming, if used ● SIP. 	76	Do for each MAS. Configuration notes required.
	Restart the messaging services on all MASs in the VMD as a final step. <ul style="list-style-type: none"> ● Verify that the services that are not required on this MAS are disabled. <i>Do not</i> start all Modular Messaging services until this is done. ● Verify that all Modular Messaging services required on this server are started and set to Automatic. 	79	Ensure that the correct services are enabled on each MAS.
	Verify the ability of each MAS to handle calls.	82	Not applicable for Supplementary server.
	Verify the alarming setup on each MAS.	82	
Table page 4 of 6			

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
	Verify Tracing Service operation, if installed on any server.	84	
	Verify Audit Service	85	
	Add the Supplementary server name into the security configuration	65	Applicable only for Supplementary server.
Complete initial MSS administration:			
	Switch the monitor to show the MSS.	24	
	Continue the MSS configuration using a DCT data file	106	
	Configure the MSS modem	119	
	Install any software updates, if needed	120	
Do acceptance tests:			
	Set up the monitoring tools such as the operational history viewer, and port monitor for multiple-MAS systems to track the calls.	122	Useful for troubleshooting.
	Do acceptance tests on each MAS, including: <ul style="list-style-type: none"> ● Create and receive test messages in both integrated and nonintegrated mode. ● Test all required TUIs. ● Create and print faxes, if fax service is installed. ● Test system outcalling using Subscriber Options. 	124	Tests vary per MAS and local system setup.
	Remove any test subscribers.	132	
Complete the installation:			
	Register the MSS and MAS	134	Required for all systems that Avaya supports.
	Set up logins and remote access on the MSS: <ul style="list-style-type: none"> ● Administer required logins on the MSS to grant access to authorized parties. 	134	Do as required.
	Specify SAL alarm origination on the MSS, and test alarm origination.	138	
	Do an attended backup on each MAS.	145	Do this on each MAS.
	Do an attended backup on the MSS. Discuss unattended backup methods with the customer.	147	Leave DVD backup in place.
	Install additional software or client applications if required.	148	Do if required.
Table page 5 of 6			

Modular Messaging on Avaya MAS installation checklist

Modular Messaging on Avaya-provided MAS installation checklist

✓	Description	Page	Comments
	Copy the most current DCT data file to each MAS.	144	When done, delete the data file from your storage device.
	Hand off system to the customer for further administration.	149	
Table page 6 of 6			

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Modular Messaging on a customer-provided MAS installation checklist

Use this checklist to install a new Modular Messaging system on a customer-provided MAS. As you complete a task, make a check mark in the " ✓ "column.

Modular Messaging on a customer-provided MAS installation checklist

✓	Description	Page	Comments
Complete preinstallation requirements:			
	If Avaya is to maintain the system, preregister the system. The registration process produces product IDs for the servers and IP addresses for remote access.		You can obtain all required information for the MAS in advance.
	Assemble and review the required documentation.	11	Web access required.
	Download required software updates, including the latest version of the DCT executable file (MMDCT.exe), Pre-upgrade and Backup Verification Tool and client software.	12	Web access required.
	Obtain the DCT data file (*.mmdct) for this site.	11	Local procedures vary
	Review security considerations.	15	
	Obtain the required anti-virus software for the MAS if required.	16	Customer provides the software.
	Gather the necessary test equipment and tools.	16	
	Arrange for initial switch and LAN administration. Register MAS corporate computer names on the DNS if required.	17	See LAN administrator.
	Verify that the switch or PBX is administered.	17	See switch administrator.
	Review preinstallation site requirements such as environmental requirements, weight and space considerations, power and grounding requirements.		
	Review hardware requirements.		
Prepare for corporate Windows domain installs— do the tasks in this section only if the Modular Messaging system is joining the corporate Windows domain:			
	Create user accounts in the corporate Windows domain. This step is done by the corporate domain admin.	19	Review requirements in Chapters 4 and 5.
Table page 1 of 4			

Modular Messaging on a customer-provided MAS installation checklist

✓	Description	Page	Comments
	Create computer accounts in the corporate Windows domain. This step is done by the corporate domain admin.	20	
Do initial MSS administration:			
	Log on to the MSS.	24	
	Adjust the monitor settings if needed.	25	
	Start the MSS configuration using a DCT data file	26	
	Set the time and date	31	Must do manually before configuring an MAS
Configure a new CPE MAS:			
Note: The customer domain administrator may be required to perform these tasks. To configure Avaya-provided MAS, see Configure the MAS—repeat this section for each MAS and the Supplementary server : on page 304.			
	Complete the configuration pre-requisites.	88	
	Install Microsoft Windows 2003 R2 with SP2 operating system, if not previously installed.	89	
	Set the computer name	89	
	Run recommended disk checks	89	
	Install and enable required MS Windows services.	90	Requires Microsoft Windows media.
	Install required Microsoft Windows updates and security patches	92	
	Install Microsoft Windows 2003 SP2	92	
	Adjust system values	92	
	Verify if the Network Connections are set up correctly.	94	<i>See Installing the Avaya S8800 1U Server for Modular Messaging guide.</i>
	Verify network adapters and bindings	95	
	Change the Power Management settings	96	
	Install and launch the Modular Messaging Configuration Wizard.	97	
Table page 2 of 4			

Modular Messaging on a customer-provided MAS installation checklist

✓	Description	Page	Comments
Complete the CPE MAS configuration:			
	Enter the RAS IP addresses	101	
	Set logging location	101	
	Install anti-virus software	102	
	Specify the preferred language for administration.	55	
	Verify that Modular Messaging services are started.	56	
	<p>Use the Voice Mail System Configuration (VMSC) program to configure required domain-wide settings on MAS#1:</p> <ul style="list-style-type: none"> ● TUI and administration access settings ● PBX parameters using the configuration notes ● Serviceability settings for SAL <p>For MultiSite specific configuration, see Voice Mail System Configuration section in <i>Modular Messaging with Avaya MSS - MAS Administration Guide</i>. For information on MultiSite concepts and requirements, see <i>Avaya Modular Messaging MultiSite Feature Description Guide</i>.</p>	57	<p>Do these tasks on MAS#1.</p> <p>Configuration notes required for PBX settings.</p>
	<p>Install and configure WebLM server on one of the following:</p> <ul style="list-style-type: none"> ● an MAS or Supplementary server ● a standalone server <p>If you already have a WebLM server that you are using for licensing other Avaya products, proceed with Obtaining the license file on page 63.</p>	61	
	Obtain the new license file and apply it on the WebLM server.	63 , 63	
	<p>Configure the Call Me, Notify Me, MWI, Audit, Fax, language or TTS, and offline access (configure OLA only after you configure the last MAS).</p> <p>Reconfigure any of these services that are not enabled or are enabled on the wrong server.</p>	66	Set up the features and services that are required on each MAS or on the Supplementary server.
	<p>Configure specific parameters for this MAS, including:</p> <ul style="list-style-type: none"> ● SAL alarming ● SIP configurations. 	76	Do for each MAS. Configuration notes required.

Table page 3 of 4

Modular Messaging on a customer-provided MAS installation checklist

✓	Description	Page	Comments
	Restart the messaging service. <ul style="list-style-type: none"> ● Verify that the services that are not required on this MAS are disabled. Do not start all Modular Messaging services until this is done. ● Verify that all Modular Messaging services required on this server are started and set to automatic. 	79	Ensure that the correct services are enabled on each MAS.
	Restart service on all MASs in the VMD as a final step.		Do after last MAS.
Complete initial MSS administration:			
	Switch the monitor to show the MSS.	24	
	Continue the MSS configuration using a DCT data file	106	
	Configure the MSS modem	119	
	Install any software updates, if needed	120	
	Verify Network adaptors and bindings	120	
Do acceptance tests and run backups:			
	Add a test subscriber on MSS for each TUI used at this site.	118	
	Set up monitoring tools: <ul style="list-style-type: none"> ● Operational History Viewer ● Port monitor 	122	
	Do acceptance tests: <ul style="list-style-type: none"> ● Create and send a call-answer message. ● Retrieve test messages in integrated mode. ● Create and send a test message in nonintegrated mode. ● Test the outcalling capability. ● Create and print a fax message ● Run additional tests. 	124	Do on CPE MAS that is set up to handle calls.
	Remove the test subscribers from MSS.	132	
	Back up the system.	145	Use local procedures.
	Set up the system to perform regularly, scheduled backups.	147	Use local procedures.
	Turn the system over to the customer.	149	Be sure to give the customer an updated DCT data file.
Table page 4 of 4			

Modular Messaging Release 5.2 upgrade and migration checklists

This section of the Appendix provides two check lists that can be used to:

- Upgrade to Modular Messaging Release 5.2 from Release 3.x or Release 4.0 that runs on S3500 hardware.
- Migrate from Release 3.x, Release 4.0, Release 5.0 or Release 5.1 to Modular Messaging Release 5.2 system that runs on S8800 1U-family server or HP DL360 G7 server.

After you complete a task, make a checkmark in the ✓ column.

Important:

- If you are moving the Modular Messaging system to the corporate Windows domain, first complete the entire upgrade (all releases), and then go to [Moving the Modular Messaging system to the corporate Windows domain checklist](#) on page 321.
- If you must add a new MAS to an existing Modular Messaging system, first complete the entire upgrade for release that you planned. You must then install the new MAS using the new installation checklist.

The following check lists are covered in the subsequent sections:

- [Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist](#) on page 312.
- [Modular Messaging Release 5.2 system migration checklist](#) on page 316.

Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist

Use this checklist to upgrade Modular Messaging Release 3.x or Release 4.0 on S3500 server.

Note:

To upgrade Modular Messaging Release 5.0 to Release 5.2, use the procedure described in [Upgrading from Release 5.0 or Release 5.1 to Release 5.2](#) on page 153.

Modular Messaging Release 5.2 upgrade and migration checklists

As you complete a task, make a check mark in the " ✓ "column.

Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist

✓	Description	Page	Comments
Plan for the upgrade:			
	Assemble and review the required software and the documentation: <ul style="list-style-type: none"> ● Installation and Upgrade Guide ● Data Collection Tool (DCT) ● Pre-Upgrade and Backup Verification Tool ● System Checklists ● Planning for upgrade of clients in addition to the Modular Messaging system (such as Outlook Client, Web Client, Speech Access, Web Subscriber Options). 	11	Web access required (see http://support.avaya.com > Modular Messaging > Installation, Migrations, Upgrades and Configurations)
	Manually check the following items: <ul style="list-style-type: none"> ● No errors or warnings are shown on the system ● Resolve major and minor alarms ● Backups are done ● Private IP addresses are in the correct range ● Private IP addresses on the same subnet ● Corporate IP addresses on the same subnet <ul style="list-style-type: none"> - Make sure that the private IP and corporate IP addresses <i>do not</i> use the same subnet ● Private name of the MSS is MSS1 ● Corporate name is not mss1.b.c ● List of non-standard installations (need help from the MMIUS team for a complete list) ● Correct errors ● Use the time estimates to set customer expectations for the time required to complete the upgrade. 		
	Review product functionality with the customer: <ul style="list-style-type: none"> ● Customer noticeable differences for Modular Messaging Release 3.x, or 4.0 ● Known issues (see Product Support Notices) ● Rollout plan for new features ● Security concerns. 	161	
	Coordinate with MMTAC: <ul style="list-style-type: none"> ● Submit DCT for approval ● Provide implementation schedule for Tiered Support. 		
Prepare for the upgrade:			
	Download any required Avaya software updates, including the Outlook Client.	12	Web access required.
Table page 1 of 3			

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Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist

✓	Description	Page	Comments
	Verify the key settings on the MSS and MAS, such as switch integration, port board settings, and domain information: <ul style="list-style-type: none"> ● Verify if the Modular Messaging system is at required SP and Patch level ● Verify the MSS has recommended RFU installed ● Record information for non-default port groups ● Record RAS IP addresses for each MAS ● Back up Caller Applications files on separate computer ● Record associations for Caller Application (will be needed for re-association later). ● Record SNMP trap destination and community details from the Serviceability - Voice Mail Domain window 	157	
	Obtain and review the configuration notes for any changes.	157	Web access required.
	Use the Pre-Upgrade tool (PUBVT): <ul style="list-style-type: none"> ● Download and run the Pre-upgrade tool ● Correct errors ● Use the time estimates to set the customer expectations for the time required to complete the upgrade. 	157	
<p><i>Be prepared to delay the upgrade if everything is not in order. It is better to delay and do it right than to go ahead and get it wrong!</i></p>			
<p>Prepare for the upgrade on the MAS:</p>			
	Switch the monitor to show the correct server.	156	
	Verify that all Modular Messaging servers and services are running.		
	Run the Pre-Upgrade Tool.	159	
	Analyze every MAS and create a Data Collection Tool (DCT) file: <ul style="list-style-type: none"> ● Download the current version of the DCT ● Run the DCT in "analyze" mode on each MAS ● Verify the DCT file. 	162	
	Busy out ports on each MAS.	165	
	Check for any spooled messages.	166	
	Back up each MAS.	166	
	Back up the MSS.	167	
	Run Backup Verification tool	169	
<p>Table page 2 of 3</p>			

Modular Messaging Release 3.x or 4.0 on S3500-family server upgrade checklist

✓	Description	Page	Comments
Perform the upgrade:			
	Load the updated software on the MSS.	171	
	Upgrade the MSS.	171	
	Log off all remote logins.	173	
	Upgrade RealSpeak <i>only</i> if you are upgrading from Release 3.x.	174	
	Upgrade Dialogic drivers on the MAS.	176	For any MAS that already has drivers installed.
	Install and configure the WebLM server on one of the following: <ul style="list-style-type: none"> ● an MAS or a Supplementary server ● a standalone server If you already have a WebLM server that you are using for licensing other Avaya products, proceed with Obtaining the license file on page 63.	61	
	Upgrade the MAS software. Includes software (Windows updates, service pack(s), and patches) and configuration of Fax and Audit services.	177	
	Obtain the license file and apply it on the WebLM server.	63	
Complete the upgrade:			
	Complete the upgrades.	181	
Convert the Supplementary server to run a 0 port MAS:			
	<i>Optional:</i> Convert the Supplementary server to run a 0 port MAS on the Supplementary server.	183	
Change the switch integration:			
	<i>Optional:</i> Change the switch integration as appropriate depending on the type of switch integration involved.	186	
Table page 3 of 3			

Modular Messaging Release 5.2 system migration checklist

Use this checklist to migrate Modular Messaging to S8800 1U or HP DL360 G7 server. As you complete a task, make a check mark in the " ✓ "column.

Modular Messaging Release 5.2 system migration checklist: Planning for the migration

✓	Description	Page	Comments
Plan for the migration:			
	Complete a project plan for the migration, including <ul style="list-style-type: none"> ● Project schedule ● Definition of roles ● Assignment of resources (staff) ● Internal kickoff meeting ● Planning for upgrade of clients in addition to the Modular Messaging system (such as Outlook Client, Web Client, Speech Access). 		Local procedures vary.
	Assemble and review the required software and documentation required for migration: <ul style="list-style-type: none"> ● Installation and Upgrade Guide ● Data Collection Tool (DCT) ● Pre-Upgrade and Backup Verification Tool ● System Checklists ● Web Client Installation and Upgrades. 	11 and 210	Web access required (see http://support.avaya.com > Modular Messaging > Installation, Migrations, Upgrades and Configurations)
	Assemble and review relevant Product Support Notices (PSNs) and Product Correction Notices (PCNs).	11	
	If a design is required, verify that it was received from ATAC. Review design output with the implementation team. Design review is required for the following migrations: <ul style="list-style-type: none"> ● Replacement of all S3400/3500/S8730/S8800 servers (MSS and MAS) with HP DL360 G7 servers ● Addition of a new MAS to the configuration ● Removal of an MAS from the configuration. 		
	Switch the monitor to show the correct server.	156	
	Use the Pre-Upgrade tool (PUBVT): <ul style="list-style-type: none"> ● Download and run the Pre-upgrade tool ● Correct errors ● Use the time estimates to set customer expectations for the time required to complete the upgrade. 	212	
	Change switch integration. If migrating from S3400, S3500 or S8730, convert the port boards to SIP.	212	
Table page 1 of 3			

**Modular Messaging Release 5.2 system migration checklist:
Planning for the migration**

✓	Description	Page	Comments
	Analyze every MAS and Supplementary server, and create a Data Collection Tool (DCT) file: <ul style="list-style-type: none"> ● Download the current version of the DCT ● Run the DCT in "analyze" mode on each MAS ● Verify the DCT data file. 	213	
	Review product functionality with the customer: <ul style="list-style-type: none"> ● TUI difference document(s), as needed ● Customer noticeable differences ● Known issues (see Product Support Notices) ● Rollout plan for new features ● Security concerns. 	213	
	Verify key settings on the MSS and MAS, such as switch integration, port board settings, and domain information: <ul style="list-style-type: none"> ● Record information for non-default port groups ● Record RAS IP addresses for each MAS ● Back up Caller Applications files on separate computer ● Record associations for Caller Application (you need this for re-association later) ● Record SAL destination and community details from the Serviceability - Voice Mail Domain window 	157	
	Review the migration with the entire implementation team: <ul style="list-style-type: none"> ● Review output from the Pre-Upgrade tool, Data Collection Tool, and Checklists ● Discuss the migration process, known issues, questions about documentation, customer expectations and concerns, time required for migration, and back-out plan. 		
	Coordinate with MMTAC: <ul style="list-style-type: none"> ● Submit DCT for approval ● Provide implementation schedule for Tiered Support. 		
Prepare for the migration:			
	Download any required Avaya software updates.	12	Web access required.
	Obtain and review the configuration notes for any changes.	12	Web access required.
	Process and set up new hardware (replacement S8800 1Us or HP DL360 G7 for MSS and/or MAS, S8800 1U or HP DL360 G7 for additional MAS): <ul style="list-style-type: none"> ● Unpack equipment ● Review inventory checklist ● Pre-register new hardware ● Rack and stack only (power off, no software installation). 		<i>See Installing the Avaya S8800 1U Server for Modular Messaging and Installing the HP DL360 G7 server for Modular Messaging guide.</i>
Table page 2 of 3			

**Modular Messaging Release 5.2 system migration checklist:
Planning for the migration**

✓	Description	Page	Comments
<i>Be prepared to delay the migration if everything is not in order. It is better to delay and do it right than to go ahead and get it wrong!</i>			
Prepare for the migration on the MAS:			
	Busy out ports on MAS	217	
	Check the spooled messages	217	
	Do a fresh, attended backup on each MAS	218	Do not use old backups.
	Backup the data from the MSS	218	
Table page 3 of 3			

**Modular Messaging Release 5.2 system migration checklist:
Implementing the migration**

✓	Description	Page	Comments
Migrate the MSS:			
	Run the Backup Verification tool	218	
	Restore data on the MSS.	219	
Migrate each MAS and the Supplementary server, if present:			
	Start the MAS migration.	222	
	Install and administer anti-virus software.	226	Local procedures vary.
	Install the latest Avaya-approved updates for Microsoft Windows: system updates and security patches.	226	Local procedures vary.
	Reapply the remote access settings to each MAS.	227	
	Verify and update settings in the VMSC, including: <ul style="list-style-type: none"> ● Update Security permissions for system administration. ● Verify license settings and TTS sessions per MAS. ● Verify port board and telephony interface settings. ● Set up additional port groups, if required at this site. 	228	Verify settings for switch integration and configured features as required.
Table page 1 of 3			

**Modular Messaging Release 5.2 system migration checklist:
Implementing the migration**

✓	Description	Page	Comments
	Install and configure the WebLM server on one of the following: <ul style="list-style-type: none"> ● an MAS or Supplementary server ● a standalone server If you already have a WebLM server that you are using for licensing other Avaya products, proceed with Obtaining the license file on page 63.	61	
	Obtain the new license file and apply it on the WebLM sever.	63	
	<i>Optional</i> -Create offline message store on the server that hosts offline messages.	231	
	Restart messaging services. <ul style="list-style-type: none"> ● Verify that all services not required on this MAS are disabled. Do not start all Modular Messaging services until this is done. ● Verify that all Modular Messaging services required on this server are started and set to Automatic. 	233	Do after last MAS.
	Complete VMSC setup (enter MAS product IDs, configure Fax and Audit services, verify services)	235	
Complete MSS administration:			
	Verify the MAS host information for each MAS.	237	Logins and passwords changed on the MAS because of the W2003 server so make sure you do this step.
	Place the MSS in the private Windows domain.	238	Do this once per migration.
Restore data on each MAS:			
	Stop all Modular Messaging services.	239	
	Restore data on each MAS from most current backup.	240	
	Restore Caller Applications on MAS#1.	242	Do if Caller Applications are used on the system.
	Restart messaging services and verify correct services are started.	242	Make sure Modular Messaging service connector is started.
	Install any Avaya software updates.	243	You must install software updates if they're available.
Table page 2 of 3			

**Modular Messaging Release 5.2 system migration checklist:
Implementing the migration**

✓	Description	Page	Comments
	Repeat data restoration for each MAS.	240	
	Do messaging acceptance tests, including: <ul style="list-style-type: none"> ● Create and receive test messages in both integrated and nonintegrated mode. ● Test all supported TUIs as required. ● Create and print faxes, if fax service is installed. ● Test system outcalling using Subscriber Options. 	244	Repeat for each MAS.
	Continue migration for additional MASs and Supplementary server, if present.	222	
Complete the system migration:			
	Analyze the system using the DCT file.	245	
	Do an attended backup on each MAS.	245	
	Remove old MAS backup files from the MSS.	247	Do this for each MAS.
	Do an attended backup on the MSS.	248	
	<i>Optional:</i> Add new S8800 1U-family servers or HP DL360 G7 server to this system.	387	Use the new system installation checklist.
	Update and turn over DCT data file.	250	When done, erase the data file from your storage device.
Update or install new client software:			
	Update or install any additional software required on each MAS, such as: <ul style="list-style-type: none"> ● Modular Messaging Web Subscriber Options ● Avaya Modular Messaging Notes Client ● Avaya Modular Messaging Outlook Client ● Avaya Modular Messaging Outlook Restricted 	251	
	<i>Optional:</i> Reduce the number of MASs in your VMD.	252	
	<i>Optional:</i> Move to the corporate Windows domain after migration.	254	
Table page 3 of 3			

Moving the Modular Messaging system to the corporate Windows domain checklist

Moving the Modular Messaging system to the corporate Windows domain checklist

✓	Description	Page	Comments
Prepare to join an upgrade or migration to the corporate Windows domain:			
	Complete the upgrade or migration to Release 5.2.	151 or 209	
	Create user accounts in the corporate Windows domain.	19	Performed by the corporate domain admin
	Create computer accounts in the corporate Windows domain.	20	Performed by the corporate domain admin
Move servers to the corporate Windows domain:			
	Prepare the system before moving subsequent servers.	194	Move subsequent servers before the MSS and MAS#1
	Move subsequent MASs and Supplementary server to the corporate Windows domain.	198	
	Move the MSS to the corporate Windows domain.	201	
	Move MAS#1 to the corporate Windows domain.	201	
Complete the move to the corporate Windows domain:			
	Complete the move to the corporate Windows domain.	205	

Appendix B: Configuring and testing port boards

Overview

This appendix describes how to configure and test Dialogic port boards. Dialogic port boards are installed in some MASs, depending on the switch integration. All new installations of Modular Messaging Release 5.2 on Avaya S8800 1U server, HP DL360 G7 server or CPE MAS only supports SIP based switch integration. Therefore, Modular Messaging does not support Dialogic port boards on new installations.

Note:

An MAS that uses an IP H.323 or IP SIP switch integration has no port boards. You do all configuration for these switch integrations using the Voice Mail System Configuration (VMSC) program. For more information, see [Configuring the voice mail system](#) on page 54.

This section contains the following topics:

- [When to configure port boards](#) on page 324
- [Configuring port boards](#) on page 326
- [Testing the port boards](#) on page 334

When to configure port boards



Important:

New installations of Modular Messaging support SIP based switch integration only.

In Release 5.2, you must configure Dialogic port boards for upgrades only if:

- Dialogic port boards are installed in this MAS *and*
- The Avaya Modular Messaging Configuration Wizard does not automatically configure the Dialogic port boards.

The Avaya Modular Messaging Configuration Wizard automatically configures any installed Dialogic port boards for several switch integrations, including:

- Avaya (QSIG)
- Cisco (QSIG)
- Nortel NT M-1 (QSIG)
- Siemens Hipath (QSIG)

Supported port boards

New installations of Modular Messaging Release 5.2 support SIP based switch integration *only*.

Modular Messaging Release 5.2 on Avaya S8800 1U server or HP DL360 G7 server supports 96 SIP sessions per MAS.

[Table 13](#) lists supported Dialogic port boards for S8730-family servers. For S8730 server, an MAS supports a maximum of three port boards.

Table 13: Supported MAS port boards: S8730 hardware

Protocol	Maximum Ports per MAS	Port boards	Maximum cards per MAS
Analog	36	Dialogic D/120JCT-LS-EW 12-port board	3
	12	Dialogic D/41JCT-LS-EW 12-port board	3
Digital Set Emulation	24	Dialogic D/82JCT-EW	3
E1-QSIG	90	Dialogic D/ 600JCT-1E1-120-EW	3
T1-QSIG	69	Dialogic D/480JCT-1T1 -EW	3
H.323 integration	30	None	None
SIP	96	None	None

The Dialogic documents provide details required to install and connect the port boards; see [Downloading user documentation](#) on page 13.

Configuring port boards

 **Important:**

You must ensure that you stop all Modular Messaging services before you stop the Dialogic Services.

Manual port board configuration involves three phases:

1. The appropriate party must administer the switch for the port boards using the configuration notes for this particular switch (PBX) integration. For instructions to obtain the most recent configuration notes, see [Downloading configuration notes](#) on page 12.

 **CAUTION:**

You can only install this system by using the required configuration notes for this switch or PBX. The PBX administrator *must* have administered the ports on the switch before you can proceed.

2. Configure and test the port boards as described in this section. Some steps require you to use the configuration notes.
3. You must complete the port board configuration as described in [Configuring port boards and switch integration](#) on page 77.

Continue based on the type of port boards installed in this MAS:

- [Configuring T1-QSIG or E1-QSIG boards](#) on page 327
- [Configuring set emulation boards](#) on page 328
- [Configuring analog port boards](#) on page 330

 **CAUTION:**

If the window displays no port boards when you run the Dialogic Configuration Manager, you might need to reseal or replace some of the boards. For more information, obtain the appropriate maintenance information for this Modular Messaging system; see [Downloading user documentation](#) on page 13:

- For S8730-family servers, see *Maintaining the Avaya S8730 Server for Modular Messaging* guide.
- For S3500-family servers, see *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions*.

Configuring T1-QSIG or E1-QSIG boards

Any of the following QSIG port boards might be installed in an MAS:

- Dialogic D/480JCT-1T1
- Dialogic D/480JCT-1T1- EW
- Dialogic D/600JCT-1E1
- Dialogic D/600JCT-2E1
- Dialogic D/600JCT-1E1- 120- EW

The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Supported port boards](#) on page 325.

To configure either of these QSIG boards:

1. Click **Start > Programs > Intel Dialogic System Release > Configuration Manager - DCM**.

The **Intel Dialogic Product Configuration Manager** window opens.

2. If a popup window opens, connect to the MAS as follows:

- a. In the **Computer Name** window, verify that **Local** is selected and that the correct server name is shown, such as *MYMAS1*.
- b. Click **Connect**.

The system displays this window only the first time that you access the Dialogic Configuration Manager application.

The Dialogic software locates any installed port boards.

3. Verify that all Intel Dialogic services are stopped. All boards should show a red icon.
4. If the board icon shows an X, the board is disabled. To enable it, right-click the board and select **Enable device(s)**.
5. Under Configured Devices, double-click the name of the first Dialogic board, such as *#0*.
6. In the **Intel Dialogic product Configuration Manager - Properties** window:
 - a. Click the **Interface** tab and select the **ISDNProtocol** parameter.
 - b. Select the correct value for this board from the pull-down list:
 - For E1-QSIG: select **QTE**
 - For T1-QSIG: select **QTU**
 - c. Click the **Telephony Bus** tab and select the **PCMEncoding** parameter.
 - d. Select the correct value for the installed board from the pull-down list:
 - For E1-QSIG: select **A-Law** for most countries, particularly Europe

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Configuring and testing port boards

- For T1-QSIG: select μ -**Law** (mu-Law) for the United States and Japan
- e. Click the **Misc** tab.
 - f. For the **FirmwareFile** parameter, verify that the value is **default**.
 - g. Select the **FirmwareFile2** parameter. Type **spfax.fwl** in the **Value** field, which is editable.
 - h. Click the **Country** tab and select the **Country** parameter.
 - i. On the pull-down list of values, always use **United States** for either type of board.
 - j. Click **OK** to close the window.
7. Repeat steps 5 and 6 for any other installed Dialogic boards, such as #1.
 8. After all boards are configured, click the green **Start** button on the button bar.
Wait for service to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.
 9. Verify that the port boards are operating correctly.
 - a. Check the LED display on the Dialogic board faceplate.
 - A red status LED lights on the back of the port board during driver startup.
 - If the drivers start successfully, the board whose port is connected to the PBX shows a green LED within 30 seconds. LEDs on the other boards remain red.
 - b. If a problem occurs, check the board configuration, the physical connections between the board and the PBX, or the PBX configuration. Repeat Steps 5 through 9 as needed.
 10. Close the **Intel Dialogic product Configuration Manager** window.
 11. Continue with [Testing the port boards](#) on page 334.

Configuring set emulation boards

An MAS supports 8-port Dialogic Digital Set Emulation (DSE) boards. The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Supported port boards](#) on page 325.

Note:

Avaya supports the non-universal Dialogic D/82JCT-EW board for upgrades only.

To configure digital set emulation boards:

1. Click **Start > Programs > Dialogic System Release > Configuration Manager - DCM**.

The **Dialogic product Configuration Manager** window opens.

2. If a popup window opens, connect to the MAS as follows:

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- a. In the **Computer Name** window, verify that **Local** is selected and that the correct server name is shown, such as *MYMAS1*.
- b. Click **Connect**.

Note:

The system displays this window only the first time that you access the Dialogic Configuration Manager application.

The Dialogic software locates any installed port boards.

3. Verify that all Dialogic services are stopped. All boards should show a red icon.

Note:

If the board icon shows an X, the board is disabled. To enable it, right-click the board and select **Enable device(s)**.

4. Under Configured Devices, double-click the name of the first Dialogic board, such as *#0*.
5. In the **Dialogic product Configuration Manager - Properties** window:
 - a. Click the **Telephony Bus** tab and select the **PCMEncoding** parameter.
 - b. On the pull-down list of values, select either **A-Law** or **μ-Law**, depending on your location. Usually, **A-Law** is Europe and **μ-Law** (mu-Law) is United States and Japan.
 - c. Click the **Misc** tab.
 1. Select the **FirmwareFile** parameter. In the **Value** field, select or type **D82U.fwl**. The **Value** field is editable.
 2. Select the **PBXSwitch** parameter. On the pull-down list of values, select the name of the PBX. For example, use *Lucent 2-wire* for an Avaya G3 switch.

Note:

For a Siemens Hicom 300/9006 PBX, select **Siemens Rolm 9006**.

- d. Click the **Country** tab and select the **Country** parameter. On the pull-down list of values, select the country.
 - e. Click **OK** to close the window.
6. Repeat Steps 4 and 5 for any other installed Dialogic boards, such as *#1*.

 **CAUTION:**

If the DSE boards are connected to a Nortel (NTM-1) PBX, you must reboot the MAS *before* you start the Dialogic drivers. Close the DCM and reboot the system now. When the reboot is complete, log back in and reopen the DCM as in Step 1, and then continue with Step 7.

7. After all boards are configured, click the green **Start** button on the button bar.

Wait for service to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.

Configuring and testing port boards

8. Verify that the port boards are operating correctly.
 - a. Check the LED display on the Dialogic board faceplate. Verify the code for each port:
 - Ports that are connected to a telephone line and functioning correctly show 0 and the port number, such as *00* or *01*.
 - Ports that are not connected to a telephone line or not functioning correctly show *En*, where *n* is the port number. For example, the display reads *E3* if port 3 has an error.
 - b. If the system displays any *En* error, check the board configuration, the physical connections between the board and the PBX, or the PBX configuration. For example, verify that you configured the correct PBX. Repeat Steps 4 through 8 as needed.
9. Close the **Dialogic product Configuration Manager** window.
10. Continue with [Testing the port boards](#) on page 334.

Configuring analog port boards

The following analog port boards might be installed in an MAS:

- Dialogic D/41JCT-LS 4-port Tip/Ring
- Dialogic D/41JCT-LS- EW 4-port
- Dialogic D/120JCT-LS 12-port Tip/Ring
- Dialogic D/120JCT-LS- EW 12-port

The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Supported port boards](#) on page 325.

To configure either of these analog boards:

1. Click **Start > Programs > Dialogic System Release > Configuration Manager - DCM**.

The **Dialogic product Configuration Manager** window opens.

2. If a popup window opens, connect to the MAS as follows:
 - a. In the **Computer Name** window, verify that **Local** is selected and that the correct server name is shown, such as *MYMAS1*.
 - b. Click **Connect**.

Note:

The system displays this window only the first time that you access the Dialogic Configuration Manager application.

The Dialogic software locates any installed port boards.

3. Verify that all Dialogic services are stopped. All boards should show a red icon.

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Note:

If the board icon shows an X, the board is disabled. To enable it, right-click the board and select **Enable device(s)**.

4. *For a D/120JCT-LS board:* You must load the new firmware separately in Release 5.2, or the 12-port boards will not work correctly. For example, fax service will not work.

Note:

The D/41JCT-LS board uses the default.fwl file and does not need to be set. If this server uses 4-port analog boards, continue with Step 6.

To load the new firmware for a 12-port analog board in Release 5.2:

- a. Under Configured Devices, double-click the name of the Dialogic board, such as #0.
- b. In the **Dialogic product Configuration Manager - Properties** window, click the **Misc** tab.
 1. Click the **FirmwareFile** parameter. In the value field, select or type **spfax.fwl**.
 2. Click **OK** to close the window.
- c. Repeat Steps a and b for any other installed Dialogic boards, such as #1.

**CAUTION:**

Make no other property changes at this time.

5. Reload firmware:

- a. After you set the firmware parameter on all installed boards, close the **Dialogic Product Configuration Manager** window.
- b. Wait 30 seconds for all the Dialogic processes to completely stop.
- c. Reopen the Dialogic product Configuration Manager application to load the new firmware file. For more information, see Step 1.
- d. Click the green **Start** button on the button bar.
- e. Wait for the device to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.

Note:

If the drivers fail to start, complete Steps 6 through 16. You must then completely power down and power up the MAS. After the server boots, continue with [Testing the port boards](#) on page 334.

- f. Click the **Stop** button to stop the Dialogic drivers.

Note:

You must ensure that you stop all Modular Messaging services before you stop the Dialogic Services.

- g. After all boards show a red icon, continue with Step 6.

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Configuring and testing port boards

- Under Configured Devices, double-click the name of the first Dialogic board, such as #0.

 **CAUTION:**

If you cannot find a suitable TSF file for this PBX, you must build an appropriate tone file now or the integration will not work. Click **Cancel** in this window, and see [Appendix D: Creating a new tone file](#) on page 361.

- In the **Dialogic product Configuration Manager - Properties** window:

- Click the **Files** tab.
- Select the **TSFFilename** parameter, if it is not already selected.

Note:

For a D/41JCT-LS board, you must highlight the **Configured Devices** parameter on the DCM display when you select **Configure Device**. You can then view the **TSFFilename** parameter.

- Locate the prerecorded TSF file for this PBX or switch:
 - Click the ... button to browse. In the **Look In** field, navigate to *C:\Avaya_Support\Tone_Files*.
 - In the **Search File** window, select a TSF file that is appropriate for the PBX to which you are connecting, such as *Avaya-G3-US.tsf*. Double-click the file name.

The system displays the appropriate TSF file in the **Value** field.

Note:

You can type in the **Value** field. This field is editable.

- After an appropriate TSF file is selected, click the **Misc** tab.
 - Click the **TSFFileSupport** parameter.

 **CAUTION:**

You must have selected an appropriate TSF file for this PBX *before* you set the **TSFFileSupport** value to **Yes**, or errors might occur.

- From the **Value** drop-down list, select **Yes**.
- Click the **DisconnectTone** parameter. From the **Value** drop-down list, select **Yes**.
- Click **OK** to close the window.

- Repeat Steps 6 through 13 for any other installed Dialogic boards, such as #1. Verify that the settings are correct, and set any values if needed.

- After all boards are configured, click the green **Start** button on the button bar.

Wait for service to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.

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Note:

For a D/120JCT-LS board: If the drivers failed to start in Step 4, you must completely power down and power up the MAS. After the server boots, continue with [Testing the port boards](#) on page 334.

11. Close the **Dialogic product Configuration Manager** window.

Continue with [Testing the port boards](#) on page 334.

12. In the **Dialogic product Configuration Manager - Properties** window:

- a. Click the **Files** tab.
- b. Select the **TSFFilename** parameter, if it is not already selected.

Note:

For a D/41JCT-LS board, you must highlight the **Configured Devices** parameter on the DCM display when you select **Configure Device**. You can then view the **TSFFilename** parameter.

- c. Locate the prerecorded TSF file for this PBX or switch:
 1. Click the ... button to browse. In the **Look In** field, navigate to *C:\Avaya_Support\Tone_Files*.
 2. In the **Search File** window, select a TSF file that is appropriate for the PBX to which you are connecting, such as *Avaya-G3-US.tsf*. Double-click the file name.

The system displays the appropriate TSF file in the **Value** field.

Note:

You can type in the **Value** field. This field is editable.

13. After an appropriate TSF file is selected, click the **Misc** tab.

- a. Click the **TSFFileSupport** parameter.

! CAUTION:

You must have selected an appropriate TSF file for this PBX *before* you set the **TSFFileSupport** value to **Yes**, or errors might occur.

- b. From the **Value** drop-down list, select **Yes**.
- c. Click the **DisconnectTone** parameter. From the **Value** drop-down list, select **Yes**.
- d. Click **OK** to close the window.

14. Repeat Steps 6 through 13 for any other installed Dialogic boards, such as #1. Verify that the settings are correct, and set any values if needed.

15. After all boards are configured, click the green **Start** button on the button bar.

Wait for service to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.

Note:

For a D/120JCT-LS board: If the drivers failed to start in Step 4, you must completely power down and power up the MAS. After the server boots, continue with [Testing the port boards](#) on page 334.

16. Close the **Dialogic product Configuration Manager** window.
17. Continue with [Testing the port boards](#) on page 334.

Testing the port boards

Test all port boards and channels to verify that they can send and receive calls.

Note:

Sometimes after you apply settings to a port board, the board comes up in a bad state. The Dialogic drivers consistently fail to start, and the Event Viewer shows **dlg_log** errors. If this problem occurs, turn off and then turn on the server for the port board to work. The power cycle corrects the port board problems.

Preparing for the test

Prepare for port board testing as follows:

1. Stop Modular Messaging voice service:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to **MM Messaging Application Server**.
 - d. Right-click **MM Messaging Application Server** and select **Stop**.
2. *For T1-QSIG or E1-QSIG boards*, set up the test options as follows:
 - a. Click **Start > Programs > Avaya Modular Messaging > Dialogic Line Tester**.
 - b. In the **Dialogic Line Test Application** window, click **Tools > Options**.
 - c. In the **Options** window, select the correct values for each field. Use the configuration notes to identify the correct values:
 - For **Layer 1 Protocol**, select the required ISDN protocol from the drop-down list.
 - For **Number Type**, select the destination number type.
 - For **Number Plan**, select the destination number plan.

Note:

The values you select here must be the same as those entered on the PBX or switch. Check the configuration notes.

- d. After you select the correct values, click **OK**.

Testing the ports

To test Dialogic port board functionality:

1. Access the Dialogic Line Test application. Click **Start > Programs > Avaya Modular Messaging > Dialogic Line Tester**.

The **Dialogic QSIG - Line Test Application** (or DLTest) window opens. The name of the window varies, depending on the type of port boards installed.

2. Verify that all port numbers and channel designations are listed.
3. Test the incoming call connectivity of all ports as follows:
 - a. From a handset on the same PBX, dial each port individually.
 - For QSIG boards, repeatedly dial the number for that group of ports. The switch connects to the next port in the list for each new call.
 - For analog and set emulation boards, use individual port extensions.
 - b. Check the **Status** column.
 - Verify that each port shows **Received call** followed by **Connected**.
 - For different status conditions, see [Table 14](#).

The system should answer each connected call with a standard welcome message.

Table 14: Status messages for Dialogic Line Test

Status	Description	Highlight
Channel starting...	The channel is being started.	Normal
Channels idle...	The channel is idle.	Normal
Waiting for call...	The channel is waiting for an incoming call.	Normal
Received call...	An incoming call is being processed.	Normal
Dialling number...	A number is being dialed to make an outgoing call.	Normal
Resetting...	The user reset the channel.	Normal
Line Busy.	An outgoing call was made, but a busy tone was detected.	Normal
No Answer.	An outgoing call was made, but the call was not answered.	Normal
Connected.	An incoming or outgoing call was answered, so the call is now connected.	Normal
Call was disconnected.	An incoming or outgoing call was disconnected.	Normal
Error.	A general error with the channel occurred.	Error
Error, No Dial tone detected.	An outgoing call was made, but no dial tone was detected before dialing.	Error

4. Test the outcalling capability of all ports.
 - a. Select a port in the **Dialogic Line Test Application** window under **Port Number**.
 - b. Type the number of an extension on this PBX in the **Dial Number** field.
 - c. Click **Dial Number**.
 - d. When the dialed extension rings, answer the call and hang up.
 - e. Select the next port number, and click **Dial Number** again.
 - f. Repeat Steps d and e until all ports are tested.
5. After testing is complete, close the **Dialogic Line Test Application** window.

6. If a problem occurs, check:

- the board configuration
- the physical connections between the board and the PBX
- the PBX configuration itself

For example, verify that you have configured the correct PBX type and administered the values according to the current configuration notes.

7. After port board testing is complete, continue with [Updating settings in VMSC](#) on page 228.

Appendix C: Installing Dialogic port boards in a customer-provided MAS

This chapter describes how to install Dialogic port boards and their drivers in a customer-provided equipment (CPE) server, also called a customer-provided MAS. A customer might have several servers that support Avaya Modular Messaging software and services.

 **CAUTION:**

Modular Messaging Release 5.2 does not support Dialogic telephony for new installations or migrations on CPE MAS.

- One to five servers that handles call-processing functions. These are called *Messaging Application Server (MAS)* servers. An MAS can contain port boards, depending on the switch integration.
- One Supplementary server that is configured like an MAS, but does not handle calls and does not contain port boards.
- Multiple optional servers that handle special services only. An optional server never contains port boards.

 **CAUTION:**

Use the procedures in this chapter *only* to install Dialogic port boards in a customer-provided equipment (CPE) server that is to handle calls.

Continue with [Performing initial MSS administration](#) on page 23 if:

- you are using Avaya-provided hardware, For detailed procedures, see *Installing the Avaya S8730 Server for Modular Messaging* guide or *Maintaining the Avaya S8800 Server* guide or *Maintaining and Troubleshooting the HP DL360 G7 server for Modular Messaging* guide.
- this Avaya Modular Messaging system is to use an IP H.323 or IP SIP integration. These IP switch integration methods do not use port boards.

Note:

Before you can do the tasks described in this section, verify that all preinstallation requirements were met as described in [Preinstallation requirements](#) on page 9.

Topics in this chapter include:

- [Supported MAS port boards](#) on page 341
- [Installing MAS port boards](#) on page 343
- [Connecting MAS port boards to the switch](#) on page 355
- [Completing the hardware installation](#) on page 356
- [Configuring port boards](#) on page 356

Avaya Modular Messaging for Avaya MSS Release 5.2 Installation and Upgrades

Installing Dialogic port boards in a customer-provided MAS

- [Testing the port boards](#) on page 359

Supported MAS port boards

New installations of Modular Messaging Release 5.2 support SIP based switch integration *only*.

[Table 15](#) lists the Dialogic port boards that Avaya supports for upgrades that use customer-provided equipment (CPE) servers. The type of port boards required depends on the switch integration, but each MAS can have only one type of port board installed. For example, all the boards in the server must be T1-QSIG or DSE.

Table 15: Supported MAS port boards for customer-provided servers

Protocol	Ports per MAS	Port boards	Maximum Number	Dialogic files on documentation media
Analog	36	Dialogic D/120JCT-LS 12-port board Dialogic D/120JCT-LS- EW 12-port board Dialogic D/120JCT-LS- EWEU (Europe) 12-port board	3	D/120JCT-LS (PDF) D/120JCT-LS-EW (PDF)
	12	Dialogic D/41JCT-LS 4-port board Dialogic D/41JCT-LS- EW 4-port board Dialogic D/41JCT-LS- EWEU (Europe) 4-port board	3	D/41JCT-LS (PDF) D/41JCT-LS-EW (PDF)
Digital Set Emulation	24	Dialogic D/82JCT-U-PCI-UNIV Dialogic D/82JCT-EW	3	D/82JCT-U PCI Univ (PDF) D/82JCT-EW (PDF)
E1-QSIG	90	Dialogic D/600JCT-1E1 ¹ or D/600JCT-2E1 Dialogic D/600JCT-1E1- 120- EW	3	D/600JCT-1E1 or D/600JCT-2E1 (PDF) D/600JCT-1E1-120-EW
T1-QSIG	69	Dialogic D/480JCT-1T1 ¹ Dialogic D/480JCT-1T1- EW	3	D/480JCT-1T1 (PDF) D/480JCT-1T1-EW (PDF)
H.323	30	None	None	
SIP	96	None	None	

1. Early D/600JCT-1E1 and D/480JCT-1T1 QSIG port boards have a plug in the unused connector on the faceplate. Dialogic D/600JCT-1E1 or D/480JCT-1T1 QSIG port boards that shipped after mid-2005 have only a single connector. Both types of QSIG boards operate identically.

Note:

To support the capacities shown in [Table 15](#), the minimum CPE server hardware specifications must match the specifications for the S8730-family MAS. For information on the port capacities for CPE server hardware with specifications that matches with S3500-family server hardware, see the *Avaya Modular Messaging Concepts and Planning Guide*.

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Installing Dialogic port boards in a customer-provided MAS

- a. The Dialogic documents provide details about installing and connecting the port boards. The documents are available on the *Avaya Modular Messaging Documentation* media or from the www.avaya.com/support Web site. For instructions on how to obtain the documents, see [Downloading required software and documentation](#) on page 11.

Note:

The Dialogic documentation describes more setups than the ones used for Avaya Modular Messaging. If information in a Dialogic document conflicts with this Avaya document, follow the steps in the Avaya documentation. Use the Dialogic documentation to locate various items on the board or verify cable connections.

Installing MAS port boards

Do this task only on a customer-provided server.

Before you can install the Modular Messaging software on a customer-provided equipment (CPE) server, you must first install any required port boards in each MAS.

Note:

The number of port boards you can install in a customer-provided MAS depends on the type of board and the number of PCI slots in the server. These instructions assume that up to four PCI slots are available in the server, and that board installation starts with the fourth PCI slot. Modify these instructions as appropriate for the server that you are using.

Preparing for the installation

To install Dialogic port boards in a customer-provided MAS:

1. Verify that this MAS meets the minimum requirements needed to support Modular Messaging software. For more information, see the *Avaya Modular Messaging Concepts and Planning Guide*.
2. Print the appropriate Dialogic PDF file for more information. For a list of the Dialogic documents that support each type of board, see [Table 15: Supported MAS port boards for customer-provided servers](#) on page 341.
3. If the server is already in operation, take it out of service to install the port boards. Schedule and publicize a time.
4. When you are ready to start the installation, shut down the system software and turn off the server. Unplug the AC power cord for safety.

 **CAUTION:**

Electrostatic discharge can severely damage sensitive electronic circuits. Before handling any electronic hardware, be sure to wear a grounding wrist strap or other static-dissipating device. The antistatic wrist strap must touch your bare skin and the strap cable must connect to an earth ground. For complete ESD instructions, see "[Protecting against ESD damage](#)" on the documentation media.

5. Open the chassis to access the PCI card slots.
6. Remove the cover for the PCI slot in which you want to install the new board. Set the retaining screw aside.
 - If you are installing multiple boards, remove as many card slot covers as are needed.
 - Note the maximum number of boards of a certain type that you can install in one MAS. See [Table 15: Supported MAS port boards for customer-provided servers](#) on page 341.

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Note:

When you insert boards, start from the right-most slot if possible. For example, if six PCI slots are in the server, start with PCI slot 6 to insert the port boards.

Setting jumpers and switches

Set the jumpers and switches for board position, bus termination, and other features as described in this section. For more information about jumper or switch locations, see the Dialogic documentation listed in [Table 15: Supported MAS port boards for customer-provided servers](#) on page 341.

Note:

The Dialogic documentation describes more setups than the ones used for Avaya Modular Messaging. If information in a Dialogic document conflicts with this Avaya document, follow the steps in the Avaya documentation. Use the Dialogic documentation to locate various items on the board or verify cable connections.

To set the jumpers and switches on each board:

1. Remove the new port board from its packaging. Do not touch the circuit board surface.
2. Set the jumpers and switches as required for this type of board:
 - [D/480JCT-1T1 and D/600JCT-1E1 or D/600JCT-2E1 QSIG board settings](#) on page 345
 - [D/480JCT-1T1-EW and D/600JCT-E1-120-EW QSIG board settings](#) on page 345
 - [D/82JCT-U PCI Univ set emulation board settings](#) on page 346
 - [D/82JCT-U EW set emulation board settings](#) on page 347
 - [D/120JCT-LS 12-port analog board settings](#) on page 348
 - [D/120JCT-LS-EW port analog board settings](#) on page 348
 - [D/41JCT-LS 4-port analog board settings](#) on page 349
 - [D/41JCT-LS-EW analog board settings](#) on page 351

D/480JCT-1T1 and D/600JCT-1E1 or D/600JCT-2E1 QSIG board settings

To set up Dialogic T1 or E1 QSIG boards, you must set only the board ID for the port board.

1. Turn the rotary switch, located on the top of the port board. Set the board ID according to the slot number in which the board is installed.

The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet. For the board ID numbers for a 6-PCI slot MAS, see [Table 16](#).

Table 16: D/480JCT-1T1 and D/600JCT-1E1 or D/600JCT-2E1 QSIG board ID settings

Card number	Board ID number	PCI slot number
1	0	6
2	1	5

Note:

Do *not* set the Computer Telephony (CT) bus for bus termination.

2. Continue with [Installing the port boards](#) on page 353.

D/480JCT-1T1-EW and D/600JCT-E1-120-EW QSIG board settings

If a system has two boards, they must be installed in adjacent slots.

For the D/480JCT-1T1-EW and D/600JCT-E1-120-EW boards, set the board ID and turn off power budgeting.

1. Turn the rotary switch, located on the top of the port board. Set the board ID according to the slot number in which the board is installed.

The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet. For the board ID numbers for a 6-PCI slot MAS, see [Table 16](#).

Table 17: D/480JCT-1T1-EW and D/600JCT-E1-120-EW QSIG board ID settings

Board ID number	PCI slot number
0	3
1	4

2. Move the P3 jumper on the top of the board on to pins 1-2 to disable power budgeting.

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D/82JCT-U PCI Univ set emulation board settings

To set up Dialogic digital set emulation (DSE) boards, you must set only the bus termination.

1. If the server contains more than one port board, set the boards on both ends of the Computer Telephony (CT) bus for bus termination. Use jumper **P8** to set CT bus termination as shown in [Table 18](#).

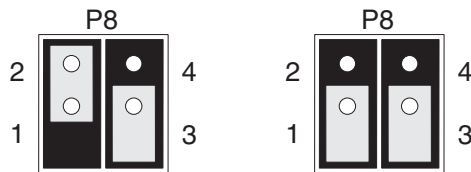
Table 18: D/82JCT-U set emulation board settings for CT bus termination

Number of cards	P8 jumper	CT bus termination
1	OFF	Do not terminate bus.
2	Card 1: ON pins 1 and 2 Card 2: ON pins 1 and 2	Terminate bus on both boards.

[Figure 1](#) shows the **P8** jumper settings.

- The setting on the left is ON. Pins 1 and 2 are jumpered. If set, the CT bus is terminated.
- The setting on the right is OFF.

Figure 1: D/82JCT-U board settings for CT bus termination: ON or OFF



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2. Continue with [Installing the port boards](#) on page 353.

D/82JCT-U EW set emulation board settings

To set up Dialogic digital set emulation (DSE) boards, you must set only the bus termination.

1. If the server contains more than one port boards, set the boards on both ends of the Computer Telephony (CT) bus for bus termination and turn off power budgeting on all boards. Use jumper **P8** to set CT bus termination as shown in [Table 18](#).

Table 19: D/82JCT-U set emulation board settings for CT bus termination

Number of cards	P8 jumper	CT bus termination
1	OFF	Do not terminate bus.
2	Card 1: ON pins 1 and 2 Card 2: ON pins 1 and 2	Terminate bus on both boards.

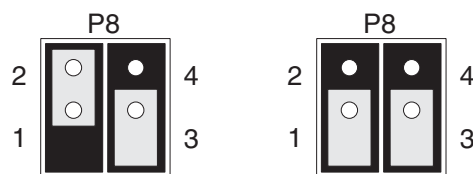
2. Set the P8 jumper to the appropriate position for the system configuration:

- For a system with two boards, move the P8 jumper on to pins 1 and 2.
- For a system with one board, verify that the P8 jumper is only on pin 1.

[Figure 2](#) shows the **P8** jumper settings.

- The setting on the left is ON. Pins 1 and 2 are jumpered. If set, the CT bus is terminated.
- The setting on the right is OFF.

Figure 2: D/82JCT-U board settings for CT bus termination: ON or OFF



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3. Move the P11 jumper on the top of the board on to pins 1–2 to disable power.

D/120JCT-LS 12-port analog board settings

To set up Dialogic 12-port analog boards:

1. Set the unique board ID for the port board. Turn the rotary switch, located on the top of the board. Set the board ID according to the slot number in which the port board is installed.

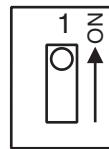
The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet. For the board ID numbers for a 6-PCI slot MAS, see [Table 20](#).

Table 20: D/120JCT-LS 12-port analog board ID settings

Card number	Board ID number	PCI slot number
1	0	6
2	1	5

2. Set the hook-switch state of the port board to **ON** so callers hear a busy signal when the board is not initialized. Use the **SW1** switch, located at the top of the board, to set the hook-switch state. See [Figure 3](#).

Figure 3: D/120JCT-LS analog board setting for on-hook switch



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3. Continue with [Installing the port boards](#) on page 353.

D/120JCT-LS-EW port analog board settings

Determine in which slot in the PCI cage you will be installing the board. Slots in the PCI cage are number 3 (bottom slot) 4 (middle slot) and 5 (top slot). If a system has two boards, they must be installed in adjacent slots. For the D/120JCT-LS-EW board, set the board ID, the hook-switch state and turn off power budgeting.

1. Set the unique board ID for the port board. Turn the rotary switch, located on the top of the board. Set the board ID according to the slot number in which the port board is installed.

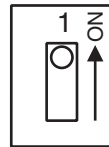
The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet, see [Table 21](#).

Table 21: D/120JCT-LS-EW port analog board ID settings

Board ID number	PCI slot number
0	3
1	4

- Set the hook-switch state of the port board to **ON** so callers hear a busy signal when the board is not initialized. Use the **SW1** switch, located at the top of the board, to set the hook-switch state. See [Figure 4](#).

Figure 4: D/120JCT-LS analog board setting for on-hook switch



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- Move the P3 jumper on the top of the board on to pins 1–2 to disable power budgeting.

D/41JCT-LS 4-port analog board settings

To set up Dialogic 4-port analog boards:

- Set the unique board ID for the port board. Turn the **SW30** rotary switch, located on the top of the board. Set the board ID according to the slot number in which the board is installed.

The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet. For the board ID numbers for a 6-PCI slot MAS, see [Table 22](#).

Table 22: D/41JCT-LS 4-port analog board ID settings

Card number	Board ID number	PCI slot number
1	0	6
2	1	5

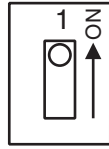
- Set the hook-switch state of the port board to **ON** so callers hear a busy signal when the board is not initialized. Use the red **SW4** switch, located near the top of the board, to set the

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Installing Dialogic port boards in a customer-provided MAS

hook-switch state. See [Figure 5: D/41JCT-LS analog board setting for on-hook switch](#) on page 350.

Figure 5: D/41JCT-LS analog board setting for on-hook switch



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- If the server contains more than one port board, set the boards on both ends of the Computer Telephony (CT) bus for bus termination. Use jumper **JP2** to set CT bus termination as shown in [Table 23](#).

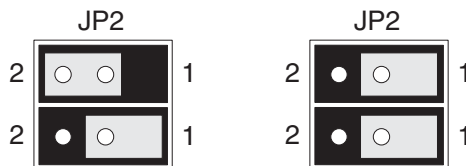
Table 23: D/41JCT-LS analog board settings for CT bus termination

Number of cards	JP2 jumper	CT bus termination
1	OFF	Do not terminate bus.
2	Card 1: ON pins 1 and 2 Card 2: ON pins 1 and 2	Terminate bus on both boards.

[Figure 6](#) shows the **JP2** jumper settings.

- The setting on the left is ON. Pins 1 and 2 are jumpered. If set, the CT bus is terminated.
- The setting on the right is OFF.

Figure 6: D/41JCT-LS analog board settings for CT bus termination: ON or OFF



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D/41JCT-LS-EW analog board settings

Determine in which slot in the PCI cage you will be installing the board. Slots in the PCI cage are number 3 (bottom slot) 4 (middle slot) and 5 (top slot). If a system has two boards, they must be installed in adjacent slots. For the D/41JCT-LS-EW board, set the board ID, the hook-switch state and Computer Telephony (CT) bus termination. CT bus termination is set by adjusting the JP2 jumper on the side of the board.

1. Set the unique board ID for the port board. Turn the **SW30** rotary switch, located on the top of the board. Set the board ID according to the slot number in which the board is installed.

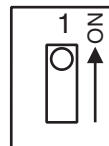
The Dialogic port boards usually are placed in the PCI slots starting from the right side of the cabinet, see [Table 24](#).

Table 24: D/41JCT-LS 4-port analog board ID settings

Board ID number	PCI slot number
0	3
1	4

2. Set the hook-switch state of the port board to **ON** so callers hear a busy signal when the board is not initialized. Use the red **SW4** switch, located near the top of the board, to set the hook-switch state. See [Figure 7: D/41JCT-LS analog board setting for on-hook switch](#) on page 351.

Figure 7: D/41JCT-LS analog board setting for on-hook switch



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Installing Dialogic port boards in a customer-provided MAS

3. If the server contains more than one port board, set the boards on both ends of the Computer Telephony (CT) bus for bus termination. Use jumper **JP2** to set CT bus termination as shown in [Table 25](#).

Table 25: D/41JCT-LS-EW analog board settings for CT bus termination

Number of cards	JP2 jumper	CT bus termination
1	OFF	Do not terminate bus.
2	Card 1: ON pins 1 and 2 Card 2: ON pins 1 and 2	Terminate bus on both boards.

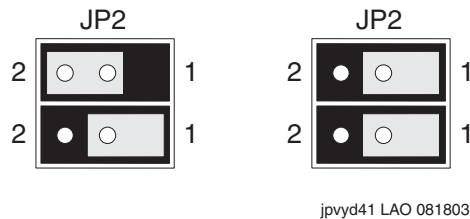
4. Set the JP2 jumper to the appropriate position for the system configuration:

- For a system with two boards, move the JP2 jumper on to pins 1 and 2.
- For a system with one board, verify that the JP2 jumper is only on pin 1.

[Figure 8](#) shows the **JP2** jumper settings.

- The setting on the left is ON. Pins 1 and 2 are jumpered. If set, the CT bus is terminated.
- The setting on the right is OFF.

Figure 8: D/41JCT-LS-EW analog board settings for CT bus termination: ON or OFF



Installing the port boards

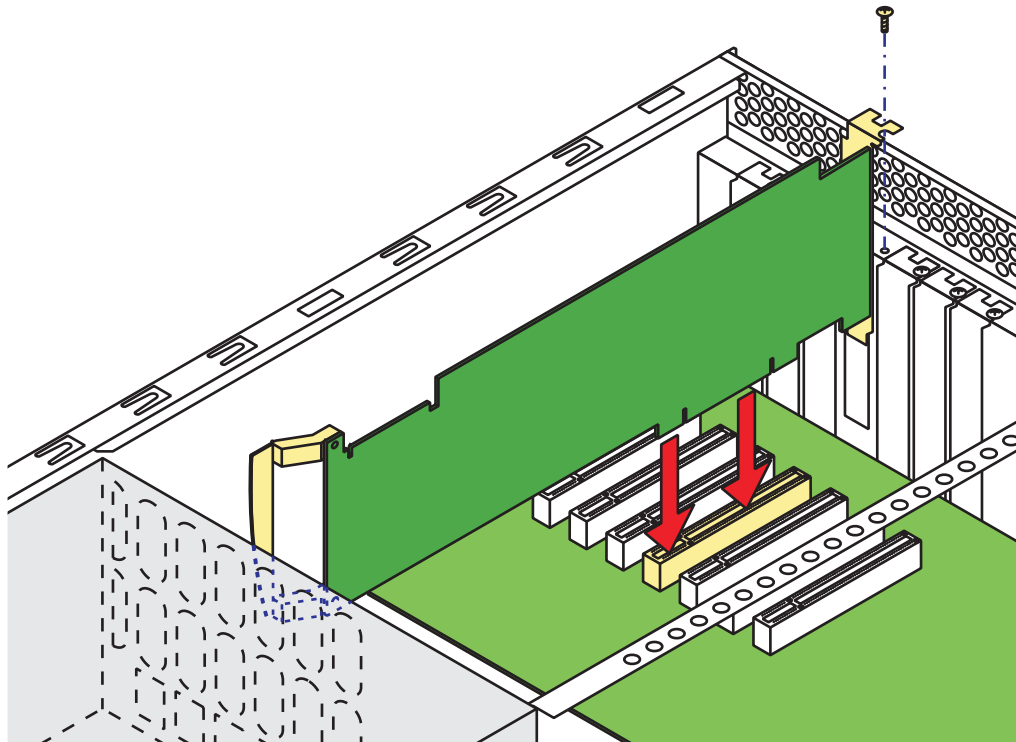
After you verify that the settings are correct, install the MAS port boards:

⚠ CAUTION:

Verify that all port boards in an MAS are of the same type. You cannot mix board types within the same MAS, such as analog boards with DSE or QSIG.

1. Slide the slot retainer bracket on the port board into the slot guide on the chassis.
2. Align the edge connector on the port board with the slot connector. Apply pressure to the top of the board only. Push down until the edge connector is firmly seated. See [Figure 9](#).

Figure 9: Installing a port board in a CPE MAS



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3. Replace and tighten the retaining screw for the port board.
4. Repeat Steps 1 through 3 to install any additional port boards.

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Installing Dialogic port boards in a customer-provided MAS

5. *If the MAS has multiple port boards*, attach the Computer Telephony (CT) bus cable to connect all the port boards:
 - a. Position the CT bus cable so the colored stripe on the ribbon cable faces the ports at the back of the chassis.
 - b. Start with the board in the highest numbered slot. Attach the end connector on the bus cable to the CT bus edge connector at the top of the board.
 - c. Connect the next bus connector to the next port board, and so on.
 - d. If the cable has extra connectors or loose ribbon cable, tuck down the cable so it does not snag when you replace the cover.
6. Replace the chassis cover.
7. Plug in the AC power cord.
8. Restore power to the server.

The server boots.

Disabling the Dialogic hardware

The Microsoft Windows software automatically detects the Dialogic port boards that you just installed. You configure these boards later as part of the Modular Messaging software installation. Do *not* install the Dialogic drivers at this time.

To temporarily disable the Dialogic port boards:

1. After the server boots, log on using an account that has permission to install software, such as the local administrator.
2. The system runs a **Found New Hardware Wizard** once for each new Dialogic port board installed in the MAS. To complete the wizard:
 - a. On the Welcome screen, use the default option to **Install the software automatically**. Click **Next**.
 - b. Wait while the system searches for a driver.
 - c. When the wizard reports that it **Cannot Install this Hardware**, click **Finish**.
3. Repeat Step 2 for each repetition of the Found New Hardware Wizard.

Note:

You install the Dialogic drivers later with the rest of the Modular Messaging software.

Connecting MAS port boards to the switch

Connect the MAS port boards to the PBX (switch), as described in this section.

To connect MAS port boards to the switch:

1. Assemble the required cables.

Note:

Port boards ordered through Avaya ship with the correct cables.

2. Connect each port on the port boards to the switch (PBX) as required:

Note:

Check the numbering on the board faceplate to verify that you are connecting the correct cable to the correct port.

● **For E1-QSIG or T1-QSIG boards:**

- a. Connect the port on the Dialogic E1-QSIG or T1-QSIG board using an RJ-48C Ethernet cable.
- b. The other end of the cable must be connected to the QSIG board on the corporate switching system. The organization responsible for maintaining the corporate switch must make this connection. See the customer contract or the statement of work.

● **For set emulation boards:**

- a. Connect each port on the Dialogic set emulation (DSE) board using the D/82U cable.
- b. The other end of the cable must be connected to a 4-wire punch-down block on the corporate switching system. The organization responsible for maintaining the corporate switch must make this connection. See the customer contract or the statement of work.

● **For analog boards:**

- a. Connect each port on the installed analog boards to one end of a standard RJ-11 tip/ring cord. You can also use individual tip/ring cables and a 12-port harmonica. Note which cables connect to which ports.
- b. The other end of the cable must be connected to an analog line on the corporate switching system. The organization responsible for maintaining the corporate switch must make this connection. See the customer contract or the statement of work.

Completing the hardware installation

The Dialogic port boards require their own drivers and software for board configuration. To complete the hardware installation on a customer-provided equipment (CPE) server, install the Dialogic drivers and software as part of the Modular Messaging software installation. For more information, see [Running the Modular Messaging Configuration wizard](#) on page 97.

Configuring port boards

 **Important:**

You must ensure that you stop all Modular Messaging services before you stop the Dialogic Services.

Note:

An MAS that uses an IP H.323 or IP SIP switch integration has no port boards. You do all configuration for these switch integrations using the Voice Mail System Configuration (VMSC) program. For more information, see [Configuring the voice mail system](#) on page 54.

Manual port board configuration involves three phases:

1. The appropriate party must administer the switch for the port boards using the configuration notes for this particular switch (PBX) integration. For instructions to get the most recent configuration notes, see [Downloading configuration notes](#) on page 12.

 **CAUTION:**

You can only install this system by using the required configuration notes for this switch or PBX. The PBX administrator *must* have administered the ports on the switch before you can proceed.

2. Configure and test the port boards as described in this section. Some steps require you to use the configuration notes.
3. You must complete the port board configuration as described in [Configuring port boards and switch integration](#) on page 77.

Continue based on the type of port boards installed in this MAS:

- [Configuring T1-QSIG or E1-QSIG boards](#) on page 357
- [Configuring set emulation boards](#) on page 359
- [Configuring analog port boards](#) on page 359



CAUTION:

If the window displays no port boards when you run the Dialogic Configuration Manager, you might need to reseal or replace some of the boards.

Configuring T1-QSIG or E1-QSIG boards

Any of the following QSIG port boards might be installed in an MAS:

- Dialogic D/480JCT-1T1
- Dialogic D/480JCT-1T1- EW
- Dialogic D/600JCT-1E1
- Dialogic D/600JCT-2E1
- Dialogic D/600JCT-1E1- 120- EW

The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Configuring port boards](#) on page 356.

To configure either of these QSIG boards:

1. Click **Start > Programs > Dialogic System Release > Configuration Manager - DCM**.

The **Dialogic Product Configuration Manager** window opens.

2. If a popup window opens, connect to the MAS as follows:
 - a. In the **Computer Name** window, verify that **Local** is selected and that the correct server name is shown, such as *MYMAS1*.
 - b. Click **Connect**.

The system displays this window only the first time that you access the Dialogic Configuration Manager application.

The Dialogic software locates any installed port boards.

3. Verify that all Dialogic services are stopped. All boards should show a red icon.
4. If the board icon shows an X, the board is disabled. To enable it, right-click the board and select **Enable device(s)**.
5. Under Configured Devices, double-click the name of the first Dialogic board, such as *#0*.
6. In the **Dialogic product Configuration Manager - Properties** window:

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Installing Dialogic port boards in a customer-provided MAS

- a. Click the **Interface** tab and select the **ISDNProtocol** parameter.
 - b. Select the correct value for this board from the pull-down list:
 - For E1-QSIG: select **QTE**
 - For T1-QSIG: select **QTU**
 - c. Click the **Telephony Bus** tab and select the **PCMEncoding** parameter.
 - d. Select the correct value for the installed board from the pull-down list:
 - For E1-QSIG: select **A-Law** for most countries, particularly Europe
 - For T1-QSIG: select **μ-Law** (mu-Law) for the United States and Japan
 - e. Click the **Misc** tab.
 - f. For the **FirmwareFile** parameter, verify that the value is **default**.
 - g. Select the **FirmwareFile2** parameter. Enter **spfax.fwl** in the **Value** field.
 - h. Click the **Country** tab and select the **Country** parameter.
 - i. On the pull-down list of values, always use **United States** for either type of board.
 - j. Click **OK** to close the window.
7. Repeat Steps 5 and 6 for any other installed Dialogic boards, such as #1.
 8. After all boards are configured, click the green **Start** button on the button bar.

Wait for service to start. When service is started, the **Stop** button becomes active and the installed boards show a green light.
 9. Verify that the port boards are operating correctly.
 - a. Check the LED display on the Dialogic board faceplate.
 - A red status LED lights on the back of the port board during driver startup.
 - If the drivers start successfully, the board whose port is connected to the PBX shows a green LED within 30 seconds. LEDs on the other boards remain red.
 - b. If a problem occurs, check the board configuration, the physical connections between the board and the PBX, or the PBX configuration. Repeat Steps 5 through 9 as needed.
 10. Close the **Dialogic product Configuration Manager** window.
 11. Continue with [Testing the port boards](#) on page 359.

Configuring set emulation boards

An MAS supports 8-port Dialogic Digital Set Emulation (DSE) boards. The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Configuring port boards](#) on page 356.

Configure the port boards as outlined in [Configuring set emulation boards](#) on page 328. You may install Dialogic D/82JCT-EW board in an MAS.

Note:

Avaya supports the non-universal Dialogic D/82JCT-U-PCI-UNIV board for upgrades only.

Configuring analog port boards

The following analog port boards might be installed in an MAS:

- Dialogic D/41JCT-LS 4-port Tip/Ring
- Dialogic D/41JCT-LS- EW 4-port
- Dialogic D/120JCT-LS 12-port Tip/Ring
- Dialogic D/120JCT-LS- EW 12-port

The maximum number of port boards per MAS varies, depending on the server hardware. For more information, see [Configuring port boards](#) on page 356.

Configure the analog port boards as outlined in [Configuring analog port boards](#) on page 330.

Testing the port boards

Test all port boards and channels to verify that port boards can send and receive calls using the procedures outlined in [Testing the port boards](#) on page 334.

Note:

Sometimes after you apply settings to a port board, the board comes up in a bad state. The Dialogic drivers consistently fail to start, and the Event Viewer shows **dlg_c_log** errors. If this problem occurs, turn off and then turn on the server again. The power cycle corrects the port board problems.

Installing Dialogic port boards in a customer-provided MAS

Appendix D: Creating a new tone file

New installations of Modular Messaging support SIP based switch integration *only*.

This appendix describes how to build a tone file for Dialogic analog port boards by using the PBXpert utility to learn PBX tones.

Do this procedure after you administer the port boards on the switch, but before you configure the port boards using the Intel Dialogic product Configuration Manager. For more information, see [Configuring analog port boards](#) on page 330.

 **CAUTION:**

Use the configuration notes for the PBX or switch integration to administer the port boards. For instructions to get the configuration notes, see [Downloading required software and documentation](#) on page 11. Administer the port boards on the switch before you can continue.

PBXpert learns the call progress tones for this PBX and stores in a Tone Set File (TSF). You can store many tone sets in a single TSF file.

You can use the PBXpert utility either automatically or manually:

- *Automatic Learning:* PBXpert uses two different channels on the Dialogic port board to set up tones and learn the resulting call progress tones automatically. To use this procedure, see [Learning tones automatically](#) on page 362.
- *Manual Learning:* PBXpert uses one channel on the Dialogic port board and a telephone to set up tones and learn the resulting call progress tones manually. PBXpert prompts you how and when to use the telephone. To use this procedure, see [Learning tones manually](#) on page 365.

Note:

If only one line is connected to the Dialogic port board, you must use Manual Learning.

Learning tones automatically

This section describes:

- [Running the PBXpert wizard](#) on page 362
- [Consolidating and saving the TSF file](#) on page 364
- [Using the new TSF in Dialogic Configuration Manager](#) on page 365

Running the PBXpert wizard

The PBXpert wizard guides you to learn the tones used by the PBX and save the information as a TSF file. PBXpert can learn the following tones:

- Dial tone
- Ringback
- Busy
- Reorder (fast busy)
- Disconnect

To run the PBXpert wizard:

1. Start the Dialogic port boards.
2. You must ensure that you stop all Modular Messaging services before you stop the Dialogic Services.

The Intel Dialogic product Configuration Manager window must be open

- a. To open the DCM application, click **Start > Programs > Intel Dialogic System Release > Configuration Manager - DCM**.
- b. Click the green **Start** button on the button bar.

When the service starts, the **Stop** button becomes active and the installed boards show a green light.

3. Click **Start > Programs > Intel Dialogic System Release > PBX Expert**.

The PBXpert main window opens. Most fields are blank until tones are learned.

- If you are using PBXpert for the first time after installation, the PBXpert wizard starts automatically.
- If the PBXpert wizard does not start automatically, click **Tones > Tone Wizard**.

Note:

You can change the default settings in the wizard if you are familiar with this PBX environment and the Dialogic API. The program saves any settings that you change when you exit PBXpert. For help on a particular screen, click the **Help** button in the wizard.

After the PBXpert Wizard window opens, complete the screens as follows:

1. On the Welcome screen, click **Next**.
2. On the PBX Information screen:
 - Under **PBX**, enter the name of the **Manufacturer**, such as *Mitel*.
 - Enter the **Model** of the PBX, such as *SX-2000*.
 - You can use the automatically created **Tone Set File** name, or change the file name.
 - Click **Next**.
3. On the Select a Board screen:
 - Select the port board to use.
 - Click **Next**.
4. On the Select the Calling Resource screen, for the Line A (Calling Channel):
 - For **Select the Channel**, enter the port number or the channel to use.
 - For **Phone Number**, enter the extension number of this port.
 - Click **Next**.
5. On the Select the Called Resource screen, for the Line B (Called Channel):
 - For **Select the Channel**, enter a port number or the channel that is different from Line A.
 - For **Phone Number**, enter the extension number of this port.
 - Click **Next**.
6. On the Settings Confirmation screen:
 - Verify the settings. Click **Back** if you have change any of the settings.
 - Verify if you have checked the **Run Wizard Auto-Test** box.
 - Click **Next**.
7. The Auto Line Test window opens while PBXpert verifies the connection between the two specified channels.
 - If you see a **Test finished successfully!** message, click **OK**. Close this window and continue.
 - If the line test fails:
 - a. Click **OK**. Close this window.
 - b. Click **Back**, adjust the settings, and try the test again.

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Creating a new tone file

8. On the Learning Tones screen, click **Next** to start learning tones automatically.
The Learn Tones window opens.

Note:

You can click **Cancel** anytime during the test to stop automated learning.

9. When PBXpert completes learning, choose to keep or discard the data.
 - If the tones were learned without errors, select **Keep Data**. The Learn Tones window closes and you can continue.
 - If errors occurred, select **Discard Data**. The window closes.
 - Click **Back**, adjust the settings, and learn the tones again.

You cannot test or save the tone file if it contains errors.
10. On the Verifying the Learn screen, click **Next** to test the learned tones.
 - If the test succeeds, click **OK** to close the test window and continue.
 - If the test fails, click **OK** to close this window. Click **Back** on the wizard, adjust the settings, and try the test again.
11. The **Summary of Results** screen shows the final wizard status and the tone definitions. Click **Finish**.

The PBXpert main window displays the tone definitions.

Consolidating and saving the TSF file

You must consolidate and save the new TSF file so you can use it with the Dialogic voice driver. To do this:

1. Click **Tones > Consolidate**.
2. After consolidation is complete, click **File > Save** to save the new TSF file.
 - a. In the Save As window, navigate to the **C:\Avaya_Support\Tone_Files** directory to ensure that you have saved the file.

Note:

If you use the default DATA directory, the system will *not* save the customized tone file automatically.

- b. Specify a file name of TSF file type, such as *Mitel-SX-2000.tsf*.

Using the new TSF in Dialogic Configuration Manager

To use the new TSF that you just created:

1. Return to the Intel Dialogic product Configuration Manager window.
2. Click the red **Stop** button on the button bar.
3. Return to Step 6 in [Configuring analog port boards](#) on page 330 and complete board configuration and testing.

Learning tones manually

This section describes:

- [Running PBXpert](#) on page 365
- [Adding a new tone set](#) on page 366
- [Learning tone definitions](#) on page 367
- [Testing the tone set](#) on page 367
- [Consolidating and saving the TSF file](#) on page 368
- [Using the new TSF in Dialogic Configuration Manager](#) on page 368

Running PBXpert

To run PBXpert manually:

1. Start the Dialogic port boards.
 - a. The Intel Dialogic product Configuration Manager window must be open.

To open the DCM application, click **Start > Programs > Intel Dialogic System Release > Configuration Manager - DCM**.
 - b. Click the green **Start** button on the button bar.

When the service starts, the **Stop** button becomes active and the installed boards show a green light.
2. Click **Start > Programs > Intel Dialogic System Release > PBX Expert**.

The system opens the **PBXpert** main window. Most fields are blank until tones are learned. If you are using PBXpert for the first time after installation, the PBXpert wizard starts automatically.

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Creating a new tone file

3. Select the **Don't run wizard at startup** check box and then click **Cancel**.

A new, empty TSF is now active.

4. In the PBXpert main window, click **Settings** on the button bar. The system opens the **Settings** window.

5. Click the **Dialing** tab, complete the following:

- a. Under **Line A**, enter the **Board Number**, such as *1*.
- b. Enter the **Channel Number** or **Port number**.
- c. Verify that the **Manual mode** check box is checked.
- d. For **Phone Number**, enter the extension for this port or channel.

You can use the default values for all other fields in this window. Click **Help** for more information if needed.

- e. Repeat Steps a through d for **Line B**.

Note:

If you are familiar with this PBX environment and the Dialogic API, you can change these default settings. The program saves any settings that you change when you exit PBXpert.

- f. Click **OK**.

Adding a new tone set

To add a new tone set to a TSF:

1. From the PBXpert main window, click **Edit > New Tone Set**.
2. In the New Toneset window:
 - a. Enter the PBX **Manufacturer**, such as *Mitel*, and the **Model** name, such as *SX-2000*.
 - b. Click **OK**.

The PBXpert main window shows the manufacturer and the model names you entered. The tone definitions are set to zero.

Learning tone definitions

To add tone definitions to the new tone set:

1. From the PBXpert main window, click **Tones > Learn**.
2. On the Start Learn window:
 - a. Select the tones for the Dialogic boards to learn. The default is all tones.
 - b. Click **Start Learn** to have PBXpert start learning tones.

The Learn Tones window opens.

Note:

Click **Cancel** anytime to stop learning.

3. The system prompts you to listen for ringing, and to pick up or replace the telephone handset, during the test. When a message box pops up, do the requested action, and then click **OK**.
4. When the learning process is complete, the system displays the tone definitions in the Learn Tones window. Choose to keep or discard the data:
 - If the tones were learned without errors, select **Keep Data**. The Learn Tones window closes and you can continue.
 - If errors occurred, select **Discard Data**. The window closes.
 - Click **Back** on the wizard, adjust the settings, and try to learn the tones again.
 - You cannot test or save the tone file if it contains errors.

The Learn Tone window closes. The PBXpert main window displays the new tone definitions.

Testing the tone set

The Test function verifies that the consolidated tone set in the active TSF works correctly with Perfect Call, a call progress analysis utility.

To test the newly learned tones:

1. In the main PBXpert window, click **Tones > Test**.
2. A Test window opens.

When testing is complete, the Test window displays the test results.
3. Verify that the tone definitions of the learned tones are correct.

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Consolidating and saving the TSF file

You must consolidate and save the new TSF file so you can use it with the Dialogic voice driver. To do this:

1. Click **Tones > Consolidate**.
2. Click **File > Save** to save the new TSF file.
 - a. In the Save As window, navigate to the following directory to ensure that the file is backed up: **C:\Avaya_Support\Tone_Files**

Note:

If you use the default DATA directory, the system will *not* back up the customized tone file automatically.

- b. Specify a file name of TSF file type, such as *Mitel-SX-2000.tsf*.

Using the new TSF in Dialogic Configuration Manager

To use the new TSF that you just created:

1. Return to the Intel Dialogic product Configuration Manager window.
2. Click the red **Stop** button on the button bar.

Note:

You must ensure that you stop all Modular Messaging services before you stop the Dialogic Services.

3. Return to Step 6 in [Configuring analog port boards](#) on page 330 and complete board configuration and testing.

Appendix E: Updating Modular Messaging software

You might update the Avaya Modular Messaging software after an installation or upgrade to bring it up to date with the latest changes. Software updates might include the latest Avaya Service Pack (SP) or Avaya software patches.

Topics in this appendix include:

- [Getting software updates from the Web](#) on page 370
- [Installing software updates on each MAS](#) on page 371
- [Installing software updates on the MSS](#) on page 373

Considerations for applying updates include:

- You can apply multiple patches to a system.
- You can apply multiple updates to Modular Messaging components.
- If you apply a Service Pack, the program automatically uninstalls all previously applied patches and Service Packs.

Getting software updates from the Web

Get the latest Avaya software updates from the Web.

To get any Avaya software updates for the system:

1. Use a computer that can access the Internet.
2. Go to the Avaya Support Web site at <http://www.avaya.com/support>.
3. Download the files needed to update the Modular Messaging system.

Note:

Ensure that you download both the software files and any instructions required to install the Service Pack or software patch.

4. Copy the downloaded files to a storage device.
5. Use the appropriate tools on your computer to extract the files into an appropriate directory. The files are often in a compressed form, such as a zip file.

Installing software updates on each MAS

To start the update procedure, you must copy the Avaya software updates to each MAS. You then run an installation wizard to install the updates.

Copying files to the MAS

To copy the Avaya software updates to an MAS:

1. Switch the monitor to show the appropriate MAS. For more information, see [Switching the monitor to show the correct server](#) on page 156.
2. Insert the storage device into the server.
3. Copy the software update files to the MAS:
 - a. Open Windows Explorer.
 - b. Navigate to the appropriate directory on the storage device.
 - c. Right-click the software update file that you downloaded in [Getting software updates from the Web](#) on page 370. For example, file *MAS520100.exe*. Select **Copy**.
 - d. Navigate to the C:\Avaya_Support directory.
 - e. Right-click in a blank area in the right pane, and select **Paste**.
 - f. Verify that the correct file is pasted in the C:\Avaya_Support directory.
 - g. If you have downloaded more than one file, repeat Steps c through f to copy the software files and the update instructions to the MAS.
4. Remove the storage device from the server:
5. Repeat Steps 1 through 4 for each MAS in the system.
6. Open and review the installation instructions for this specific software update.

Note:

A software update might contain updates for the MAS only, the MSS only, or both servers. To complete the update, use the instructions as a guideline, altering the instructions to fit the update situation.

Installing the updates on each MAS

 **Important:**

Ensure that there are no errors or warnings on the system. Resolve major and minor alarms before the update.

Always read the Release notes for each software update which provide specific information about the software update. The following are general instructions for installing updates on each MAS.

To install the Avaya software updates on the MAS:

1. Log on as the Domain Administrator or Service Pack Installer account so that you can copy the updates to the MSS.
2. Double-click the software update file for this MAS, such as *MAS520100.exe*.

The program unpacks the file and then runs the Modular Messaging Installation Wizard.

3. In the Modular Messaging Installation Wizard window:
 - a. Select all applicable patches for this system.

Note:

You must install updates for the MSS once for each software update. If you want to update a subsequent MAS and have already installed the MSS update, ensure that you cleared the **Message Storage Server Update** check box.

- b. Click **Install**.

Note:

If the **Install** button is not active, you do not need to apply these software updates to the system. Continue with Step 6.

4. If you are installing a Service Pack (SP), an Installation Wizard - Update Warning window opens. The window displays the patches and Service Packs that the program must remove before the update can continue. Click **Continue**.
5. After you click **Install**, monitor the software update progress:
 - a. In the Services window, the Modular Messaging Installation Wizard stops all appropriate Modular Messaging and related services.
 - b. Windows Installer then installs all relevant software updates on the MAS.
 - c. If any updates apply to the MSS, the program transfers the appropriate files to the MSS.
 - d. If prompted, reboot the system.
6. To verify the software updates installed on the MAS:
 - a. Logon to the MAS.
 - b. Select **Start > Programs > Avaya Modular Messaging**.

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- c. Click the **About Modular Messaging** tab.

The About tab shows the version of Modular Messaging installed

- d. Click the **Patches** tab.

You can see the Service Packs and Patches installed on the system.

7. After installation and verification is complete, close all open windows.

Installing software updates on the MSS

Important:

Ensure that there are no errors or warnings on the system. Resolve major and minor alarms before the update.

Read the Release notes for each software update for specific information. The following sections only contain general instructions for installing updates on the MSS.

To continue the software update procedure, you must install any available updates on the MSS.

1. Toggle the port on the KVM switch to have the monitor show the MSS. For more information, see [Switching the monitor to show the correct server](#) on page 156.
2. Log on to the MSS server as **craft** using the appropriate password.
3. From the Software Management menu, click **Software Update > Service Pack**.

CAUTION:

If you see a warning about the backup that is incomplete within the last 2 hours, click **Cancel**. Save the server data before you continue. For more information, see [Setting up and running a backup on the MSS](#) on page 147.

4. The system might report that the installed version is current. In this case, the MSS already has the most recent software updates installed. Do not take any further action. Log off the server.
5. If an update is present, click **Proceed with Service Pack Installation**.
The system reports that a reboot is required.
6. Click **Proceed with Installation**.
The system installs the updates on the MSS.
7. Verify that the installation completed successfully.
8. Click **Reboot** *servername*.

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Updating Modular Messaging software

9. At the reboot warning message, click **OK** to continue.

The system displays status messages as the server shuts down the messaging software. The shutdown process can take several minutes.

Appendix F: Moving Modular Messaging services

You must distribute the Modular Messaging services across all installed MASs, and the Supplementary server if present. This practice balances the load on the system for optimum performance.

Use the procedures described in this section to redistribute Modular Messaging services:

- after you add a new MAS or a Supplementary server to the system
- to optimize performance the system in service.

This appendix describes how to move the Modular Messaging services across MASs, and the Supplementary server if present.

This section includes the following topics:

- [Disabling Modular Messaging services you plan to move](#) on page 376
- [Moving Modular Messaging services among servers](#) on page 377
- [Enabling the services on the correct server](#) on page 383

See *Avaya Modular Messaging Concepts and Planning Guide* on recommendations for the distribution of Modular Messaging services and tools among MASs that use S8800 1U-family hardware or HP DL360 G7 server.

Disabling Modular Messaging services you plan to move

Before you move any Modular Messaging services, you must disable the service on the server where it is currently running.



CAUTION:

You must set any **MM** services that you intend to move to another server to **Disabled** before you enable them on a different server. Serious problems occur if you activate a service on multiple servers that is supposed to run on only one.

Use the following steps to disable services that are currently running on a server:

1. Log on to each server that you intend to move Modular Messaging services from.
2. Double-click the **Monitor** icon on the desktop or from command prompt, run **services.msc**.
3. Click **Services (Local)** in the left pane, if the service is not already selected.
4. In the right pane of the **Monitor** window, scroll down to the service you plan to move.
 - a. Right-click the service and select **Stop**.
 - b. Double-click the service to open the **Properties** window.
 - c. Set the **Startup type** to **Disabled**.
 - d. Click **OK**.
5. Repeat Step 4 to disable each service you intend to move. Services you can move include:
 - MM Call Me—must be on the same server with the Mailbox Monitor Server
 - MM Mailbox Monitor—must be on the same server with Call Me and MWI
 - MM MWI—must be on the same server with the Mailbox Monitor Server
 - MM Fax Sender Service —enable on a server with voice ports that support Fax calls
 - MM Tracing Service—enable on only one server in the VMD
6. Refresh the screen to verify that all **MM** services that you plan to move are **Disabled**.

Moving Modular Messaging services among servers

Moving the **Modular Messaging** services involves the following steps:

1. Log on to the MAS or Supplementary server to which you intend to move Modular Messaging services.
2. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
3. Move the following services as required:
 - [Moving Call Me, MWI, and Mailbox Monitor](#) on page 377
 - [Moving MM Fax Sender service](#) on page 379
 - [Moving Audit server](#) on page 381
 - [Moving Tracing service](#) on page 381

Moving Call Me, MWI, and Mailbox Monitor

You must enable Call Me, Message Waiting Indicator (MWI), and Mailbox Monitor services only once in the voice mail domain. All three services must be enabled on the same server.

Updating the Call Me configuration

Use the following steps to change the parameters for Call Me configuration:

1. In the voice mail domain, such as *vmdom*, double-click **Call Me**.
2. Click the **General** tab.
3. In the **MAS Call Me server** field, specify the server on which to enable the Call Me service. If the field is blank:
 - a. Click the ... next to the field.
 - b. In the **Select Computer** window, enter the name of the MAS you chose as your MAS Call Me server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.

Note:

As Call Me and Message Waiting Indicator (MWI) services use the Mailbox Monitor, you must enable both services on the same server.

Updating the MWI configuration

Use the following steps to change the Message Waiting Indicator (MWI) configuration parameters:

1. In the voice mail domain, such as *vmdom*, double-click **Message Waiting Indicator**.
2. In the Message Waiting Indicator - Voice Mail Domain window, click the **General** tab.
3. In the **MAS MWI server** field, specify the server on which the MWI Service is enabled. If the field is blank.
 - a. Click the ... button next to the field.
 - b. In the **Select Computer** window, enter the name of the MAS you chose as your MAS Call Me server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.
 - e. Click **OK** to close this window.
4. For the **Limit requests** and **Maximum requests per minute** fields, use the values specified in the configuration notes for your PBX integration type.
5. In the **Messaging Application Servers that support MWI** box, list all MASs that have a port group set up to support MWI. Use the following steps to add a server name:
 - a. Double-click inside the top of the big list box, or click the **Add** just above the list box. The **Add** button looks like a dashed box.
 - b. The list box displays a data entry field and a ... button. **Click**
 - c. In the **Select Computer** window, double-click the name of each MAS that has ports allocated to support MWI, such as *MYMAS2*.
 - d. Repeat Steps b and c to add any other MASs that support MWI, such as *MYMAS1*.
 - e. Click **OK** to close the **Select Computer** window.

Note:

The arrow icons move the selected MAS up or down the list. MWI requests start with the first MAS in the list, and proceed to each additional MAS if needed.

6. Click **OK** to close this window.
7. Log on to the MSS server as **craft** using the appropriate password.
8. Click **Messaging Administration >Trusted Servers**.

The system opens the **Manage Trusted Servers** page.
9. Select and edit the VVSTS entry:
 - a. Change the IP address to the IP address of the new MWI server.
 - b. Click **Save**.
 - c. Click **OK**.

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Moving MM Fax Sender service

The Supplementary server is **not** an Avaya-recommended location for the fax service as it is recommended for the fax service to run on a system that has voice ports. IP H.323 switch integration does not support fax service.

Use the following steps to move MM Fax Sender service:

Enable MM Fax Sender service on the MAS that will now host MM Fax Sender service:

1. Run **C:\Avaya_Support\Utils\FaxSenderEnable.exe** on the MAS that will now host MM Fax Sender.
2. Restart the Microsoft Fax service.

Remove the MM Fax Printer from the MAS that no longer hosts the MM Fax Sender service:

1. Click **Start > Settings > Printers and Faxes**.
2. In the **Printers and Faxes** window, right-click the Fax and select **Properties**.
3. Click the **Security** tab.
4. Remove the Network Service user.
5. Click the **Sharing** tab.
6. Clear the **Share this printer** check box.
7. Click the **Security** tab.
8. Remove any Fax permissions.

Share the MM Fax Printer on the MAS that will now host MM Fax Sender:

1. Verify that Windows Fax Service is **Started** and set to **Automatic**.
2. Click **Start > Settings > Printers and Faxes**. The system opens the **Printers and Faxes** window.
3. Right-click the Fax and select **Properties**.
4. Click the **Security** tab.
5. Add the Network Service user and assign that user **Print, Manage Printers, and Manage Documents** permissions.
6. Click the **Sharing** tab.
7. Select the **Share this printer** check box. Leave the share name as **Fax**.
8. Select the **List in the directory** check box.
9. Click **Additional Drivers**. The system opens the **Additional Drivers** dialog box.
10. Select the client operating systems installed on the network that can use the Fax Printer.
The Fax Printer drivers are downloaded when you first connect the system to the Fax Printer.
11. Click **OK**.

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Moving Modular Messaging services

12. Click the **Security** tab.
13. Verify that **Everyone** is assigned Fax permissions on the share.

Note:

To reduce access to the Fax printer share, remove the Everyone group and add Fax permission to the Active Directory Users or Groups you want to have access to print faxes using the MM Fax Printer.

Start MM Fax Sender on the MAS that now hosts it:

1. Disable MM Fax Sender on the server that was previously running it; see [Disabling Modular Messaging services you plan to move](#) on page 376
2. Open the **Monitor** window on the MAS that will now host MM Fax Sender or from the command prompt, run **services.msc**.
3. Click **Services (Local)** in the left pane, if the item is not already selected.
4. In the right pane, scroll down to **MM Fax Sender Server**.
5. Right-click **MM Fax Sender Server** and select **Start**.
6. Double-click **MM Fax Sender Server** to open the Properties window.
7. Set the **Startup type** to **Automatic**.
8. Click **OK** and then close the Monitor window.

Create the Phone and Modem dialing rule on the MAS that will now host MM Fax Sender:

1. On the on the MAS that will now host MM Fax Sender, click **Start > Settings > Control Panel > Phone and Modem Options**.
2. If a dialing rule is not already created, click **New** in the Dialing Rules tab.
3. Specify the location details and the dialing rules for the MAS.
4. Click **OK** to save the dialing rule and close the New Location window.
5. Click **OK**.

Configure MM Fax Sender on the new location:

1. In the **Voice Mail System Configuration** window, under the voice mail domain, such as *vmdom*, double-click **Fax**.
2. In the Fax - Voice Mail Domain window, on the **General** tab:
 - a. Next to **MM Fax Sender server**, click **Browse**.
 - b. In the Select Computer window, enter the name of the MAS you now chose as your MM Fax Sender server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.
3. Click **OK** to close the Fax - Voice Mail Domain window.

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4. On the "restart" window, click **OK**.

Moving Audit server

Audit service is installed on each MAS in the VMD. Complete the following steps to change the MAS that acts as an MM Audit Server:

1. In the **Voice Mail System Configuration** window, in the voice mail domain, double-click **Auditing**.
2. In the **Auditing - Voice Mail Domain** window, on the **General** tab, select the **Enable Auditing** check box.
3. in the **Audit server** field, specify the server that acts as the MM Audit server. If the field is blank.
 - a. Click the ... button next to the field.
 - b. In the **Select Computer** window, enter the name of the MAS you chose as your MAS Call Me server.
 - c. Click **Check Names**.
 - d. Click **OK** to accept the MAS name and close the window.
 - e. Click **OK** to close this window.
4. In the **Database server** field, enter the name of the server where the database resides or click **browse (...)** and select the server.
5. Click **OK** to close this window.

Moving Tracing service

To move the Tracing Service to a different server:

1. Log in to the MAS to which you intend to move the Tracing Service.
2. Access the Voice Mail System Configuration program. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.
3. Under the voice mail domain, such as *vmdom*, double-click **Tracing System**.

The system may display a warning that the current Home Message Application Server is not valid. You must then click **OK**.
4. In the Tracing System - Voice Mail Domain window, on the **General** tab:
 - The **MAS Tracing Server Machine Name** field displays the name of the server that is now running the tracing system. The new server can be an MAS or a supplementary tracing server.
 - The **Home Message Application Server** field shows the first MAS that the tracing system connects to when doing an operation. You do not have to update this field.
5. Click **OK** to close this window.

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Moving Modular Messaging services

6. Remove the scheduled tasks from the server that previously hosted the Tracing Service:
 - a. Click **Start > Run** to open the Run window.
 - b. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Tools\Tracing\RemoveSchedTasks.exe

 **CAUTION:**

This script automatically removes the tasks that were assigned to the original tracing server. If you fail to run this script after you move Tracing Service from one server to another, errors occur when the originally scheduled tasks fail.

Enabling the services on the correct server

After you set up the services correctly in the VMSC, you must enable them on the appropriate servers. You must stop all Modular Messaging services to do this task.

Stopping all Modular Messaging services

You must stop all Modular Messaging services on all servers that you are moving services to or from. Stopping and then restarting all services gets the entire voice mail domain configured with the correct services running on the correct servers.

To stop all Modular Messaging services:

1. Switch the monitor to show the first MAS.
2. Stop all Modular Messaging services as follows:
 - a. Click **Start** > **Run** to open the Run window.
 - b. In the **Open** field, type the following and press **Enter**:

C:\Avaya_Support\Tools\ServiceControl\StopMMServices.exe

A command window displays the status of the Modular Messaging services shutdown. The script might take several minutes to complete.

Note:

This script also stops Dialogic services and some Windows services.

3. Confirm that all Modular Messaging services are stopped:
 - a. Double-click the **Monitor** icon on the desktop or from command prompt, run **services.msc**.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to the list of installed Modular Messaging services. These all start with the abbreviation **MM**.
 - d. Verify that the **Status** column is blank. If any service is *not* stopped, repeat Steps 2 and 3.
4. Repeat this procedure on each server that you are moving services to or from.

Enabling the appropriate services

After all Modular Messaging services are stopped, you must enable the appropriate services on each server.

To enable the appropriate Modular Messaging services:

1. In the **Monitor** window or from command prompt, run **services.msc**.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. In the right pane, scroll down to the list of Modular Messaging services. These services start with the abbreviation **MM**.

 **CAUTION:**

You must enable some Modular Messaging services only once in a voice mail domain, or serious problems will occur. For more information, see [Table 6](#).

4. To enable an **MM** service on this server:
 - a. Double-click the service to open the Properties window.
 - b. Set the **Startup type** to **Automatic**.
 - c. Click **OK**.
 - d. Repeat Step 4 to update the status for each Modular Messaging service as required.
5. Refresh the screen. Verify that the **Status** column shows the correct state for each Modular Messaging service.
 - Services that are required for this server must show a startup type of **Automatic**.
 - Services that are *not* required on this server must show a blank status and a startup type of **Disabled**.

 **CAUTION:**

You must set all **MM** services to the correct state before you restart Modular Messaging services. Serious problems occur if you activate a service that is supposed to run on only one server in the VMD on multiple servers.

6. Repeat this procedure on each server that you are moving services to or from.

Restarting messaging services

After you verify and update all required settings on all servers in the voice mail domain, you must restart the services on each server.

To restart messaging service:

1. Click **Start** > **Run** to open the Run window.
2. In the **Open** field, type the following and press **Enter**:
C:\Avaya_Support\Scripts\serverrecovery.vbs
The script takes a few seconds to run. The program sets up all **MM** services correctly.
3. Refresh the screen to verify that all **MM** services required for this server are **Started** and set to **Automatic**.
4. If any required **MM** services are not set up correctly, return to [Enabling the appropriate services](#) on page 384. Correct the problem, and then restart service again.
5. Restart all Modular Messaging services on each Modular Messaging server in the voice mail domain after you finish moving services. A restart ensures that the voice mail domain-wide properties are consistent across the VMD.

Moving Modular Messaging services

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Appendix G: Adding an MAS or a Supplementary server to an existing system

This appendix describes how to add an Avaya Messaging Application Server (MAS) or a Supplementary server to an existing Modular Messaging system that is already in service.

All servers must meet the requirements listed in the *Avaya Modular Messaging Concepts and Planning Guide*. You can download the document using the instructions provided in [Downloading user documentation](#) on page 13.

Topics in this chapter include:

- [MAS configuration prerequisites](#) on page 387
- [Adding a new server to a system in service](#) on page 388
- [Configuring the new server](#) on page 392

MAS configuration prerequisites

To set up a server, you need:

- All required hardware installed. For more information about how to install the server, see *Installing the Avaya S8730 Server for Modular Messaging* guide.
- The following software from the Avaya Support Web site at <http://www.avaya.com/support>. For more information about how to access these items on the Web site, see [Downloading required software and documentation](#) on page 11.
 - Avaya software updates that are required to bring the Modular Messaging software up to date after an installation. Download the software to a storage device.
 - The latest copy of the Data Collection Tool and DCT data file. Download the **MMDCT.exe** file from the Avaya support Web site to a storage device. If a DCT file was created for this installation, download **MMDCT.exe** to the same storage device as the DCT data file.
- Microsoft Windows Service Pack 2, if not previously installed for customer-provided server *only*.

Adding a new server to a system in service

The section describes how to add an MAS or a Supplementary server to a Modular Messaging system that is already in service.

 **CAUTION:**

You cannot add a new server to a Modular Messaging system during an upgrade to Release 5.2. You can replace the server hardware with a new model, but you cannot change the number of servers until after the upgrade is complete. Follow the instructions outlined in [Migrating to Modular Messaging Release 5.2 on S8800 1U-family server](#) on page 209 to migrate to S8800 1U. If you have not upgraded the system to Release 5.2, complete the upgrade as instructed in [Upgrading to Modular Messaging Release 5.2](#) on page 151 and proceed with instructions in this section to add a new server.

Installing the new MAS or a Supplementary server

You can install one or more servers after an initial upgrade or new installation. You can add one or more of the following servers, one at a time:

- One or more Messaging Application Server (MAS)s, up to the limit allowed by the system.
- A Supplementary server, if one is not already present in the system.
- A combination of MASs and a Supplementary server.

To install a new Avaya Messaging Application Server (MAS) or a Supplementary server:

1. Install the S8800 1U-family MAS, HP DL360 G7 server or Supplementary server hardware. For more information, see *Installing the Avaya S8800 1U Server for Modular Messaging* or *Installing the HP DL360 G7 Server* guide.

 **Tip:**

Use the new server installation checklist for this configuration of Modular Messaging system as a guide to avoid missing steps. See [Installation, upgrade and migration checklists](#) on page 301.

2. Before you configure the new servers, prepare the message store to recognize the new servers. Continue with [Preparing the MSS for the new servers](#) on page 389.

Preparing the MSS for the new servers

If you add one or more MASs or a Supplementary server to a system, you must configure the MSS so that it can identify the new server.

Adding a new trusted server on the MSS

You must add a trusted server for each MAS or Supplementary server in the voice mail domain.

 **CAUTION:**

Use the DCT file to enter the correct values for the trusted servers.

Use the following steps to set up the new server as a trusted server on the MSS:

1. Toggle the port on the KVM switch to have the monitor show the MSS.
2. Log on to the MSS as **craft**.
3. On the Messaging Administration web interface, click **Messaging Administration** > **Trusted Servers**. The system opens **Manage Trusted Servers** page.
4. Click **Add a New Trusted Server** and enter the following information:
 - a. In the **Trusted Server Name** field, enter the customer-specified NetBIOS name for this MAS, such as *mymas1*.
 - b. In the **Password** field, enter the LDAP password to be used for all MASs in this Modular Messaging system. Type the password again in the **Confirm Password** field.
 - c. In the **Machine Name / IP Address** field, enter the correct private IP address for this MAS as listed in [Private IP addresses for each MAS by IP address range](#) on page 34.

 **CAUTION:**

You must use the same private IP address range on the MSS that you will use on each MAS. Ensure that the private network settings in the Modular Messaging Data Collection Tool match with the settings on this page.

- d. In the **Special Type** field, click **Messaging Application Server** from the drop-down list, to add a trusted server for an MAS or a Supplementary server.

The **Special Type** selection populates the other fields with the required values.

5. After you verify or update the information, click **Save**.
6. At the confirmation message, click **OK**.
7. If you are adding an MAS or a Supplementary server, repeat the process for each MAS and Supplementary server.

Using the DCT to analyze the current configuration

Before you can configure the new server, you must ensure that the DCT data file for the Avaya Modular Messaging system is complete and current. To do this, you must collect information from each MAS in the system, including the Supplementary server, if present. The data file allows the Avaya Modular Messaging Configuration wizard to configure the new server automatically.

Use the following steps to collect data from each MAS and the Supplementary server, if present:

1. Verify that the Modular Messaging system works normally and that the correct services run on each MAS and Supplementary server.
2. Ensure that you have a current copy of the DCT file to use as a guide.
3. Switch the monitor to show the server to analyze.

 **CAUTION:**

Do not stop or disable any Modular Messaging services that you plan to move at this stage. All currently installed services must run normally for the DCT analysis to be successful.

4. Verify that the required messaging services on this server are running:
 - a. Double-click the **Monitor** icon on the desktop.
 - b. Click **Services (Local)** in the left pane, if the item is not already selected.
 - c. In the right pane, scroll down to the list of Modular Messaging services. All services start with the abbreviation **MM**.
 - d. Verify that the **Status** column shows **Started** for each messaging service that belongs on this server. For a list of required services, see DCT data file.

Note:

If service is *not* started for a required messaging service, right-click the specific **MM** service and select **Start**. The system starts the messaging service.

5. Insert a storage device that contains the DCT program, **MMDCT.exe** into the MAS.
 - a. Copy the **MMDCT.exe** to the **C:\Program Files\Avaya Modular Messaging\Install\MISCM** directory.
 - b. Double-click the **C:\Program Files\Avaya Modular Messaging\Install\MISCM\MMDCT.exe** file. The system opens **Avaya Modular Messaging Data Collection Tool** window.
6. Update the most current data file for the system:
 - a. In the **Select the DCT Configuration to use** dialog box, select **Analyze existing system**. Click **OK**.
 - b. When the program prompts you to use an existing DCT file, click **Yes**.

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- c. In the **Open** window, click the drop-down list next to **Look in**.
- d. Navigate to the location of the most current DCT data file.
 - For MAS#1, navigate to the MAS directory
C:\Program Files\Avaya Modular Messaging\Install\MISCM\cfg.
 - For a subsequent MAS or the Supplementary server, navigate to the most current data file on the storage device, **Removable disc (E:)**.
- e. Double-click the current data file for this site, such as *sitfile.mmdct*.
The system opens the **MM System Analysis** window.

 **CAUTION:**

For a multiple-MAS system, you must open the same data file that you saved on the previous MAS. Otherwise, the data from that server is lost. Do *not* enter the data for subsequent servers manually! Use the DCT to analyze each server in turn. The tool collects some data that does not appear on the DCT screens.

7. Click the appropriate number for the server. In the **MAS Information is being collected from** field, click the appropriate number for the server:
 - For MAS#1, select **First MAS (#1)**.
 - For a subsequent MAS or a Supplementary server, select the appropriate number for this server, such as **Second MAS (#2)**.

Note:

Analyze the MASs in numeric order, first to last.

8. Click **Start**.
The system displays the process of data collection. When the analysis is complete, the system displays "information has been successfully collected" message and then opens the Avaya Modular Messaging Data Collection Tool window.
9. Verify the data on each screen. For more information, see *Avaya Modular Messaging Data Collection Tool Online Help*.
10. Click **Complete**.
11. Save the data file to the storage device:
 - a. When the system prompts you to save the file, click **Yes**.
 - b. In the **Save As** window, navigate to the storage device.
 - c. Enter the name of the data file in the **File name** field, such as *sitfile*.
 - d. Leave the file type set as MM DCT Files (*.mmdct).
 - e. Click **Save**.
 - f. If the system prompts you to replace an existing data file, click **Yes**.The system closes the **Avaya Modular Messaging Data Collection Tool** window.

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Adding an MAS or a Supplementary server to an existing system

12. Safely remove the storage device from the server to prevent damage to the data file:
 - a. Double-click the icon on the task bar to **Safely Remove Hardware**.
 - b. Follow the prompts to safely remove the hardware.
 - c. Close all open windows.
13. Continue as appropriate:
 - If the system has additional MASs or a Supplementary server, return to Step 3.
 - After all servers in the system are analyzed, continue with [Configuring the new server](#) on page 392.

Configuring the new server

Use the updated DCT data file and the Avaya Modular Messaging Configuration wizard to configure the new server.

Running the configuration wizard

After the server boots, the Avaya Modular Messaging Configuration wizard runs automatically.

Note:

Before you turn on the server you want to configure, insert the storage device. The server can easily recognize the storage device if the device is already inserted when the server boots.

To configure the new server:

1. On the Welcome screen, click **Next**.
2. On the **Locate Configuration Data** screen, click **Browse**.
 - a. In the **Open** window, click the drop-down list next to **Look in**.
 - b. Navigate to the storage device, **Removable disc (E:)**.

If the server fails to recognize the storage device, you can:

 1. In the Open window, click **My Computer** in the left pane. After the **Look in** field shows **My Computer**, press **F5** to refresh the screen.
 2. If the storage device still fails to appear, remove and then insert the device again.
 - c. Double-click the most current data file on the storage device, such as *sitfile.mmdct*.
3. On the **Locate Configuration Data** screen, click **Next**.

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4. When the system prompts you to confirm the data file, click **Yes**.
The Avaya Modular Messaging Data Collection Tool window opens.
5. Update the following screens:
 - a. Navigate through the first few screens and verify the data. Click **Next** on each screen.
 - b. Under **MM servers**, Click **Message store**. On the system **Message store** screen complete the following:
 - For an Avaya-provided server, select **MSS with Avaya MAS servers**.
 - For a customer-provided server, select **MSS with customer's MAS servers**. This selection tells the system that you want to install customer-provided equipment.
 - c. Under **MM servers**, click **Voice Mail Domain**. On the system **Voice Mail Domain** screen complete the following:
 1. Update the **Number of MASs in the VMD**. Include all additional servers that you are installing, whether they are MASs or a Supplementary server.
 2. The system displays a warning that you are changing the number of MAS servers in the Voice Mail Domain. You must analyze the system at the end of this procedure to ensure that the data file reflects the changes you make. Click **OK**.
 3. Click **Next**.
 - d. Under **Networking**, click **Corporate server networking details**. The system displays **Corporate server networking details** screen.
 - Enter the values in **Full Computer Name** field and **IP address** field for each MAS and Supplementary server
 - e. Under **Accounts and passwords**, click **MAS accounts and passwords**. The system displays **MAS accounts and passwords** screen.
 - Enter the Local administrator account details in the **Logon name** and the **Password** fields for each MAS and Supplementary server.
 - f. If the server is to run the Messaging Application Server service and handle calls, then in **TTS sessions and languages**, click **TTS and announcements**. The system displays **TTS and announcements** screen.
 - Select required announcement and TTS languages. Also enter the TTS sessions for each MAS.
 - g. On the WebLM Server screen, complete the WebLM settings:
 1. Select the server on which you install the WebLM server:
 - On an MAS or Supplementary server
 - On an Avaya optional server or customer provided equipment
 2. MAS Number
 3. WebLM Server URL
 4. Click **Next**.

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Adding an MAS or a Supplementary server to an existing system

- h. Under **MAS servers**, click **MM service selection**. The system displays **MM service selection** screen.

 **CAUTION:**

Do not attempt to move services using this screen! Leave all the Modular Messaging services set exactly as they are. Do not move services from one column to another, or you will damage the operation of the system.

- For an MAS, select *only* the **Message Application** check box. Leave all other services set as they are.
- For a Supplementary server, do *not* select the **Message Application** check box. Do not select any other services. Leave the **MAS** column for the new server blank.

- i. Click **Save**.

6. Save the updated data file to the storage device:

- a. When the system prompts you to save the file, click **Yes**.
- b. In the Save As window, navigate to the storage device.
- c. Type the name of the data file in the **File name** field, such as *sitelfile*.
- d. Leave the file type set as *.mmdct*.
- e. Click **Save**.
- f. If the system prompts you to replace an existing data file, click **Yes**.

Note:

When the server configuration is complete, copy this updated DCT data file to the other servers in the system, so all servers have the same data. You must also send a copy of the current data file to the technical support group using the procedures appropriate for this site. For more information, see [Completing the Add New MAS or Supplementary server](#) on page 396.

7. To continue the configuration process, click **Complete**.

The system automatically saves the updated data file to the **C:\Program Files\Avaya Modular Messaging\Install\MISCM\cfg** directory on the new server.

The system returns you to the Avaya Modular Messaging Configuration Wizard.

8. On the **Messaging Application Server Number** screen:

- a. Change the **MAS number** field to show the correct number for this server.
- b. Click **Next**.

The Configuring System screen shows the MAS configuration starting. The Sysprep window opens. The server then reboots.

9. After the reboot starts, a Windows Setup wizard runs. To complete the wizard:
 - a. On the License Agreement screen, select **I accept this agreement**. Click **Next**.
 - b. On the Your Product Key screen, type the Windows product key for this server.
 - Each Windows computer has a unique product key for the Windows 2003 R2 operating system. Enter the number exactly as shown.
 - On an S8800 1U-family server or HP DL360 G7 server, the product key sticker is located on top of the server chassis.
 - c. Click **Next**.

The Avaya Modular Messaging Configuration Wizard displays the configuration status. The server reboots several times, but you do not need to log on manually. The entire process takes about 25 minutes.

10. When the server configuration is complete, the progress bar stretches across the screen and the **Next** button becomes active. Click **Next**.
11. On the Avaya Modular Messaging Wizard Completed screen, click **Finish**.

Completing new server configuration

Use the following steps to complete the new server configuration and setup:


1. Configure the new MAS or a Supplementary server and test that the server works. Use the procedures described in [Configuring the Avaya MAS](#) on page 41. For a customer-provided server, use the procedure [Configuring a customer-provided MAS](#) on page 87.
2. Proceed with [Moving Modular Messaging services](#) on page 375.

 **CAUTION:**

Before you activate the Modular Messaging services on a new server, complete all other VMSC administration required for this server. For more information on VMSC configuration see [Configuring the voice mail system](#) on page 54.

Completing the Add New MAS or Supplementary server

Use the following steps to complete adding new MAS or a Supplementary server:

1. Verify basic server operation and do the appropriate acceptance tests as instructed in [Running acceptance tests](#) on page 124.
 2. Because you moved Modular Messaging services, the DCT data file currently on the system is now out of date. To update the system configuration data:
 - a. Use the most recent DCT data file, which is on your USB storage device.
 - b. Use the DCT to analyze all the servers in the system again. For more information, see [Using the DCT to analyze the current configuration](#) on page 390.
 3. To ensure that all servers have the most current information, copy the updated DCT data file from the USB storage device to each server:
 - a. Using Windows Explorer, copy the updated DCT data file to the MAS directory **C:\Program Files\Avaya Modular Messaging\Install\MISCM\cfg**
-  **Tip:**
Rename the existing data file in this directory before you copy the new one, as a backup. For example, rename the existing data file *sitefile-old.mmdct*.
- b. Remove the storage device from the server to prevent damage to the data file:
 1. Double-click the icon on the task bar to **Safely Remove Hardware**.
 2. Follow the prompts to safely remove the storage device.
 - c. Insert the storage device into the next MAS or Supplementary server.
 - d. Repeat Steps a through c for each MAS and Supplementary server in the system.
4. Update and turn over DCT data file.
 - a. Send a copy of the most current DCT data file to the appropriate technical support group.
 - b. Erase the copy of the DCT data file from your USB storage device.

Appendix H: Reloading MAS and MSS software

This appendix describes how to reload the operating system and the application software on an Avaya Messaging Application Server (MAS) (or an Avaya-provided supplementary server) and Message Storage Server (MSS).

Topics in this appendix include:

- [Loading new MAS software](#) on page 397
- [Loading new MSS software](#) on page 402

Loading new MAS software

Complete the procedures described in this section to reload Modular Messaging software to the Avaya Messaging Application Server (MAS) or Avaya-provided Supplementary server.

Switching the monitor to show the correct server

1. If the server is not on, turn on the server.
2. Verify that the monitor shows the correct server.
 - For a 2-port KVM switch, the MSS is connected to one of the computer port.
 - For an 8-port Belkin KVM switch, the MSS usually is connected to the first computer port on the switch. The port is labeled **VGA 01**.
3. If the monitor displays a different server, toggle the port to show the correct MAS.
 - To have a 2-port Belkin KVM switch show a different server:
 - a. Press **Scroll Lock** twice.
The LED on top of the Belkin KVM switch starts to blink.
 - b. Type the port number on the keyboard. For example, type **1** for port 1.
 - To have an 8-port Belkin KVM switch show a different server:
 - a. Gently press **Scroll Lock** twice within 2 seconds.
 - b. Select the server to display using *one* of the following methods:
 - Press the up (or down) arrow key to change to the server connected to a higher (or lower) port number.
 - Type the port number using the keyboard. For example, type **1** for port 1.

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4. For complete user and troubleshooting instructions on KVM switch, see the KVM switch documentation.

Loading the new software

To load the new software on the MAS or the supplementary server:

1. Insert one of the following disks into the DVD drive as appropriate:
 - For HP DL360 G7 server, insert the 'Modular Messaging R5.2 MAS for Avaya Store Model DL360G7 Boot Recovery Disk 1' and 'Modular Messaging R5.2 MAS for Avaya Store Model DL360G7 Boot Recovery Disk 2'.
 - For S8800 1U server, insert the 'Avaya Modular Messaging R5.2 MAS for Avaya Store Model S8800 Boot' disk.
 - For S8730 server, insert the 'Avaya Modular Messaging R5.2 MAS for Avaya Store Model S8730 Boot' disk.
 - For S3500 server, insert the 'Avaya Modular Messaging R5.2 MAS for Avaya Store Model S3500 Boot' disk.

Wait for green LED on the drive to turn off.
2. Close the DVD drive tray.
3. Press **Ctrl+Alt+Delete** to reboot the system.
 - a. In the Windows Security window, click **Shut Down...**
 - b. In the Shut Down Windows window, select **Restart**. Click **OK**.
4. When the computer starts to boot, the system displays a warning that the hard drive contents will be overwritten.
 - a. Press any key to continue. The system displays a message to confirm that the hard disk drive will be overwritten.
 - b. Press any key to continue.

The MAS starts to copy the disk image to the hard disk.
5. After the software is copied, the program prompts you to remove the media before the system reboots.
 - a. Remove the disk from the drive and close the drive tray.
 - b. Press **Ctrl+Alt+Delete** to continue.

The system reboots, and runs a Windows Setup program.
6. If you have Intel Dialogic cards installed, the system opens a **Security Alert** window that prompts you to install the driver for the Dialogic card. Click **Yes**.
7. If you have connected a modem, a **Hardware Installation** window opens. Click **Yes** to continue the installation.

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8. A **Windows Setup** wizard runs. To complete the wizard:
 - a. On the **Welcome** screen, click **Next**.
 - b. On the **License Agreement** screen, select **I accept this agreement**. Click **Next**.
 - c. On the **Your Product Key** screen, type the Windows product key for the server.

Note:

Each Windows computer has a unique product key for the Windows 2003 R2 operating system. Enter the number exactly as shown.

- For an S8800 1U-family server or HP DL360 G7 server, the product key sticker is located on top of the server chassis.
- For an S8730 server, the product key sticker is located on the right-hand edge of the server chassis.
- For an S3500-family server, which uses the Windows 2003 operating system, the product key sticker is located inside the empty drive tray on the lower-left of the server chassis.

- d. Click **Next**.

The server automatically reboots.

Activating Microsoft Windows

You must activate the Microsoft Windows operating system when you reload the operating system.

The Microsoft Windows activation procedure requires you to use either the Internet or a telephone. Use the most appropriate method for the customer site:

- [Activating Microsoft Windows through the Internet](#) on page 399
- [Activating Microsoft Windows using a telephone](#) on page 400

Activating Microsoft Windows through the Internet

Note:

To activate the Microsoft Windows operating system through the Internet, the MAS *must* be on the LAN. If you wish to use the Internet to perform the activation, you will not be able to do it until you reach the [Preparing the new server](#) on page 48. At that point during the installation process, you can activate Windows through the Internet.

To activate the Microsoft Windows operating system through the Internet:

1. Double-click the **Internet Explorer** icon on the desktop.
2. At the Enhanced Security message, click **OK**.

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Reloading MAS and MSS software

3. In the Internet Explorer window, click **Tools > Internet Options**.
 - a. In the Internet Options window, click the **Connections** tab.
 - b. Click **LAN Settings**.
 - c. In the Local Area Connection (LAN) Settings window, specify the settings to use for this site. Click **OK**.
 - d. Click **OK** to close the **Internet Options** window.
 - e. Close Internet Explorer.
4. Click **Start > Activate Windows**.
5. In the Activate Windows window:
 - a. Click **Yes, let's activate Windows over the Internet now**.
 - b. Click **Next**.

The program checks for Internet connectivity. If connectivity fails, you can set up or adjust the Internet connections. Complete the screen and click **Next** to continue.
6. On the Thank you screen, click **OK**.

Activating Microsoft Windows using a telephone

To activate the Microsoft Windows operating system using a telephone:

1. Click **Start > Activate Windows**.
2. In the Activate Windows window:
 - a. Click **Yes, I want to telephone a customer service representative to activate Windows**.
 - b. Click **Next**.

The program generates a new installation ID.
3. On the Activate Windows by phone screen:
 - a. Select the country in which you installed the Modular Messaging system.
 - b. Call the appropriate telephone number shown on the screen.
 - c. Follow the voice prompts or the directions from the customer service representative to provide the unique installation ID shown on the screen.
 - d. Enter the confirmation ID that the automated system or the customer service representative gives you.
 - e. Click **Next**.
4. On the confirmation screen, click **Finish**.

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Preparing the server to boot

You must load all required information and activate the operating system before you activate the server configuration program:

1. When the system prompts you to log on:
 - a. Press **Ctrl+Alt+Del**.
 - b. In the Log On to Windows window, leave the user name as **Administrator**.
 - c. Leave the password field blank.
 - d. Press **Enter** or click **OK**.
2. You must activate the Microsoft Windows operating system before you restart the server. Use one of the following procedures:
 - [Activating Microsoft Windows through the Internet](#) on page 399, to activate the Microsoft Windows operating system through Internet, see [Activating Microsoft Windows through the Internet](#) on page 399.
 - [Activating Microsoft Windows using a telephone](#) on page 400, to activate the Microsoft Windows operating system using a telephone.
3. To complete the software reload, double-click the **MM_Setup** icon on the desktop.
 - a. On the MM_Setup window, when the system prompts you, insert the 'Modular Messaging R5.2 MAS Application DVD 1 of 2' disk into the MAS, and press any key to continue.
 - b. Follow instructions that appear.
 - c. When the system prompts you, remove the disk from the MAS and press any key to continue.

MM_Setup reports that the Modular Messaging configuration program will run after the server reboots.
 - d. Press any key to continue.

The computer stores the information and shuts down.
4. To bring the server into service, continue with the appropriate procedure:
 - For a new system installation, continue with the procedure, which has pointed you to this section.
 - For a hard disk drive repair or other system problem, continue with the maintenance procedure. For more information, see the appropriate document:
 - *Maintaining and Troubleshooting the HP DL360 G7 server for Modular Messaging*
 - *Maintaining the Avaya S8800 Server*
 - *Maintaining the Avaya S8730 Server for Modular Messaging*
 - *Avaya Modular Messaging S3500-Family Hardware Maintenance and Additions*

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- Avaya Modular Messaging MAS Catastrophic Disk Failure Recovery

Loading new MSS software

To copy new software to the MSS:

1. If the Message Storage Server (MSS) is not on, turn on the server.
2. Verify that the monitor is showing the MSS. For more information, see [Switching the monitor to show the correct server](#) on page 397.
3. Remove any storage device attached to the MSS, as this can interfere with the reload.
4. Insert the Modular Messaging R5.2 MSS OS disk into the MSS.
5. To reboot the system, do *one* of the tasks:
 - *From the monitor:*
 - a. If the MSS displays the Web interface, click **Logoff**.
 - b. From the *localhost login:* prompt, press **Ctrl+Alt+Del**.
 - *From the MSS:* Reset the server using the button on the front of the MSS.

The computer starts to boot. The system then displays the following options:

```
2U Standard Availability (S3500)!standard2U <ENTER>.
HP Standard Availability (S8730)!standardHP <ENTER>.
2U High Availability (S3500)!high2U <ENTER>.
HP High Availability (S8730)!highHP <ENTER>.
IBM 3 Disk (S8800)!highIBM3disk <ENTER>.
IBM 4 Disk (S8800)!highIBM4disk <ENTER>.
HP DL360 G7 3 Disk!HPG73D <ENTER>.
HP DL360 G7 4 Disk!HPG74D <ENTER>.
```

6. At the **boot:** prompt, type the word for this model of MSS (the names are case sensitive, type exactly as shown) and then press **Enter**:
 - Type **standard2U** for an S3500-type MSS-S. This model has one horizontal disk drive.
 - Type **standardHP** for an S8730-type MSS-S. This model has two vertical disk drives, indicated by lit LEDs on the server drive bays.
 - Type **high2U** for an S3500-type MSS-H. This model has four horizontal disk drives, indicated by lit LEDs on the server drive bays.
 - Type **highHP** for an S8730-type MSS-H. This model has four vertical disk drives, indicated by lit LEDs on the server drive bays.
 - Type **highIBM3disk** for an S8800 1U 3 disk. This model has six horizontal disk drive bays. Three bays are populated with disks, indicated by lit LEDs.

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- Type **highIBM4disk** for an S8800 1U 4 disk. This model has six horizontal disk drive bays. Four bays are populated with disks, indicated by lit LEDs.
- Type **HPG73D** for an HP DL360 G7 3 disk. This model has four horizontal side-by-side disk drive bays. Three bays are populated with disks, indicated by lit LEDs.
- Type **HPG74D** for an HP DL360 G7 4 disk. This model has four horizontal side-by-side disk drive bays. All four bays are populated with disks, indicated by lit LEDs.

The system takes up to 20 minutes to copy the software. The system notifies when the software installation is complete.

7. Remove the Modular Messaging R5.2 MSS OS disk.

 **Important:**

Do *not* leave the disk in the drive, or the system boots from the disk. If you cannot eject the disk from the drive, start the system reboot, and then remove the disk. Click **Reboot**. The server reboots. To speed up the server reboot, press **Escape** to exit the splash screen. For S3500 server, you must press **Space** to skip the memory test.

8. On the **Time Date Selection** screen, set the time and date as follows:
 - a. Use the up or down arrow keys to highlight the time zone.
 - b. Press **Tab** key to move to the New Time section.
 - c. Enter the current time in *hh:mm* (hours and minutes) format, based on a 24-hour clock.
 - d. Press **Tab** key to move to the New Date section.
 - e. Enter the current time in *mm/dd/yy* (month, day, and year) format, such as *12/03/09* for December 3, 2009.
 - f. Press **Tab** key to move to the **OK** field. Press **Enter**.
9. When the system displays the **localhost login** prompt, type **root** and then press **Enter**.
10. Insert the Modular Messaging R5.2 MSS Application disk into the MSS.

 **CAUTION:**

Wait for the drive light to stop flashing and go out before you continue.

11. At the prompt, type `/etc/autoinstall` and press **Enter**.
12. If the system prompts you to continue or quit, press **Enter** to continue.
13. The system prompts you to change several passwords.
 - Enter the passwords that are provided for the following logins: **root**, **craft**, **tsc**, **sroot**, and **craftppp**.
 - You can ignore any warnings, such as the passwords being too short.

When the installation is complete, the system prompts you to remove the media from the drive.

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Reloading MAS and MSS software

14. Remove the Modular Messaging R5.2 MSS Application disk.

15. Press **Enter** to reboot the system.

The system displays **Press Enter to return to prompt...**, press **Enter**.

16. At the **localhost login** prompt, log on to the MSS as **craft**.

The server displays the Messaging Administration web interface.

17. To bring the server into service, continue with the appropriate procedure:

- For new system installations, continue with [Performing initial MSS administration](#) on page 23.
- For upgrades, continue with [Checking the spool folder on each MAS](#) on page 166.
- For a hard disk drive repair or other system problem, continue with the appropriate maintenance procedure. For more information about the procedures on maintenance and repair, see the *Maintaining and Troubleshooting the HP DL360 G7 server for Modular Messaging* guide.

Appendix I: Installing and configuring the AudioCodes gateway

This appendix describes how to install and configure the AudioCodes gateway.

The procedure has two parts:

Field Configuration: This procedure must be performed by a technician on the site where the PBX switch and the AudioCodes gateway are physically located. This procedure must be completed before you attempt to configure the AudioCodes gateway remotely.

Remote Configuration: This procedure can either be performed by a technician at a remote site using remote access tools or by the technician on the site where PBX and AudioCodes gateway are located.

Topics in this appendix include:

- [Installation prerequisites](#) on page 406
- [Installing and configuring the AudioCodes gateway at switch location](#) on page 407
- [Continue configuring the AudioCodes gateway](#) on page 410

Installation prerequisites

Ensure that you have the following before you start the AudioCodes gateway installation:

- DCT file and MM DCT tool (MMDCT.exe)
- AudioCodes gateway with interface modules required for this installation.
- Configuration notes for AudioCodes gateway downloaded from the AudioCodes Web site at <http://www.audiocodes.com/avaya>.
- Avaya PBX configuration note where required.
- Download AudioCodes firmware and details of the firmware version required for this installation from the AudioCodes Web site at <http://www.audiocodes.com/avaya>.
- The following information from the AudioCodes gateway configuration notes:
 - Cabling requirements
 - PBX configuration requirements. See section 3.0 of configuration notes for AudioCodes gateway.
- X-Over cable
- A laptop
- Machine on customer's corporate LAN with access to Internet Explorer used to configure the AudioCodes gateway.

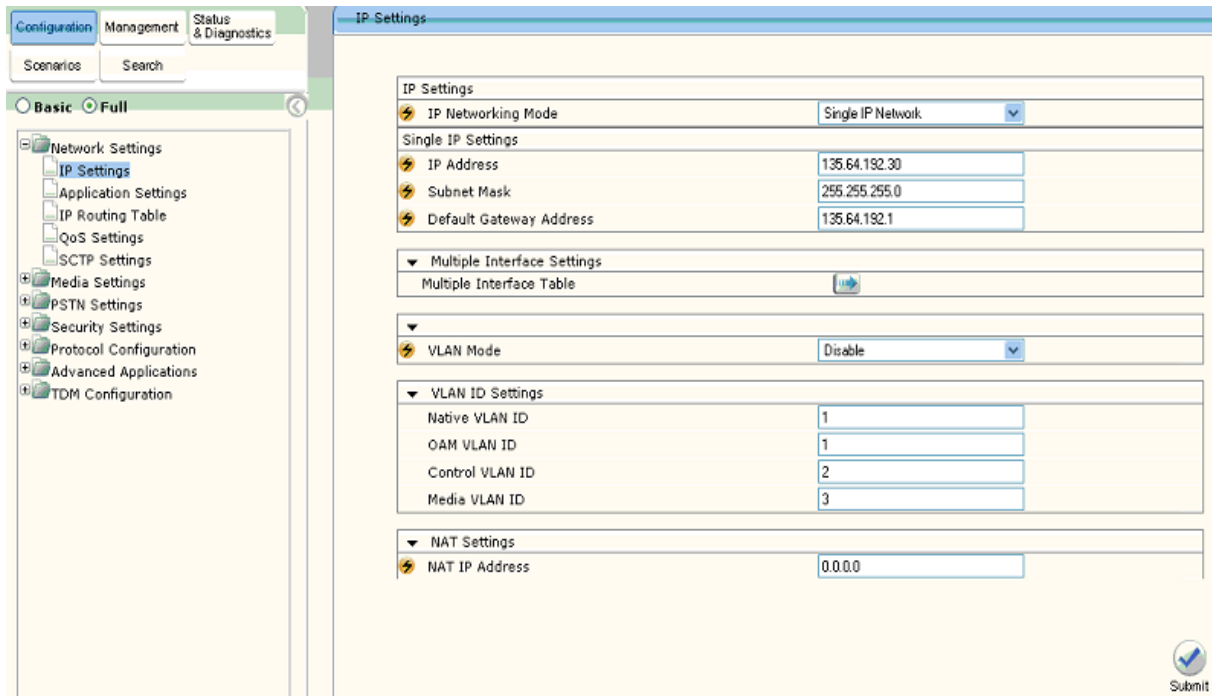
Installing and configuring the AudioCodes gateway at switch location

Perform the following steps where the AudioCodes gateway is physically located.

1. Configure the PBX. Use the configuration notes downloaded from the AudioCodes Web site.
2. Complete the PBX connection patching.
3. Complete ethernet connection patching.
4. Complete the following steps to physically install the gateway:
 - a. Unpack the AudioCodes gateway.
 - b. Mount the AudioCodes gateway in the rack.
 - c. Connect the PBX to the AudioCodes gateway.
 - d. Connect one end of the X-Over cable to the left Ethernet port on the AudioCodes gateway.
5. Prepare the computer for initial AudioCodes gateway configuration:
 - a. Connect the other end of X-Over cable to the NIC on the laptop.
 - b. Change the IP Address of the computer using the following steps:
 1. Open Control and double-click Network Connections. The system opens the **Network Connections** window.
 2. Select the LAN connection, right-click and select **Properties**.
 3. In the **General** tab, click **Internet Protocol (TCP/IP)**.
 4. Click **Use the following IP address** and change the IP address to 10.1.10.11.
 5. Click **OK**.
 6. Close all open Windows.
 - c. Launch the Internet Explorer (IE) and complete the following to clear the proxy server settings.
 1. Click **Tools >Internet Options**.
 2. In the **Internet Options** dialog box, click **Connections** tab.
 3. Click LAN Settings. The system opens Local Area Networks (LAN) Setting dialog box.
 4. Clear the **Use a proxy server for your LAN** check box.
 5. Click **OK** to close IE and for the changes to take effect.

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Figure 10: Configuring AudioCodes gateway



6. Complete the initial IP configuration of the AudioCodes gateway:

- a. Launch Internet Explorer.
- b. Enter 10.1.10.10 in the IE address bar. This is the factory default IP address for the Audiocodes gateway.
- c. When prompted, enter **Admin** as the account name and the password. Note that the account name and password are case-sensitive.

The system opens the AudioCodes Gateway WebAdmin Home Page.

- d. Click the **Configuration** tab on the left pane.
- e. Click **Full**.
- f. Expand **Network Settings** by selecting the + symbol.
- g. Click **IP Settings**.

The system displays **IP Settings** page.

- h. In the **IP Networking Mode** field, click **Single IP Network**
- i. Change the **IP Address** to the value assigned to the gateway for your network.
- j. Change the **Subnet Mask** to match the subnet mask for your network.
- k. Change the **Default Gateway Address** to match the default gateway for your network.
- l. Click **Submit** to save the changes.

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WARNING:

Ensure that you *do not* disconnect the power to the AudioCodes gateway at this stage. If you disconnect the power, you lose the changes made to IP Address, until you save the settings in step 4d described in [Continue configuring the AudioCodes gateway](#) on page 410.

if the power to the device is disconnected then the IP Address changes will be lost until we reach step x, the step where the burn occurs

Note:

When you submit the changes, the connection between the AudioCodes gateway and the computer is lost. Therefore, you must complete step 7 before you continue. You can now set the computer back to its original network configuration.

7. Connect the AudioCodes gateway to the network.
 - a. Remove X-Over cable from the Ethernet port on the AudioCodes gateway.
 - b. Connect the network cable for the customer's corporate LAN to the first Ethernet port on the AudioCodes gateway.
8. Connect to the AudioCodes Gateway WebAdmin from the machine which is connected to the customer's corporate LAN.
 - a. On the machine connected to the customer's corporate LAN, launch IE.
 - b. In the IE Address bar, enter the IP Address for the AudioCodes gateway.
The IP Address you enter is the one you configured in step 6i.
 - c. When prompted, enter **Admin** as the account name and the password.
The system opens the AudioCodes Gateway WebAdmin Home Page.
9. Update Administrative password for the gateway:
 - a. In the left pane, expand **Security Settings**.
 - b. Click **WEB User Accounts**.
 - c. Click **Change Password**.
 - d. Set the gateway Admin account name if required.
 - e. Set the Admin password to the value that is provided in the DCT data file.
 - f. Click **Submit**.

Continue configuring the AudioCodes gateway

Complete the following steps to configure the AudioCodes locally or from a location remote to the Audiocodes:

Note:

Ensure that you have the required AudioCodes gateway, Avaya Modular Messaging and PBX configuration notes available.

1. Connect to the customer site using the standard remote access method, if required.
2. Complete the following steps from the machine referred in [Installation prerequisites](#) on page 406, to connect to the AudioCodes gateway:
 - a. Launch Internet Explorer (IE).
 - b. In the IE Address bar, enter the IP address for the AudioCodes gateway
 - c. When prompted, enter the account name and the password set by the field technician as outlined in [Installing and configuring the AudioCodes gateway at switch location](#) on page 407.

The system opens the AudioCodes Web Admin Home Page.

3. On the AudioCodes Gateway Home page, confirm that the gateway firmware version matches with that provided in section 1.2 of the AudioCodes gateway configuration notes.
4. If the Firmware loaded on the gateway does not match the required version, then complete the following steps:
 - a. Click **Device Actions > Software Upgrade Wizard**.
 - b. Click **Browse** and locate the Firmware **.CMP** file.
 - c. Click **Next**.
 - d. Click **Burn** to save the changes to flash memory.
 - e. Click **Device Actions > Reset**.
5. Make the required changes in the **template.INI** file using the steps described in AudioCodes configuration notes.
6. Upload the **template.INI** file to the gateway:
 - a. Click **Device Actions > Load INI file**.
 - b. Click **Browse** and locate the **template.INI** file.
 - c. Click **Load INI file**. The system displays a warning message.
 - d. When the system prompts you, click **OK**.
7. In the AudioCodes Web Admin Home Page, verify that the AudioCodes gateway configuration matches with the details provided in section 4 of AudioCodes gateway configuration notes.

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8. Configure the Avaya MASs in Modular Messaging system.

Use section 5 in AudioCodes gateway configuration notes as a guide to configure MASs. If you add a new MAS to your VMD, then you may need to update the Audiocodes gateway configuration for the added MAS.

9. Perform the acceptance tests on MASs using the AudioCodes gateway you have just configured as described in [Performing acceptance tests for a new installation](#) on page 121.

Appendix J: Troubleshooting the installation issues

This appendix describes the frequently occurring installation issues and procedures to troubleshoot these installation issues.

License is in error mode

When you check the license status under **VMSC > Licensing**, it shows the license status in error mode.

Solution:

1. Open **Control Panel > Add or Remove Programs** to verify that WebLM is installed.
2. Verify that the license file is correct. Make sure that the license does not use the VMD Host ID. In Release 5.2, the license must use the MAC address of the corporate NIC.
3. Check license in WebLM:
 - a. Open the WebLM Server using the WebLM URL in VMSC or *https://CorpServerIP:52233/WebLM/LicenseServer*.
 - b. Ensure port number is set to 52233.
4. Check license in VMSC and apply WebLM URL information. Make sure the URL is in VMSC and the port number is set to 52233.
5. Run the Modular Messaging 5.2 License Recovery Tool for upgrades only. Download the tool from plds.avaya.com. You may need to run the tool more than four times.

Important:

The tool does not work properly when the tool is running through console (mstsc /console). If you fail to resolve a license issue remotely, ask the customer to run the `LicensingRecoveryTool.exe` from the console.

Error in saving changes on MSS without a valid license (3504)

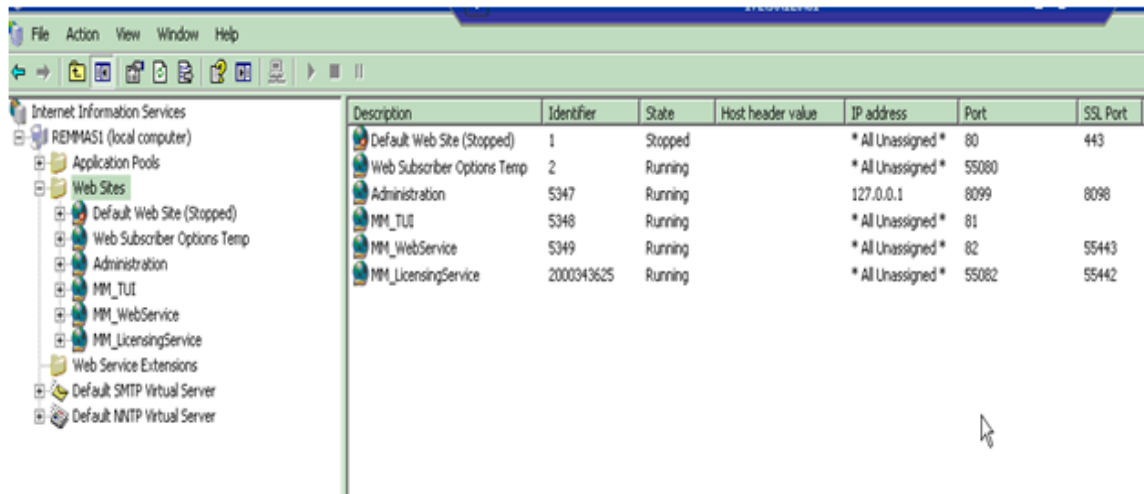
When you attempt to save changes on MSS, you may receive an error: Error - you cannot perform this operation without a valid license (3504).

Solution

1. Verify if the license is in error mode. If yes, perform the procedures listed in [License is in error mode](#).

Troubleshooting the installation issues

2. Ensure that *MM_LicensingService* is started at IIS on MAS. Verify the **Port** and **SSL Port** fields shows the ports as shown in the following image.



The screenshot shows the IIS Manager console for REMMAS1 (local computer). The 'Web Sites' folder is expanded to show several sites. The 'MM_LicensingService' site is selected, and its properties are displayed in the main pane. The table below represents the data shown in the screenshot.

Description	Identifier	State	Host header value	IP address	Port	SSL Port
Default Web Site (Stopped)	1	Stopped		* All Unassigned *	80	443
Web Subscriber Options Temp	2	Running		* All Unassigned *	55080	
Administration	5347	Running	127.0.0.1		8099	8098
MM_TUI	5348	Running		* All Unassigned *	81	
MM_WebService	5349	Running		* All Unassigned *	82	55443
MM_LicensingService	2000343625	Running		* All Unassigned *	55082	55442

3. Verify that the MAS certificate name matches the Corporate FQDN of the MAS and the expiration date is not passed.
 - a. Click **Start > Admin tools > IIS Admin > Web Sites > MM Licensing service > Licensing Certificates**.
 - b. Right-click **Properties**.
 - c. Click **Directory Services > Secured Communications > View Certificate**.If the certificates is not correct, run *C:\Avaya_Support\RecreateLicensingService.vbs*.
4. Ensure that MAS Host File is correct. From **MSS Host Setup**, enter the **Public Alias** name and save.

SIP Integration not answering, getting 1832 events in application event viewer

The Modular Messaging SIP integrated system does not answer and the ports show a message: Idle waiting for call. MAS logs 1832 errors when the MAS service is restarted. The 1832 event reads, "The SIP call manager could not find the certificate files required for the TLS protocol, or the files have a problem."

TLS is chosen as the transport method which can cause certain files to be missing on the MAS at times.

Solution

1. Re-import the MM license file through VMSC to replace any missing files.

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2. If calls are complete when you use TCP as the transport method or link type, and when your integration uses TLS and calls are not completing; then there is a license issue.

Check the MAS directory: *C:\Program Files\Avaya Modular Messaging\OpenSSL\AVA*.

Make sure that the following three files are present:

- certchain.crt
- certchain.key
- dh1024.pem

If any one or all of these files are missing, reload the licenses. These three files should be present to enable calls to complete using TLS.

Large chunks of audio are missing from recorded messages

Solution

The frame size settings on Communication Manager must match the Modular Messaging setting.

1. Log into Modular Messaging.
2. Click **Voice Mail Configuration**.
3. Click **Protocol PBX Integration**.
4. Ensure that the Packet Size Bytes is set to **20**.
5. Log into Communication Manager and the gateway, and then confirm that the packet size is same as the packet size of Modular Messaging.

Calls getting disconnecting after hitting the port monitor on Modular Messaging with SIP integration

SIP integration answers with a fast busy tone when calling the Modular Messaging hunt group. An error message is presented: Error 488: Not accepted here.

Event Type: Error

Event Source: gv_vserver

Event Category: Call Management

Event ID: 1806

Date: 3/10/2011

Time: 11:51:03 AM

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Troubleshooting the installation issues

User: NT AUTHORITY\SYSTEM

Computer: VMCMAS1

The SIP call manager does not accept the media offered by the switch. Response is [488 - Not Acceptable Here].

Solution

SIP domain specified in the PBX is different than the domain defined in Modular Messaging inside the VMSC in the SIP tab for the PBX information. You must specify the same SIP domain on both Communication Manager and Modular Messaging.

1. Log into Modular Messaging.
2. Click **VMSC > PBX > Avaya CM > SIP**.
3. Specify the name of the SIP domain in the **SIP domain** field and save the changes.
4. Specify the same SIP domain name in the signaling group on Communication Manager and save the changes.

Error in MAS configuration [20]: Failed while running AddEveryone

Solution

1. Ensure that you can ping the MSS.
2. Ensure that the voice server is running by restarting the service and checking the Windows Event Log to make sure that there are no problem starting up the service.
3. Ensure that the name of the mail store is correct and for Exchange, the Windows Domain is correct.
4. For MSS, ensure that the LDAP password is correctly entered in the DCT file and also the MSS server.
5. Perform the MMCW operation by starting up the *C:\Program Files\Avaya Modular Messaging \Install\MISCM\MISCM.exe* file.

Error in MAS configuration [30]: ConfigurePeerServerName FAILED

Solution

1. Ensure that the voice server is running and also check the Windows Event Log to ensure that the service has no problems with it.
2. Ensure that the name of the mail store is correct and for Exchange, the Windows Domain is correct.
3. For MSS, ensure that the passwords is correct.
4. Verify that the network is set up correctly.
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