



**S3400 Message Server featuring
Avaya™ Modular Messaging (MM)**

Release 1
Installation

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Notice

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About this book

Purpose

This book, *Avaya™ S3400 Message Server featuring Avaya™ Modular Messaging (MM) Release 1 Installation, Issue 2*, contains instructions for assembling and administering an S3400 messaging system. It includes procedures for equipment set up, configuration, initial administration, acceptance testing, and cut to service.

Intended audiences

This book is intended primarily for the on-site technical personnel who are responsible for installing the system and performing initial administration and testing.

We assume that the users of this book have completed a relevant hardware installation training course. See “Related resources” on page xi for information on training.

Changes to this book

Changes from Issue 1 (March 2003) to Issue 2 include:

- Some installation procedures have been updated in Chapter 4, “Administering the MAS,” and Chapter 5, “Completing initial administration.”
- A new Appendix F, “Recovering from a catastrophic disk failure,” has been added.

How to use this book

Before you begin any installation:

- Complete *all* the worksheets listed in Appendix A, “System planning forms.” You cannot complete an installation without having this material complete and accurate. Some of the material *must* be provided in advance by the customer.
- Read Chapter 1, “Installation site requirements.” This chapter contains information on prerequisites and site preparation, including the tools and equipment you need to complete an installation.
- Obtain the documentation you will need to complete the installation. See “Required software and documentation” in Chapter 2, “Installing the system hardware,” for details.

From there, read and use each chapter in the order presented.

For an overview of the complete installation process, see Appendix B, “Installation checklist.” Procedures are listed in the order in which you must perform them.

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Related resources

This section describes additional documentation and training available for you to learn more about the installation of this system.

Documentation

See the inside front cover for information on how to order documentation for this product.

Note: Always refer to the appropriate CD-ROM or book for specific information on planning, installing, administering, or maintaining an Avaya system. See the online catalog for more information on other books and CD-ROMs in the documentation set.

Technical assistance

Remote support center

Your project manager or systems consultant is responsible for providing you with the telephone number of your remote support center.

The following numbers are available for technical assistance with Avaya products and services:

Within the United States and Canada Call 1-800-242-2121 x85474.

Within any other country Call your local distributor.

Help on the system

Online help is available for both the system and administration command-line screens. On the web-interface screens, use the **Help** button. On the command-line interface, press **F6** (Choices) from the field for which you want the help.

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For information about product training, go to the Avaya web site at www.avaya.com and click Training.

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Please be sure to include the name of this book:

Avaya™ S3400 Message Server featuring Avaya™ Modular Messaging (MM) Release 1 Installation, Issue 2.

1

Site requirements

This chapter describes the site requirements for installing an Avaya™ S3400 Message Server system.

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Installation site requirements

This section describes the physical requirements for the installation site, including environmental, weight, space, and power considerations.

Environmental requirements

[Table 1-1](#) lists the environmental conditions that must be maintained in the area where the system is installed and maintained.

Table 1-1. Environmental requirements

| Operating state | Temperature | Humidity (noncondensing) |
|---|--------------------------------|--------------------------|
| Operating | +10 to +35°C (+50 to +95°F) | 20 to 60% |
| Non-operating (in storage or being shipped) | -20 to +50°C (-4 to +122°F) | 20 to 90% |

Weight and space considerations

[Table 1-2](#) lists the weight, height, width, and depth of each Message Storage Server (MSS) and the Messaging Application Server (MAS). One MSS and at least one MAS must be installed for every S3400 Message Server system.

Table 1-2. Server weight and space considerations

| Server | Weight (full) | Height | Width | Depth |
|--|---|--------------------|---------------------|---------------------|
| Message Storage Server Standard configuration (MSS-S) | 41 lb. (18.5 kg) | 6.8 in. (17 cm) | 16.9 in. (43 cm) | 18.9 in. (48 cm) |
| Message Storage Server High-availability configuration (MSS-H) | 53 lb. (24 kg) | 6.8 in. (17 cm) | 16.9 in. (43 cm) | 18.9 in. (48 cm) |
| Messaging Application Server (MAS) | 40 lb. (18 kg) (without port boards) | 6.8 in. (17 cm) | 16.9 in. (43 cm) | 18.9 in. (48 cm) |

Customer-provided cabinet requirements

If the S3400 system is installed in a rack-mounted configuration, the customer-provided cabinet must meet the following requirements:

- The cabinet must contain a 4-post rack to support the servers' weight.
- The sliding rails and extender brackets provided with each server are designed for mounting in cabinets 22.5 to 32 inches in depth.
- The customer-provided cabinet must be secured to the floor before attempting to mount any units.
- The cabinet height needs to accommodate the number of units to be mounted (see [Table 1-2](#) for server height).

Installation area requirements

Observe the following when determining where to place the system:

- Maintain an air-distribution system that provides adequately cooled, filtered and humidity-controlled air.
- Do not install the system such that the ventilation or fan openings will be blocked.
- At least two technicians are on site and available to mount the units.
- For T1/E1 connections, the circuits require isolation from exposed lines. For T1 lines, the customer must provide a CSU (T1) at the building point of entry. This CSU must be UL Listed and/or CSA Certified. For E1 lines, either the network provider or the customer must provide a CSU (E1) or other equivalent protection that has the product safety approvals required by the local jurisdictions.



CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.



ATTENTION: Pour réduire les risques d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG au de section supérieure.

- Systems installed in Finland, Norway, Sweden and Australia must be installed in a restricted-access location. A restricted-access location is defined as an installation location where access can be gained only by service personnel or customers who have been instructed on the reasons for the restricted access and safety precautions that must be taken. A restricted-access location also allows access through the use of a tool (such as a lock and key) or other means of security.

Power requirements

Table 1-3 lists the power requirements for the MSS-S, MSS-H, and MAS. The AC power supply source for the servers needs to be single phase 3-conductor (line, neutral, and ground) with a 15 A circuit breaker for 100-127 Vac installations or a 10 A circuit breaker for 200-240 Vac installations.

Table 1-3. Server power requirements

| Server | # of power supply units | Volts AC | Hertz | Amperes 120V/240V |
|--------|-------------------------|-----------------|----------------|---------------------|
| MSS-S | 1 | 100-240 +/- 10% | 50/60 +/- 3 Hz | 10/5 |
| MSS-H | 2 | 100-240 +/- 10% | 50/60 +/- 3 Hz | 6/3 for each supply |
| MAS | 1 | 100-240 +/- 10% | 50/60 +/- 3 Hz | 10/5 |

Consideration must be given to the connection of the system to a branch circuit with respect to overload or overcurrent protection. Check the system's ratings to ensure that, together with other equipment connected to the same branch circuit, that an overcurrent or overload condition does not exist.

Grounding requirements

The system relies on the ground connection through the mains socket-outlet for continued safe operation. Ensure that the AC main outlet to be used to power the system (via the power cord or UPS) is a grounded outlet. If you are unsure of the ground integrity of the outlet, have a trained and certified electrician check the outlet.

In addition, observe the following grounding requirements when determining where to place the system:

- Use only the power cord assembly provided to connect the system to the universal power supply (UPS) or to an AC mains outlet.
- Install the system within 6 feet (2m) of a grounded AC mains socket-outlet.
- Do not use extension cords with the system.



WARNING: The S3400 Message Servers must be connected to an earthed mains socket-outlet. Failure to do so will result in allowing a hazard to be present that could cause severe personal injury or death.



CAUTION: System grounding must comply with the general rules for grounding provided in article 250 of the National Electrical Code (NEC), National Fire Protection Agency (NFPA), or the applicable electrical code in the country of installation.

Tools

It is recommended that you have the following tools on site to successfully install a new system:

- A medium-width flatblade screwdriver
- A No. 2 Phillips screwdriver
- A small pair of needlenose pliers
- A small pair of wire cutters
- A sharp, pointed instrument such as a ballpoint pen



CAUTION: Do not use the point of a lead pencil. The graphite can damage a circuit card, and cause problems such as electrical shorts.

Test equipment

Recommended test equipment for a successful installation includes:

- A volt/ohm meter.
- At least one telephone that is connected through the switch or Private Branch Exchange (PBX). It must be of the same type as the majority of telephones the customer will be using on the system. If the message waiting indicator (MWI) for the system is a lamp, the test telephone must be equipped with a lamp. If the MWI is a stutter tone, it must be able to give the stutter notification. The test telephone must be placed so that you can easily see the monitor while using it.
- If fax messaging is to be installed, you need access to a fax machine.

Initial switch and LAN administration

This section describes the initial switch or Private Branch Exchange (PBX) and local area network (LAN) administration that must be completed by the customer before or during the installation of system hardware.

Initial switch or PBX administration

Initial switch or PBX administration may or may not be complete when you arrive on site, depending on the contract or customer agreements. When you install a new system, the switch must be administered to support the following situations:

- Testing each channel to be connected to the system before assigning the channels to the system or another application. During this testing, you must be able to call each channel individually.
- Testing the system with at least one test subscriber.
- Performing cut-to-service procedures that provide the subscribers with an active coverage path.

Verify that initial switch administration and testing is complete.

Initial LAN administration

The LAN administrator must administer the LAN for the messaging system. Some LANs might be administered prior to your arrival on site. Other LANs require that the administration for a new system be done at the time of installation.

| |
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| <p>Note: Avaya is not responsible for the installation, administration, or test of communications between customer computers and the LAN.</p> |
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Preinstallation planning forms

It is crucial to coordinate the IP addresses that will be used with your Avaya messaging server with those on the corporate LAN. If you specify an Ethernet address for the Avaya server that conflicts with another Ethernet endpoint, the resulting problems with traffic on the local area network may be extremely difficult to diagnose and solve.

Complete the planning forms in Appendix A, "System planning forms," prior to beginning an installation. By acquiring IP addresses, server, and domain name information in advance, you can save hours of installation time and debugging.

Demarcation points

This section lists the demarcation points for switches (PBXs) and LAN connectivity.

Demarcation point for switches (PBXs)

The demarcation point switch (PBX) connections to the S3400 Message Server is the wall field for Avaya switches.

For non-Avaya switches, it is the end of the connector of the Avaya-provided cables for the port boards. Avaya service technicians dispatched for the system installation are not responsible for making any connections directly to switches that are not maintained by Avaya.

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| <p>Note: Avaya recommends joint acceptance testing for systems integrated with switches that are not maintained by Avaya.</p> |
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Demarcation point for LAN connectivity

The demarcation point for the LAN connection to the S3400 Message Server is the physical Ethernet interface on the messaging server that connects to the corporate LAN. The customer is responsible for:

- The LAN cables that connect the messaging server to the corporate system (unless the customer uses the Avaya-provided cables, in which case the demarcation point is the modular connector at the end of the LAN cables).
- LAN administration not performed on the S3400 Message Server system.
- Maintaining the TCP/IP addresses and administration on the system after cutover, unless otherwise specified by contract.
- Providing the IP address, subnet mask, and gateway information for administration on the system, as well as any DNS server IP information and corporate domain names.

Avaya service technicians dispatched for system installation are not responsible for troubleshooting the customer's LAN.

System security

During an installation, security of the customer's system is your responsibility. You must take precautions to protect:

- Password security
- System security during the installation

Password security

To protect password security:

- Change the passwords for the system administrator (sa), voice mail administrator (vm), and craft logins on the MSS before beginning system verification and acceptance testing.
- Do not leave written passwords laying out or allow anyone to see them.
- At the first opportunity, give the passwords directly to the customer's designated representative.
- If you suspect that the security of any password has been compromised, notify your project manager or system administrator.

System security during the installation

To protect system security during the installation:

- Remove all test subscribers and test mailboxes from the system when the procedures instruct you to do so.
- Do not configure any unassigned mailboxes.

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| <p>Note: Unassigned mailboxes are mailboxes that have an extension, but no subscriber assignment.</p> |
|--|

- Always log off the system if you will be leaving it unattended, even for a short period of time.

2

Installing the system hardware

This chapter describes how to install the S3400 Message Server system hardware.

Note: Before you can successfully complete the tasks in this section, you must have read Chapter 1, “Site requirements,” and verified that all the site installation requirements have been met.

If any of the site installation requirements have *not* been met, *do not* continue with the hardware installation tasks in this chapter.

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Introduction

An S3400 Message Server system contains two servers: a Message Storage Server (MSS)—either the Message Storage Server Standard configuration (MSS-S) or the Message Storage Server High-availability configuration (MSS-H)—and one or more Messaging Application Server (MAS) units. The servers are connected through a private Ethernet LAN to operate as a unified system.

This chapter is organized as follows:

- ["Unpacking the system hardware"](#) on page 2-3
- ["Installing the system hardware"](#) on page 2-6

Because an S3400 system installation requires many steps, make a copy of the checklist in Appendix B, "Installation checklist." Check off items as you complete them to track your progress.

Unpacking the system hardware

This section lists the required and optional hardware, software, and documentation needed to successfully install and maintain an S3400 Message Server system.

Required and optional hardware

[Table 2-1](#) lists the required and optional hardware needed to set up an S3400 system. Verify that all the hardware components needed for this installation are on site.

Table 2-1. Required and optional hardware

| Item | Quantity | Required/optional |
|---|--|--|
| S3400 system components: | | |
| Message Storage Server (MSS)—either the Message Storage Server Standard configuration (MSS-S) or the Message Storage Server High-availability configuration (MSS-H) | 1 | required |
| Messaging Application Server (MAS) | 1 minimum, 4 maximum | required |
| Server AC power cables | 1 per MAS server, 1 per MSS-S server, 2 per MSS-H server | required |
| Front bezel | 1 per server | required |
| Rack-mount assembly (rails, handles, brackets, and connecting hardware) <i>and</i> rubber spacers for stackable desktop configuration | 1 set of each per server; use mount type required | required |
| Ethernet switch (includes power transformer and rubber spacers) | 1 | required |
| Ethernet LAN cables | 2 per server | required |
| MSS-specific components: | | |
| COM2 port adapter to RMB cable | 1 | required |
| External modem adapter for RMB with long cable | 1 | required only for International customers |
| DVD backup media | 1 box | required |
| MAS-specific components: | | |
| USB modem (includes USB cable) | 1 per MAS server | required |
| Port board cables (see Table 2-2) | 1 set per port board | required |

Table 2-1. Required and optional hardware

| Item | Quantity | Required/optional |
|---|--------------------|--|
| Other: | | |
| Monitor (includes power cord and VGA cable) | 1 | optional; may be customer-provided |
| Keyboard and mouse (includes cords and Y cable) | 1 set | optional; may be customer-provided |
| KVM switch (includes power transformer) | 1 KVM switch | optional; other models of switching devices may be used |
| KVM switch cable to each server | 1 cable per server | |
| includes 1 set of rack-mount brackets <i>if needed for rack-mount setup</i> | 1 set if needed | |
| Uninterruptible power supply (UPS) with required power cord | 1 | <ul style="list-style-type: none"> required for the MSS-H; model may vary optional for the MSS-S and MAS |
| includes 1 set of rack-mount brackets <i>and</i> rubber spacers for a stackable setup | | |
| Extended battery module (EBM) with required power cord | 1 to 4 | optional; may be ordered with the UPS |
| includes 1 set of rack-mount brackets <i>and</i> rubber spacers for a stackable setup | | |

Table 2-2 lists supported port boards. These cards are preinstalled in the MAS, but the external cabling must be connected, and the cards must be configured during initial administration. The cabling varies per type of card.

Table 2-2. Supported MAS port boards

| Protocol | Ports | Port boards | Max # | Dialogic documents on CD |
|------------------------------|---------|-----------------------------|-------|---|
| Analog | 4 - 8 | Dialogic 4-port T/R board | 2 | D/41JCT-LS (PDF 133K) D/120JCT-LS (PDF 131K) |
| | 12 - 48 | Dialogic 12-port T/R board | 4 | |
| Digital Set Emulation | 8 - 40 | Dialogic D/82JCT-U | 5 | D/82JCT-U (PDF 240K) |
| T1-QSIG | 23 - 69 | Dialogic D/480JCT-T1 (dual) | 3 | Span JCT boards (PDF 99K) |
| E1-QSIG | 30 - 60 | Dialogic D/600JCT-E1 | 2 | Span JCT boards (PDF 99K) |

Required software and documentation

The following software and documentation must be available on site in order to successfully install and maintain an S3400 Message Server system:

- The following server software, if new software is necessary:
 - Avaya™ Modular Messaging (MM) Release 1.0 for the Message Storage Server (MSS), Issue 1 or later, ED75011-10G10 (one CD).
 - Avaya™ Modular Messaging (MM) Release 1.0 for the Messaging Application Server (MAS) software, Issue 1 or later, ED75011-10G15 (two CDs).
- Avaya™ Modular Messaging (MM) Release 1.0 for the Messaging Application Server (MAS) application software, Issue 1 or later, ED75011-10G20 (one CD).
- *Avaya™ Modular Messaging (MM) Release 1 Documentation*, Issue 1, ED75011-10G5 (two copies of this CD).
- Detailed documentation for setting up the MAS port boards and using Modular Messaging applications. This includes the following (all available on the documentation CD):
 - The appropriate port board installation documents listed in [Table 2-2](#)
 - The *Avaya™ Modular Messaging (MM) Subscriber Options User Guide* (585-310-789, [PDF 1 MB](#))
 - The *Avaya™ Mailbox Manager User Guide* ([PDF 1 MB](#))
 - The backup procedures for the MSS. See “[Backing up system files \(attended\)](#)” and “[Backing up system files \(unattended\)](#)”.
- The configuration notes for integrating the Dialogic port boards installed in an MAS with the PBX or switch at this site. To view these:
 - a. Access the support.avaya.com web site.
 - b. Under **Technical Database**, click **Messaging**.
 - c. Scroll down to **Modular Messaging** and click **General Info**.
 - d. Download or print the appropriate configuration notes for your switch integration.

You can also access an editable Microsoft Word version of the planning forms from Appendix A, “System planning forms,” from this web site. Under the **Modular Messaging** link above, click **R1.0** to access this file.

Saving the packing materials

Save the shipping cartons and all packing materials in case any of the hardware needs to be returned to the manufacturer. If you ordered more than one MAS, saving one carton and one set of packing materials should be sufficient. Packing materials include:

- Antistatic bags
- Cardboard and foam inlays

Note: The packing materials may include a plastic bag designed to protect the system from moisture during shipment. Discard this bag. It is not reusable.

Also save the shipping cartons for all peripheral devices, such as the modems, Ethernet switch, monitor, keyboard/mouse, and UPS and EBM (if used).

Installing the system hardware

This section covers how to install the required and optional system hardware. Hardware components that are optional are noted in the text. For more information about required and optional hardware, see [Table 2-1](#) on page 2-3.

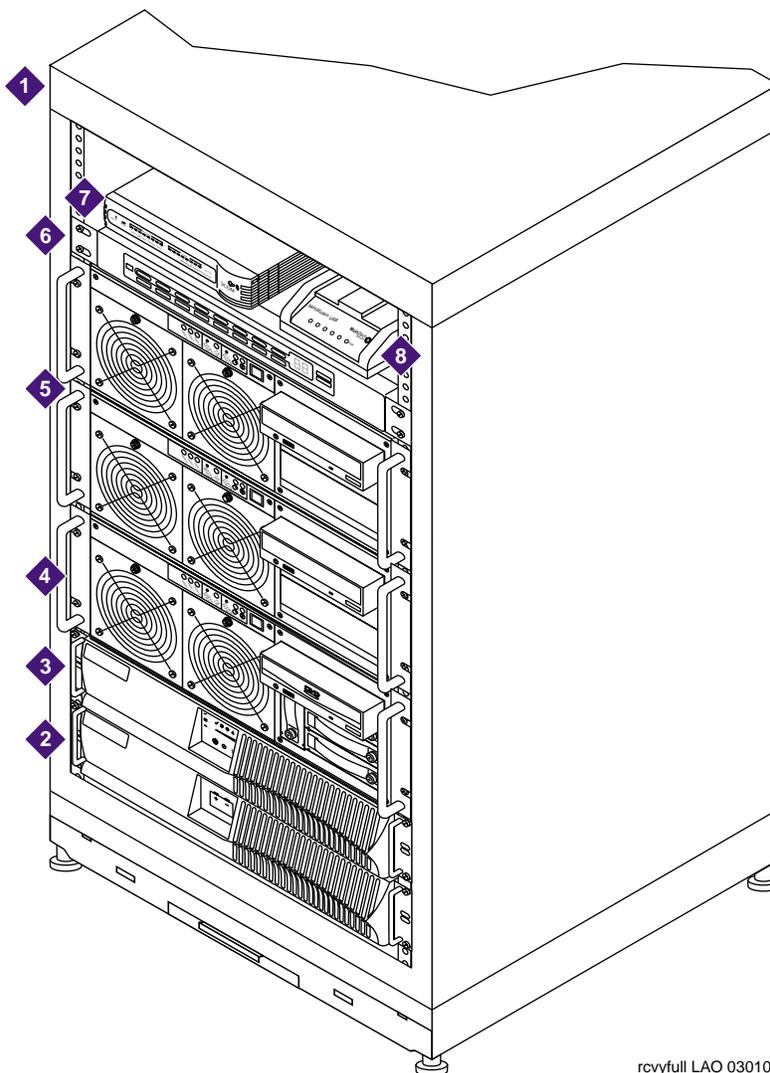
The system can be installed in one or more customer-provided commercial cabinets as a rack-mounted system, or without a commercial cabinet as a stackable desktop system. This section includes instructions on how to install both rack-mounted and stackable desktop systems.

Only one Message Storage Server (MSS), either an MSS-S or an MSS-H, is installed per system. Up to four Messaging Application Server (MAS) units may be installed per system.

[Figure 2-1](#) on page 2-7 shows an example of an installed rack-mounted system.

Note: The sample figure shows the MSS and MAS servers with their front bezels removed.

Figure 2-1. Example of an installed rack-mounted system (front view)



rcvyfull LAO 030103

| | |
|---|--|
| 1 | Customer-provided cabinet (type may vary; see physical requirements in "Installation area requirements" on page 1-3) |
| 2 | EBM (optional; 0 to 4 may be installed with a UPS) |
| 3 | UPS (required for MSS-H, optional for MSS-S; model may vary) |
| 4 | Required Message Storage Server (MSS), may be MSS-H or MSS-S |
| 5 | Messaging Application Server (MAS); 1 to 4 units may be present |
| 6 | KVM switch (type may vary) |
| 7 | Ethernet switch (one is always required) |
| 8 | External modem, one required for every MAS unit |

Installing the UPS and optional EBMs

This section describes how to install an uninterruptible power system (UPS) and one or more optional extended battery modules (EBMs).

- Customers may order a different model of UPS, or supply their own. See the documentation that came with the UPS for instructions if needed.
- If the customer did *not* purchase a UPS, continue with the next section, ["Installing the S3400 servers"](#) on page 2-12.

The UPS is a required component for the MSS-H but is optional for the MSS-S. The UPS protects the system from most common power problems including power failures, power sags, power surges, and so on.

The EBM is an optional component that works in conjunction with the UPS to add additional run time for the system. The customer has the option of adding up to four EBMs per UPS. For more information, see the documentation that was shipped with the EBM and UPS.

Installing the UPS and any EBMs into a rack

If you are installing a rack-mounted system, continue with this task. Otherwise, continue with ["Installing the UPS and any EBMs as a stackable configuration"](#) on page 2-10.

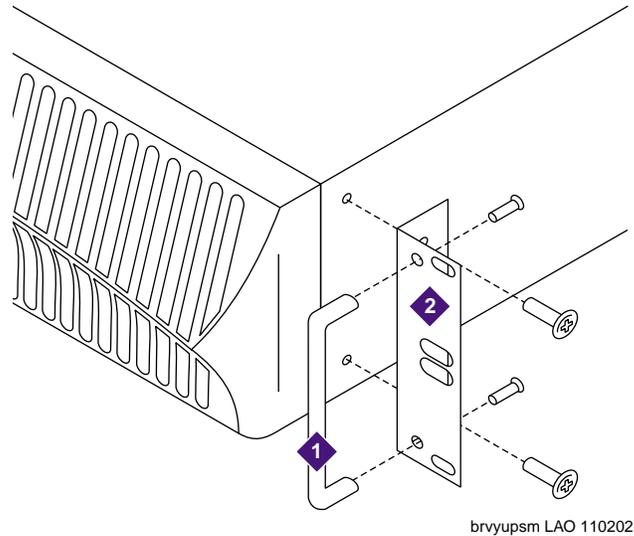
The UPS and EBMs must be positioned in the rack below the S3400 servers, with the EBM units in the lowest-available rack position.

To install the UPS and EBMs into a rack:

1. Gather the necessary rack-mount hardware, including the mounting handles, brackets, and screws.
2. Place the UPS on a flat, stable surface with the front of the UPS facing toward you.

3. Attach the mounting handle to each bracket using the supplied screws. See item 1 in [Figure 2-2](#).

Figure 2-2. Attaching mounting handles and bracket for a rack-mounted UPS



4. Align the mounting brackets with the screw holes on the side of the UPS and secure using the supplied screws. See item 2 in [Figure 2-2](#).
5. If you are installing one or more EBMs, repeat steps 1 through 4 for each EBM.

Note: The EBMs must be installed below the UPS.

6. Place the EBM into the rack in the lowest-available rack position and attach the EBM to the rack using customer-provided screws.

Note: If additional EBMs need to be installed into the rack, install them above the first installed EBM.

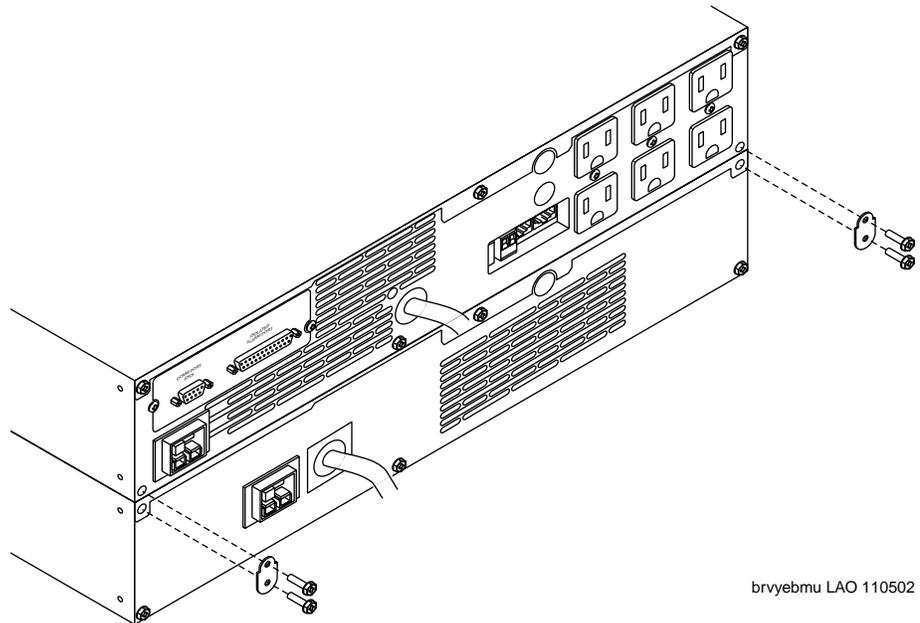
7. Place the UPS into the rack in the lowest-available rack position above any EBMs and attach the UPS to the rack using customer-provided screws.
8. Continue with the ["Cabling the UPS and any EBMs"](#) on page 2-11.

Installing the UPS and any EBMs as a stackable configuration

To configure the UPS and any EBMs in a stackable configuration:

1. If you are installing one or more EBMs, remove the adjacent corner screws from the rear panels. See [Figure 2-3](#) for the location of these screws. If you do *not* have any EBM units, go to step 4.

Figure 2-3. Attaching connecting brackets between a UPS and EBM (back view)



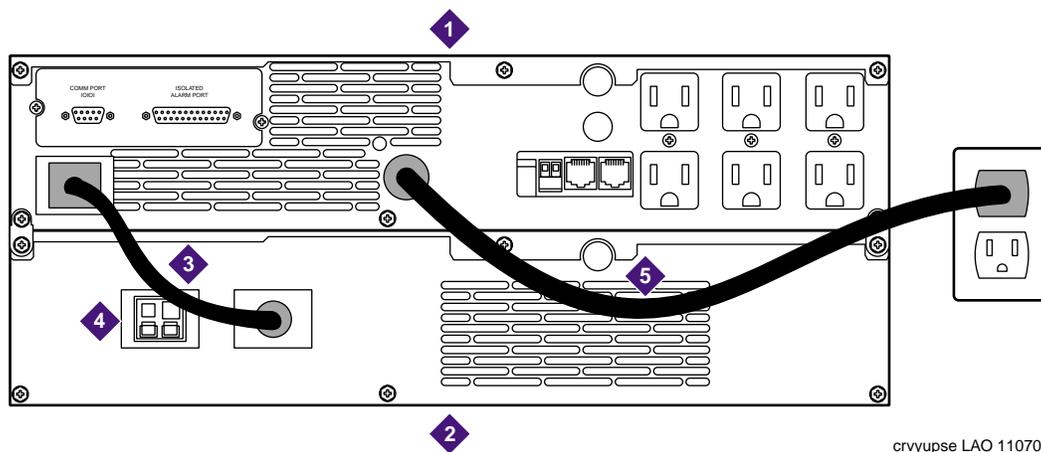
2. Install the EBM brackets by aligning each bracket with the screw holes and secure the bracket the supplied screws as shown in [Figure 2-3](#).
3. Repeat steps 1 and 2 for each additional EBM.
4. On the bottom unit (either the UPS, or an optional EBM), secure four rubber spacers to the bottom of the unit, one at each corner.
5. Set the unit on a stable platform. This unit will form the base of the S3400 system.

Cabling the UPS and any EBMs

To cable the UPS and any EBM units:

1. Connect the EBM cable to the battery connector on the UPS. See item 1 in [Figure 2-4](#).
2. If you need to connect additional EBMs, plug the EBM cable of the second EBM into the battery connector on the first EBM.
3. Repeat step 2 for each additional EBM. Up to four EBMs may be connected to the UPS.

Figure 2-4. Connecting a UPS and an EBM (back view)



crvyupse LAO 110702

| | |
|---|--|
| 1 | UPS (model may vary; see the provided documentation for details) |
| 2 | EBM (optional; 0 to 4 may be installed) |
| 3 | EBM battery cable to UPS |
| 4 | Battery connectors for additional EBMs if needed (optional) |
| 5 | UPS power cable to a grounded AC power outlet |

Installing the S3400 servers

This section describes each of the S3400 servers, and how to install them in a customer-provided commercial cabinet or in a stackable desktop configuration.

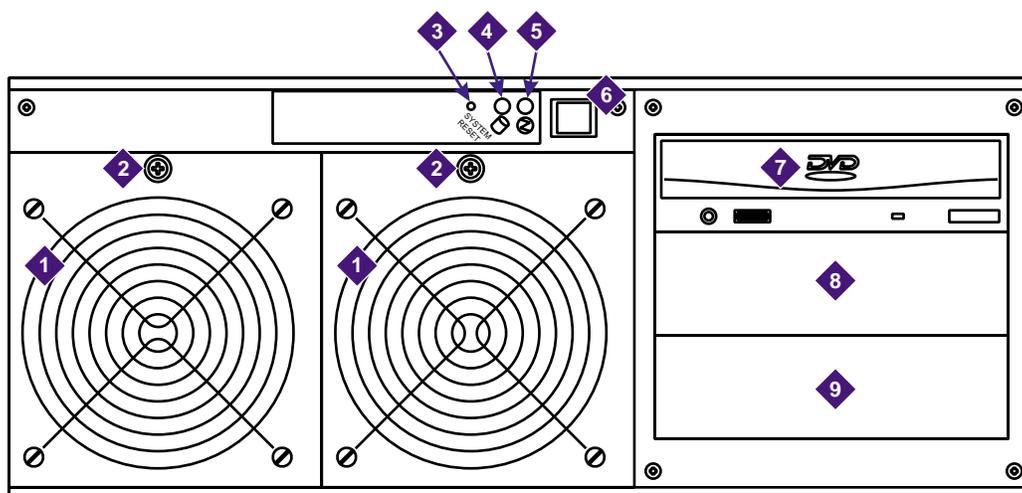
Identifying the server components

This section describes the key components of each of the S3400 servers, including the MSS-S, MSS-H, and MAS.

Key components of the MSS-S

Figure 2-5 shows the Message Storage Server Standard configuration (MSS-S).

Figure 2-5. MSS-S standard configuration (front view with bezel removed)

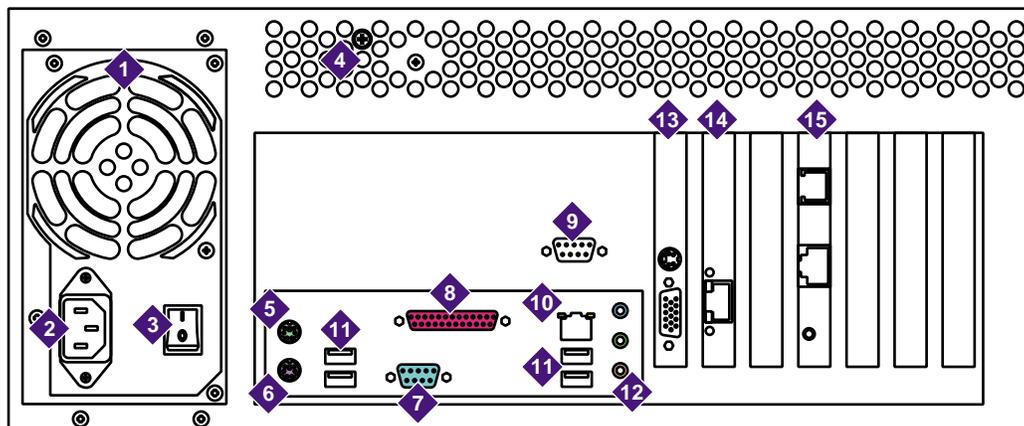


h3vyvmsf LJK 120602

| | |
|---|-----------------------------|
| 1 | Redundant chassis fans |
| 2 | Chassis fan retaining screw |
| 3 | System reset button |
| 4 | Disk drive access indicator |
| 5 | System power indicator |
| 6 | System power on/off button |
| 7 | DVD-RAM drive |
| 8 | IDE RAID disk drive C (hdc) |
| 9 | IDE RAID disk drive A (hda) |

Figure 2-6 shows the back view of a Message Storage Server Standard configuration (MSS-S).

Figure 2-6. MSS-S standard configuration (back view)



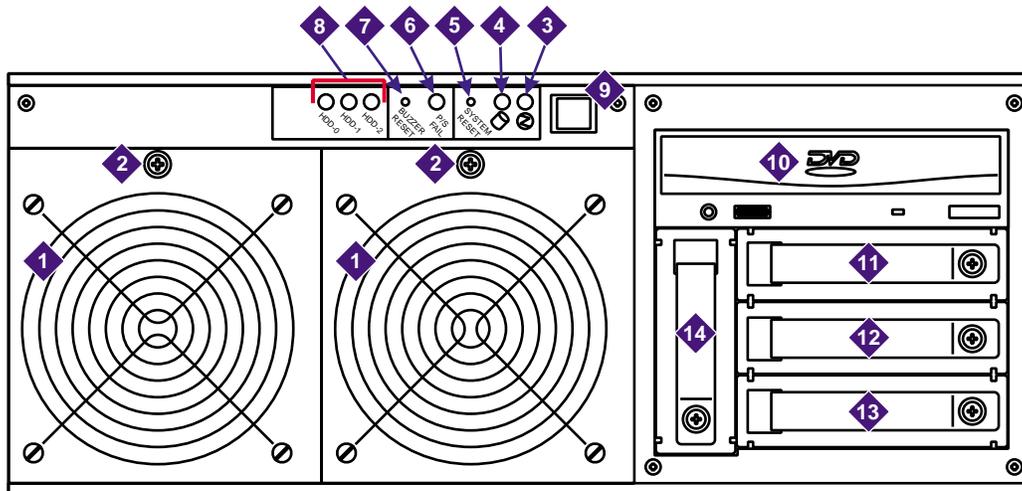
h3vyvmsb LJK 120202

| | |
|----|--|
| 1 | Power supply |
| 2 | AC power receptacle |
| 3 | Power supply on/off switch |
| 4 | Latch for top cover |
| 5 | Mouse connector |
| 6 | Keyboard connector |
| 7 | Serial port (COM1) |
| 8 | Parallel port (not used) |
| 9 | Serial port (COM2), used for RMB |
| 10 | Corporate LAN interface |
| 11 | USB ports |
| 12 | Audio connectors (not used) |
| 13 | Video card (contains monitor connector) |
| 14 | Network interface card (used for private LAN to MAS units) |
| 15 | Remote Maintenance Board (connects to analog line for alarm reporting and servicing; international versions require an external modem) |

Key components of the MSS-H

Figure 2-7 shows the Message Storage Server High-availability configuration (MSS-H).

Figure 2-7. MSS-H high-availability configuration (front view with bezel removed)

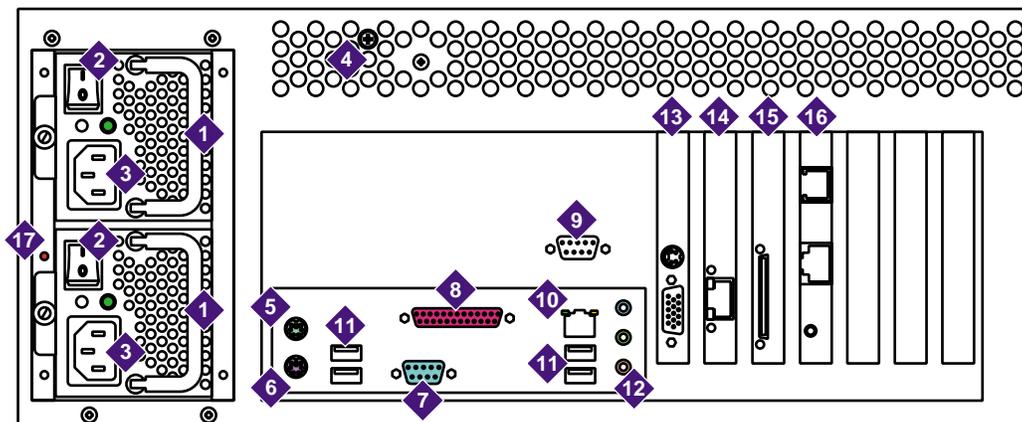


h3vyvmhf LJK 120602

| | |
|----|--|
| 1 | Redundant chassis fans |
| 2 | Chassis fan retaining screw |
| 3 | System power indicator |
| 4 | Disk drive access indicator showing activity on any hard disk drive |
| 5 | System reset button |
| 6 | Power supply failure indicator |
| 7 | Power supply alarm buzzer reset switch |
| 8 | Disk drive access indicator for each hard disk drive (HDD 0, 1, and 2) |
| 9 | System power on/off button |
| 10 | DVD-RAM drive |
| 11 | SCSI RAID drive 0 |
| 12 | SCSI RAID drive 1 |
| 13 | SCSI RAID drive 2 |
| 14 | SCSI fan tray |

Figure 2-8 show the back view of a Message Storage Server High-availability configuration (MSS-H).

Figure 2-8. MSS-H high-availability configuration (back view)



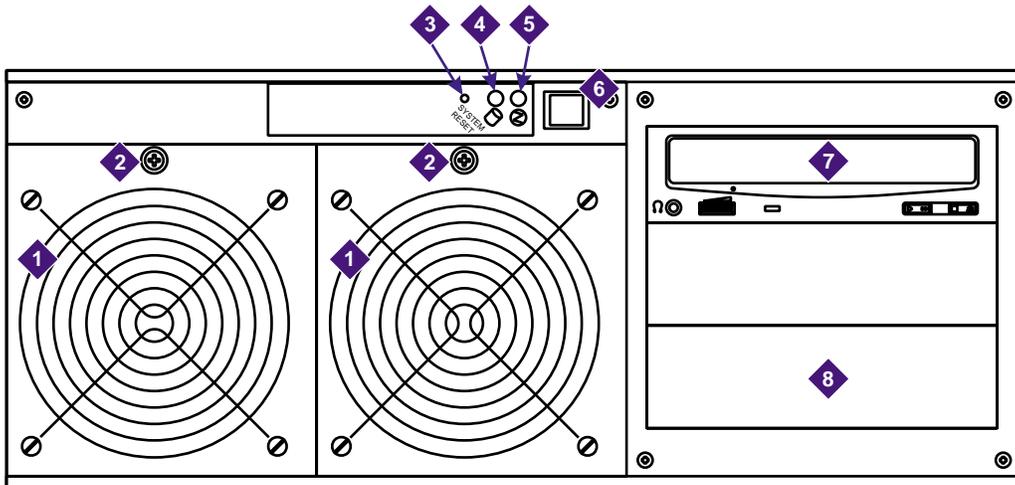
h3vyvmhb LJK 120202

| | |
|----|--|
| 1 | Redundant power supply |
| 2 | Power supply on/off switch |
| 3 | AC power receptacle |
| 4 | Latch for top cover |
| 5 | Mouse connector |
| 6 | Keyboard connector |
| 7 | Serial port (COM1) |
| 8 | Parallel port (not used) |
| 9 | Serial port (COM2), used for RMB |
| 10 | Corporate LAN interface |
| 11 | USB ports |
| 12 | Audio connectors (not used) |
| 13 | Video card (contains monitor connector) |
| 14 | Network interface card (used for private LAN to MAS units) |
| 15 | SCSI RAID controller card |
| 16 | Remote Maintenance Board (connects to analog line for alarm reporting and servicing; international versions require an external modem) |
| 17 | Reset switch for faulty power supply alarm |

Key components of the MAS

Figure 2-9 shows the Messaging Application Server (MAS). You may have up to four MAS units per S3400 system.

Figure 2-9. MAS (front view with bezel removed)

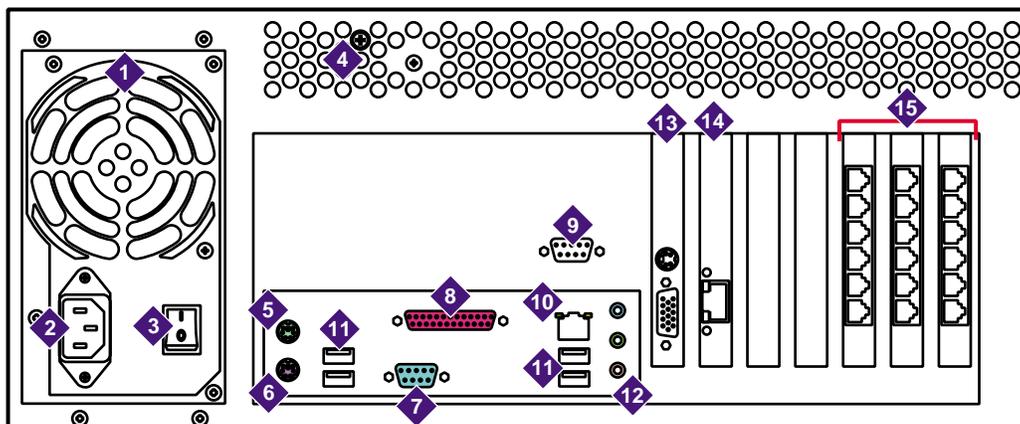


h3vyvvsf LJK 120602

| | |
|---|-----------------------------|
| 1 | Redundant chassis fans |
| 2 | Chassis fan retaining screw |
| 3 | System reset button |
| 4 | Disk drive access indicator |
| 5 | System power indicator |
| 6 | System power on/off button |
| 7 | CD-ROM drive |
| 8 | IDE disk drive A (hda) |

Figure 2-10 shows the back view of a Messaging Application Server (MAS).

Figure 2-10. MAS (back view)



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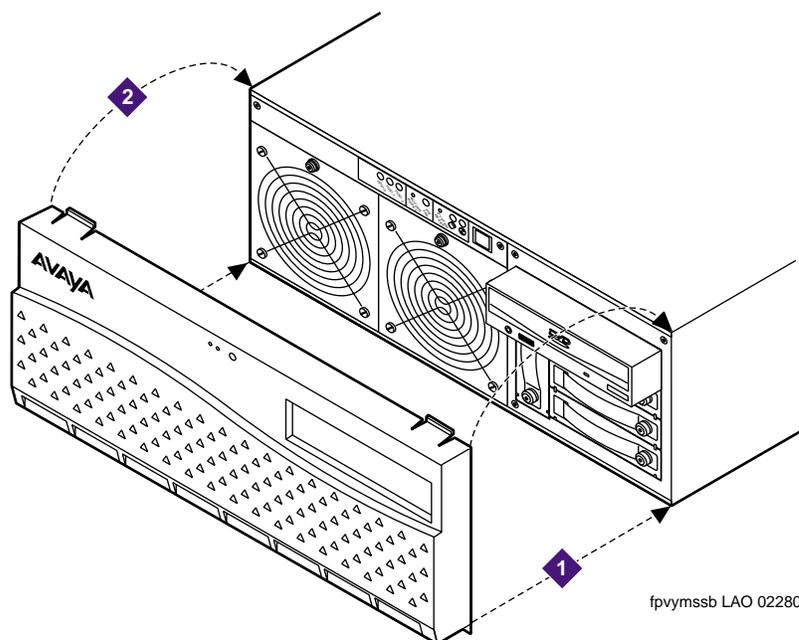
| | |
|----|--|
| 1 | Power supply |
| 2 | AC power receptacle |
| 3 | Power supply on/off switch |
| 4 | Latch for top cover |
| 5 | Mouse connector |
| 6 | Keyboard connector |
| 7 | Serial port (COM1) |
| 8 | Parallel port (not used) |
| 9 | Serial port (COM2) |
| 10 | Corporate LAN interface |
| 11 | USB ports, one of which is used for the required modem |
| 12 | Audio connectors (not used) |
| 13 | Video card (contains monitor connector) |
| 14 | Network interface card (used for private LAN to MSS) |
| 15 | Port boards (type varies from machine to machine). Up to five port boards can be installed in each unit (depending on the type of board and traffic requirements), typically starting from the end of the cabinet. |

Attaching the front bezel

The front bezel must be attached to each S3400 server unit as described.

1. Insert the bottom of the front bezel into the chassis. See item 1 in [Figure 2-11](#).
2. Push the bezel upright until the two upper tabs snap into place under the top cover.

Figure 2-11. Attaching the front bezel



Installing the S3400 servers in a rack-mount or stackable setup

The S3400 servers can be installed either in a commercial cabinet in a rack-mount configuration, or stacked on top of one another in a desktop configuration. Identify the installation method to be used at your site, then see the appropriate section:

- ["Installing the servers in a rack-mount configuration"](#) on page 2-19
- ["Installing the servers in a stackable desktop configuration"](#) on page 2-21



CAUTION: The S3400 servers are heavy. Get another person to assist you with lifting and placing the server units.

Installing the servers in a rack-mount configuration

The task describes how to install an MSS-S or MSS-H and one or more MASs in a commercial cabinet. This is also called a rack-mount configuration.

Note: The MSS-S or MSS-H is typically installed directly above the UPS. If the customer did not purchase a UPS, install the MSS-S or MSS-H in the lowest available position in the cabinet. The first MAS is typically installed directly above the MSS-S or MSS-H.

If the customer purchased more than one MAS, you typically install each additional MAS above the first MAS. However, all the servers in an S3400 system do not have to be in the same cabinet.

Before you begin to install the servers into the rack, verify that the necessary rack-mount hardware is on site. Required equipment is summarized in [Table 2-3](#).

Table 2-3. Required rack-mount hardware

| Part | Quantity |
|---|---|
| Extension bracket (two different lengths may be shipped) | 2 per server |
| Right-side rack-mount rails and slides | 1 set per sever |
| Left-side rack-mount rails and slides | 1 set per sever |
| Front panel handle set (handles and mounting brackets; these may already be assembled on some units) | 1 set per server |
| Miscellaneous screws and mounting hardware | 1 set per server |
| <i>Customer-provided:</i> Mounting hardware to secure the extension bracket and rack-mount slide to the customer-provided rack. | 1 set per rack-mount rail and extension bracket |

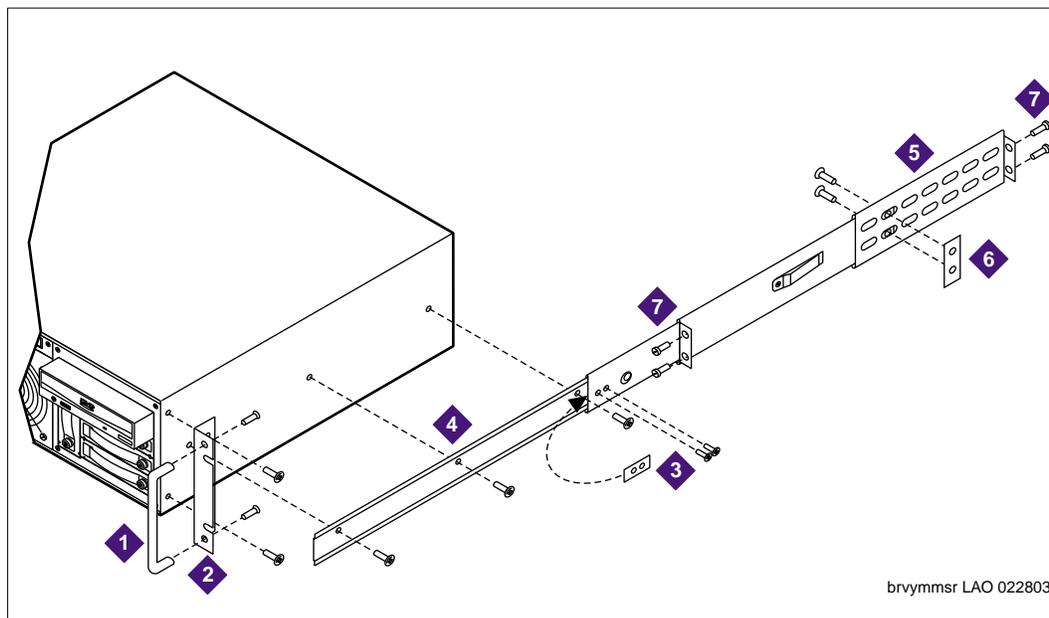
To install a server into a rack:

1. Gather the necessary rack-mount hardware as listed in [Table 2-3](#).
2. Place the server on a flat, stable surface.
3. *If the mounting handles are not already attached, attach them now:*
 - a. Connect the handles to the bracket using the supplied flat-head screws. See item 1 in [Figure 2-12](#) on page 2-20.
 - b. Align the mounting bracket with the screw holes on the side of the server and secure using the supplied flat-head screws. See item 2 in [Figure 2-12](#).
4. Attach the rack-mount rails to the server as follows:
 - a. Remove the two screws and retaining bar on the rail slide just before the server-retaining latch. Set them aside for later. See item 3 in [Figure 2-12](#).

- b. Disassemble the slide (necessary to access all three screw holes).
- c. Place the flat piece of the rail slide against the server and secure it with the three supplied flat-head screws. See item 4 in [Figure 2-12](#).

Note: The rack-mount rails are labeled **L** for left and **R** for right. Verify that you are installing the correct rail on the correct side.

Figure 2-12. Attaching server mounting handles, bracket, and rack-mount rail assembly



5. Position the extension bracket on end of the rail slide to provide the depth needed for the server to fit in the rack. A couple of extension brackets may be shipped; choose the correct length for your cabinet. See item 5 in [Figure 2-12](#).
6. Attach the extension bracket to the rear of the rail slide using the supplied screws and retaining bar (2 pan-head screws per bracket). See item 6 in [Figure 2-12](#).
7. Connect the extension bracket and rail slide to the customer-provided four-post rack using the correct customer-provided hardware for that model of cabinet. See item 7 in [Figure 2-12](#).
8. Fully extend the rail slides to the locked-out position.
9. With another technician supporting the unit, align the front of the rail slide with the rack-mount rail that is attached to the server.
10. Push the unit onto the rail slide far enough so that the safety catch engages.

11. Slide the server completely into the rack. Ensure that the server moves smoothly in and out of the rack.
12. Reattach the two screws and retaining bar on the rail slide just before the server-retaining latch (item 3 in [Figure 2-12](#), from step 4a).
13. Repeat steps 2 through 10 for each server that needs to be installed.
14. When all servers are mounted, continue with "[Connecting the S3400 power cables](#)" on page 2-22.

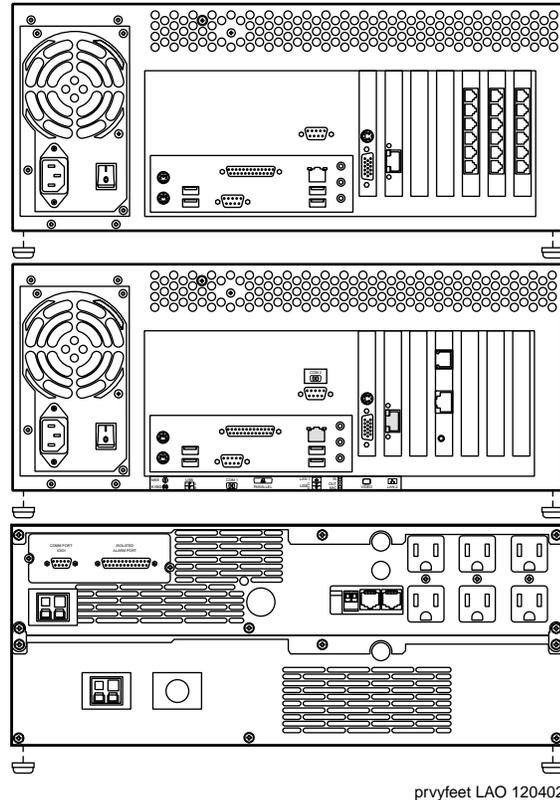
Installing the servers in a stackable desktop configuration

If the system is to be installed in a stackable desktop configuration, you must install four rubber spacers on the bottom on each of the servers. This allows you to stack the servers on top of one another.

 **CAUTION:** For safety, do not stack more than two servers atop one another; use multiple stacks if needed. If you have a UPS and an EBM, stack only one server on top of them.

See [Figure 2-13](#) for a sample configuration.

Figure 2-13. Installing rubber spacers for a stackable desktop configuration



To install the servers in a stackable desktop configuration:

1. Gather the rubber spacers shipped with each server.
2. Attach the rubber spacers to the bottom of each of the servers, one at each corner. See [Figure 2-13](#) for an example.
3. Place the MSS-S or MSS-H on top of the UPS (if present). If the customer did not purchase a UPS, place the unit in an appropriate location. See Chapter 1, "Site requirements," for more information.
4. Place the first (required) MAS on top of the MSS-S or MSS-H.
5. If the customer purchased additional MAS units, create a second stack, placing each additional MAS on top of the last one.

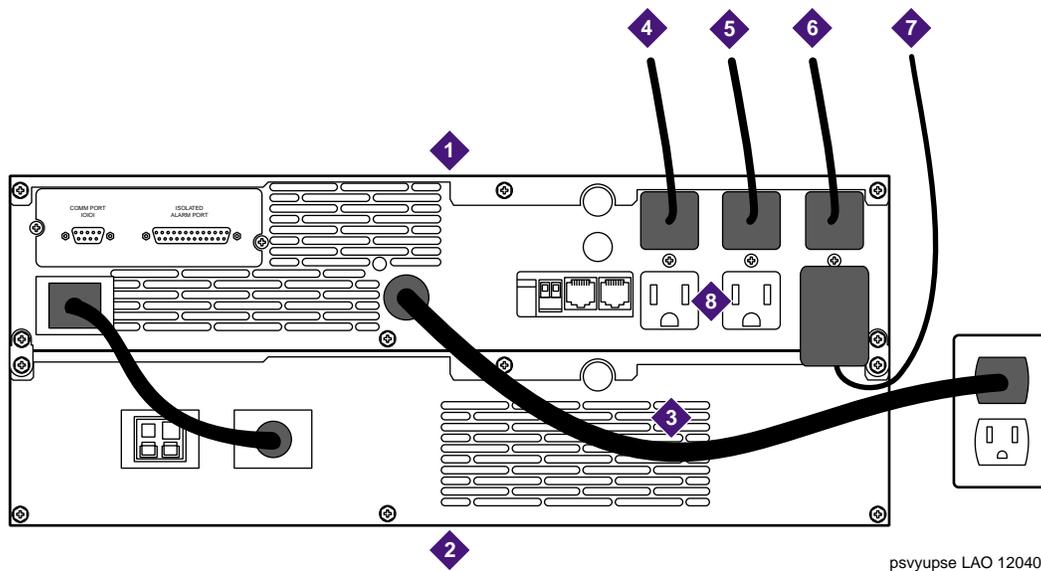
Connecting the S3400 power cables

See the figures in "[Installing the S3400 servers](#)" on page 2-12 if you need help locating the power connections on the back of the servers.

To connect the power cables:

1. Connect the female end of the power cable for the required MSS to the male power connector located on the back of the MSS-S or MSS-H.
2. Connect the male end of the MSS-S or MSS-H power cable to an AC receptacle located on the back of the UPS (if present), or to an appropriate AC power outlet. See [Figure 2-14](#) for an example.
3. *For an MSS-H:* repeat steps 1 and 2 for the second MSS-H power supply.
4. Connect the female end of the MAS power cable to the male power connector on the back of the MAS.
5. Connect the male end of the MAS power cable to AC receptacle on the back of the UPS (if present), or to an appropriate AC power outlet.
6. *If you have more than one MAS:* repeat steps 4 and 5 for each MAS.
7. If the customer is using a UPS, connect the UPS power cable into an appropriate AC power outlet.

Figure 2-14. Attaching power cables to a UPS (sample configuration)



| | |
|---|---|
| 1 | UPS (model may vary; see the provided documentation for details) |
| 2 | EBM (optional; 0 to 4 may be installed) |
| 3 | UPS power cable to a grounded AC power outlet |
| 4 | AC power cable to required MSS |
| 5 | AC power cable to required MAS |
| 6 | AC power cable for redundant power supply on MSS-H (if an MSS-H is installed) or for additional optional MAS (up to 4 may be installed) |
| 7 | AC-to-DC transformer for Ethernet switch |
| 8 | Additional AC sockets; use as needed for external modems, the KVM switch and monitor (if desired), or any additional MAS units |

Connecting the MAS port boards

Each MAS unit may have up to five voice port boards. See [Table 2-2](#) on page 2-4 for a list of supported Dialogic port boards and their associated documentation (copies of which are on the documentation CD).

Connect the cables supplied with your voice port board to the switch as described in this section.

| |
|---|
| <p>Note: Check the numbering on the board's faceplate to make sure that you are connecting the correct cord to the correct port.</p> |
|---|

1. Identify the type of port boards installed in your MAS.
2. Connect each port on the port boards to the switch (PBX) as required:
 - **For analog boards:**
 - a. Connect each port on the installed analog boards to one end of a standard RJ-11 tip/ring cord (individual tip/ring cables and a 12-port harmonica may also be used). Note which cables connect to which ports.
 - b. The other end of the cable should be connected to an analog line on the corporate switching system. The entity responsible for maintaining the corporate switch should 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 board using the provided PBX station interface cable (06-0155-001).
 - b. The other end of the cable should be connected to a 4-wire punch-down block on the corporate switching system. The entity responsible for maintaining the corporate switch should make this connection (see the customer contract or the statement of work).
 - **For T1- or E1-QSIG boards:**
 - a. Connect each port on the Dialogic T1-QSIG or E1-QSIG board using the provided RJ-48C (Ethernet) cable.
 - b. The other end of the cable should be connected through a patch panel to a 4-wire punch-down block on the corporate switching system. The entity responsible for maintaining the corporate switch should make this connection (see the customer contract or the statement of work).

Installing the KVM switch

A keyboard, video, and mouse (KVM) switch is currently required for all S3400 systems. However, the model of KVM switch and the specific monitor, keyboard, and mouse used may vary from site to site (for example, a flat-panel monitor setup may be used instead). See [Figure 2-1](#) on page 2-7 for a sample installation.

To install the Belkin OmniView Pro2 Series KVM switch:

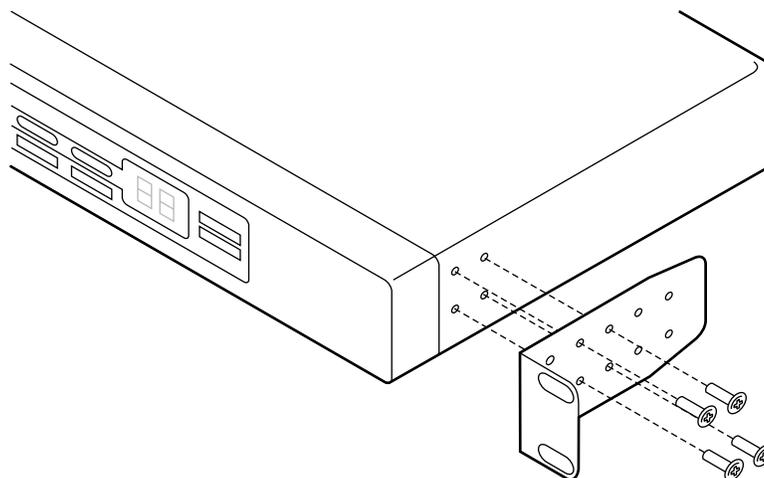
- For rack-mounted installations, see [Installing the KVM switch in a rack-mount configuration](#).
- For a stackable desktop configuration, see ["Installing the KVM switch in a stackable configuration"](#) on page 2-26.

Installing the KVM switch in a rack-mount configuration

To install the Belkin OmniView Pro2 Series KVM switch in a commercial cabinet:

1. Gather the necessary rack-mount hardware, including the adjustable mounting brackets and screws.
2. Select a bracket-hole scheme to determine how far the KVM switch should protrude from the rack.
3. Install the two rack-mount brackets on the KVM switch using the provided screws. See [Figure 2-15](#).

Figure 2-15. Attaching mounting brackets for a rack-mounted KVM



brvykvm LAO 120502

4. Install the KVM switch into the rack above the last installed MAS.
5. Continue with ["Connecting the KVM cables"](#) on page 2-26.

Installing the KVM switch in a stackable configuration

To install the Belkin OmniView Pro2 Series KVM switch in a stackable desktop configuration:

1. Place the KVM switch on top of the uppermost MAS. Rubber spacers are already in place.
2. Continue with connecting the KVM cables.

Connecting the KVM cables

The Belkin OmniView Pro2 Series KVM switch must first be connected to the keyboard, monitor, and mouse, and then to the MSS and MAS units, as described in this section.

Connecting the KVM switch to the keyboard, monitor, and mouse

The KVM switch setup for the keyboard, monitor, and mouse may vary from site to site, depending on the equipment and cabling used. This section provides instructions for a Belkin OmniView Pro2 Series KVM switch setup.

To connect the KVM switch to the keyboard, monitor, and mouse:

1. If a new monitor or keyboard/mouse was ordered for this system, unpack them now. Otherwise, continue with step 2.

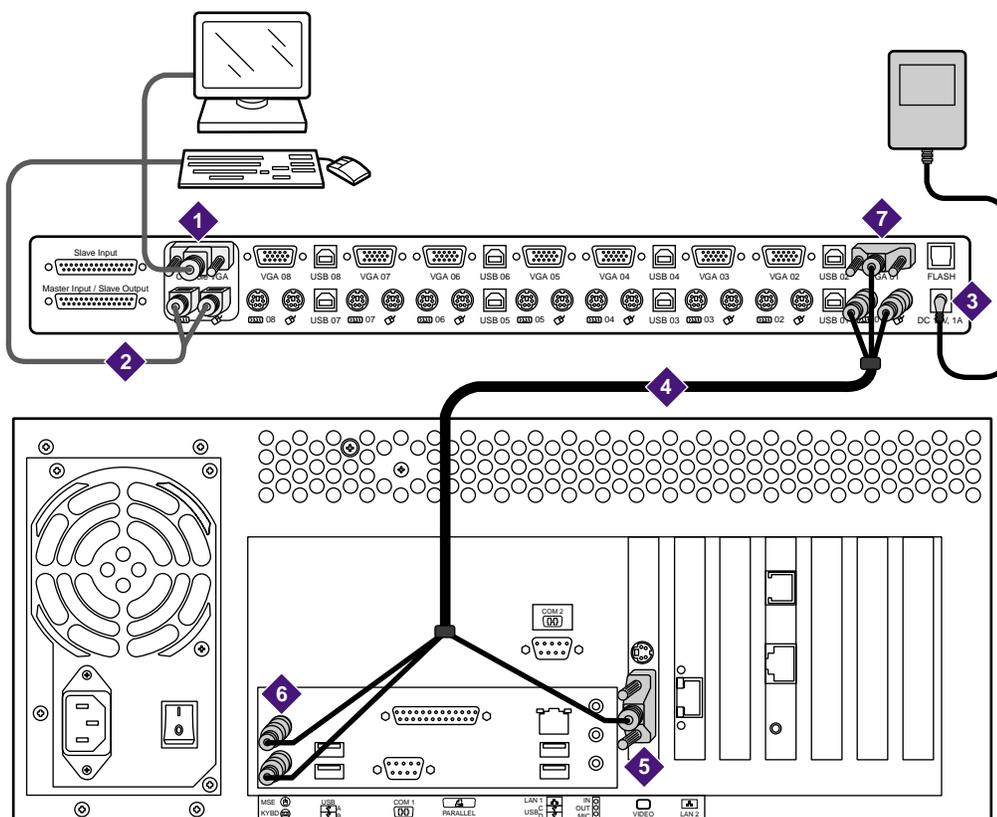
| |
|---|
| <p>Note: If a new monitor was not purchased with the system, any 15" or greater monitor can be used.</p> |
|---|

- Set up the monitor in the desired location.
 - Connect the keyboard/mouse to the monitor.
 - Plug the female end of the monitor's power cable into the monitor.
 - Plug the male end of the monitor's power cable into a free UPS receptacle (if available) or into a grounded AC outlet.
2. Connect the VGA cable from the monitor to the female port on the back of the KVM switch labeled "Console VGA." See item 1 in [Figure 2-16](#) on page 2-27.
3. Tighten the thumbscrews on the video cable connector with your fingers or with a small flatblade screwdriver.

4. Connect the PS/2 cables for the mouse and keyboard to their corresponding connectors on the back of the KVM switch in the “Console” section using the Y cable. See item 2 in [Figure 2-16](#).

The mouse connector is color-coded green, and the keyboard connector is color-coded purple.

Figure 2-16. Connecting a Belkin OmniView Pro2 Series KVM switch (rear view)



cavkvm LAO 120402

| | |
|---|--|
| 1 | VGA cord from monitor to Console VGA port on KVM switch |
| 2 | Y cable to combination keyboard/mouse (setup may vary) |
| 3 | DC power jack for transformer cable |
| 4 | KVM switch video/keyboard/mouse cable to each server unit |
| 5 | VGA connector on MSS or MAS unit (in the AGP slot) |
| 6 | Keyboard and mouse connectors on MSS or MAS unit |
| 7 | Belkin OmniView Pro2 Series KVM switch; typically the MSS-H or MSS-S is connected to the first computer port VGA 01 as shown; MAS units are connected in the subsequent port positions |

5. Attach the KVM power cable to the DC power jack labeled “DC 12V, 1A” on the rear of the KVM switch.
6. Connect the other end of the KVM power cable (the AC-to-DC transformer) to a receptacle located on the back of the UPS (if present) or to an appropriate power outlet.

When power is connected, the LED for port 01 begins flashing.

7. Push the direct-access port selectors for ports 01 through 08 in order. The corresponding LED should flash as each button is pressed, indicating that the port is ready for the server connection.

Connecting the KVM switch to the S3400 servers

To connect the KVM switch to the installed MSS and MAS units:

1. Using the provided KVM cable, plug the male VGA connector into the VGA port on the MSS unit. See [Figure 2-16](#) on page 2-27.
2. Connect the PS/2 keyboard and mouse connectors of the KVM cable to the keyboard and mouse ports on the back of the MSS unit.

| |
|---|
| <p>Note: The mouse connector is color-coded green, and the keyboard connector is color-coded purple.</p> |
|---|

3. Connect the other end of the KVM cable to the port on the back of the KVM switch labeled VGA 01.
4. Connect the ends of the cables to the keyboard and mouse ports located directly underneath the VGA 01 port.
5. Using the second provided KVM switch cable, plug the male VGA connector into the VGA port on the first MAS unit. This port is in the first PCI card slot on every S3400 server.
6. Connect the PS/2 keyboard and mouse connectors of the KVM cable to the keyboard and mouse ports on the MAS unit.
7. Connect the other end of the KVM cable to the port on the back of the KVM switch labeled VGA 02.
8. Connect the ends of the cables to the keyboard and mouse ports located directly underneath the VGA 02 port.
9. Repeat steps 5 through 8 for each additional MAS unit, connecting to port VGA 03, VGA 04 and so on, as needed.

Connecting the Ethernet cables

A pair of standard Ethernet cables is shipped with every S3400 server. Use these cables to make the two required LAN connections: one to a private LAN through an Ethernet switch, and one to the corporate LAN. Both of these connections are covered in this section.

Connecting the S3400 servers to the private LAN

The private LAN allows the MSS and any MAS units to communicate.

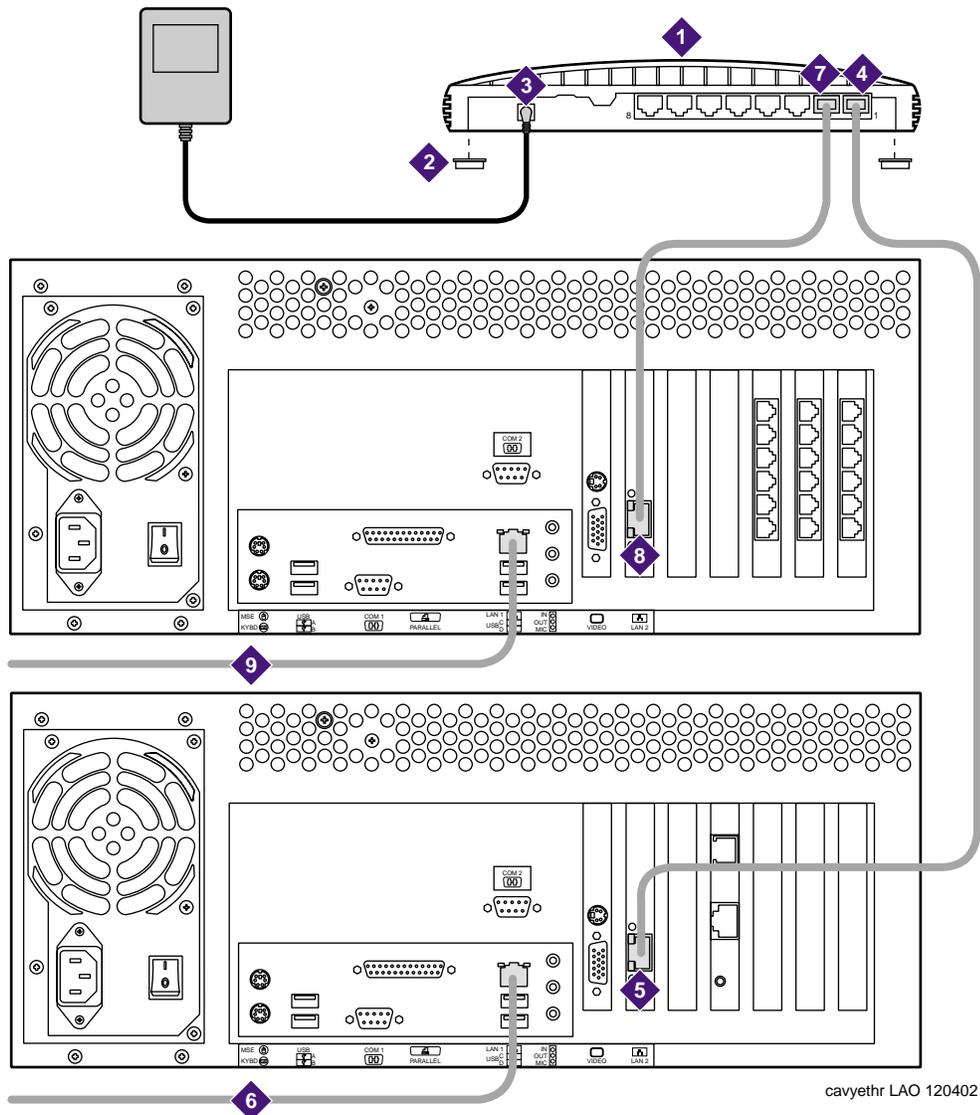
To connect the S3400 servers to the private LAN:

1. Unpack the Ethernet switch. This section assumes you are using a 3COM Office Connect Dual Speed Switch 8 Plus model.
2. Attach the rubber spacers to the four marked areas in each corner on the bottom of the Ethernet switch. See [Figure 2-17](#) on page 2-30.
3. Place the Ethernet switch on top of the KVM switch unit.
4. A suitable power cord and transformer for your region should have been shipped with your Ethernet switch.
 - a. Peel back the label, then insert the end of the Ethernet switch power cable into the DC power connector on the back of the switch.
 - b. Connect the other end of the AC-to-DC transformer to the back of the UPS (if present) or to an appropriate AC power outlet.
5. Connect the private LAN cables for each of the S3400 servers. See [Figure 2-17](#) for an example.
 - MSS: Connect the provided Ethernet cable between the RJ45 jack on the NIC and the first Ethernet interface on the back of the switch, labeled 1.
 - MAS: Connect the provided Ethernet cable between the RJ45 jack on the NIC and the second Ethernet interface on the back of the switch, labeled 2.
 - Additional MASs (if present): Connect the provided Ethernet cable between the RJ45 jack on the NIC in each unit with the next Ethernet available interface on the back of the switch, labeled 3, 4, and so on.



CAUTION: Do *not* connect the private LAN switch to the corporate LAN.

Figure 2-17. Connecting the MSS and MAS servers to an Ethernet switch (rear view)



cavethr LAO 120402

| | |
|---|---|
| 1 | Ethernet switch |
| 2 | Rubber spacers |
| 3 | DC power jack |
| 4 | Ethernet interface to private LAN on MSS (typically Ethernet switch port 1) |
| 5 | Private LAN interface on MSS (NIC card in the first PCI slot) |
| 6 | Ethernet interface to corporate LAN on MSS |

| | |
|---|---|
| 7 | Ethernet interface to private LAN on first MAS (typically Ethernet switch port 2); subsequent MAS units would use ports 3, 4, and so on |
| 8 | Private LAN interface on MAS (NIC card in second PCI slot) |
| 9 | Ethernet interface to corporate LAN on MAS |

Connecting the S3400 servers to the corporate LAN

To connect each MSS and MAS unit to the corporate LAN:

1. Connect one end of the standard Ethernet cable (provided with the server) to the RJ45 connector on the back of the server. See [Figure 2-17](#) on page 2-30.

| |
|---|
| <p>Note: Make sure that you connect the Ethernet cable for the <i>corporate</i> LAN to the Ethernet interface on the back of the server. The Ethernet interface on the NIC in the PCI slot is used for the <i>private</i> LAN.</p> |
|---|

2. The other end of this cable should be connected to an Ethernet interface on the corporate LAN. The entity that is responsible for maintaining the corporate LAN should make this connection (see the customer contract or the statement of work).
3. Repeat steps 1 and 2 for each S3400 server in your configuration.

Attaching ferrites

Ferrites must be attached to the following S3400 system video cable and to each T1- or E1-QSIG port board cable (if present on the MAS) to meet electromagnetic conductance (EMC) regulations. The optional flat-panel monitor with an integrated KVM switch also requires ferrites.



| |
|--|
| <p>CAUTION: Handle all ferrites with care. They are easily broken. Do not use any that are broken or fractured. Damaged ferrites are no longer effective for EMC control.</p> |
|--|

To install a ferrite on a cable:

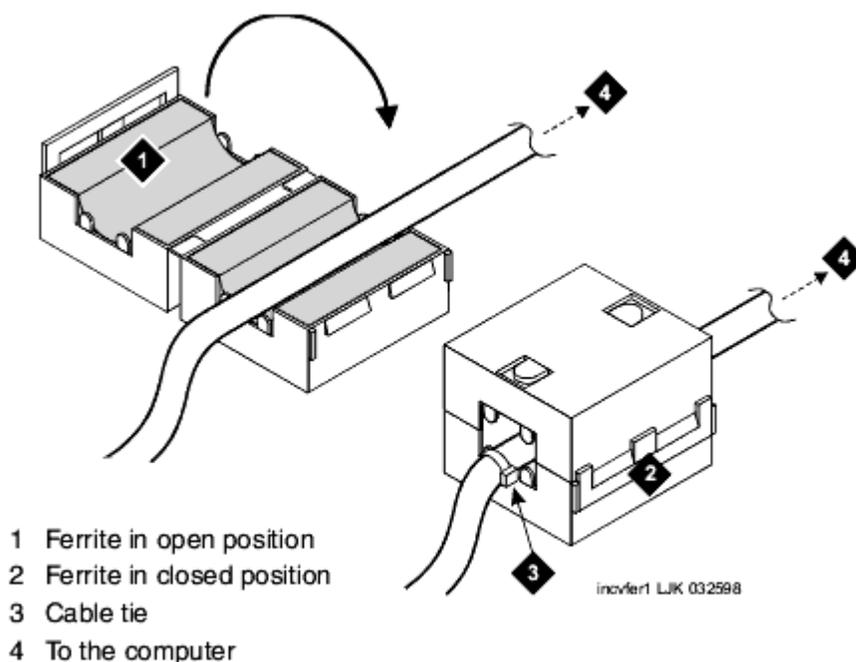
1. *For all systems:* Locate the video connector in the first slot on the back of the S3400 system unit.
2. Open the ferrite by gently pulling the fastener away from the body of the ferrite. See [Figure 2-18](#) on page 2-32.

3. Place the cable cord in the groove inside the ferrite, then gently snap the ferrite shut.

Note: Place ferrites as close as possible to the chassis to minimize the amount of cable between the ferrites and the chassis.

4. Attach a large cable tie directly behind the ferrite to secure it. Trim the cable tie.

Figure 2-18. Attaching a ferrite to a cable



5. *For systems that use a T1- or E1-QSIG port board:* Repeat steps 2 through 4 to attach a ferrite to each QSIG port board cable.
6. *For systems that use a flat-panel monitor:* Repeat steps 2 through 4 to attach a ferrite to the mouse and keyboard cables at each server. One ferrite can be used for both cables.

Connecting the USB modem on the MAS

A USB modem is required for each installed MAS. The type of modem you have may vary depending on your location. See the documentation included with your modem if you have questions about modem installation, setup, or operation.

This section describes a MultiTech USB modem setup. See [Figure 2-19](#) on page 2-33 for an example.

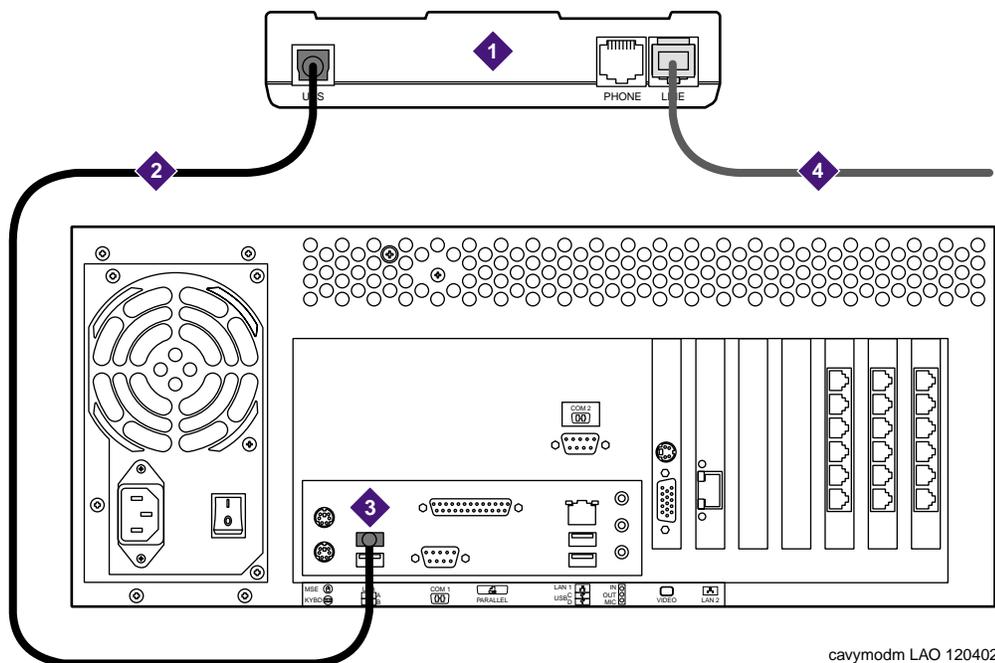
To connect a USB modem:

1. Attach the rubber spacers to the four marked areas in each corner on the bottom of the modem (if spacers are not already in place).
2. Place the USB modem on top of the KVM switch or in a secure location as required.
3. Connect one end of the USB cable to the back of the USB modem.
4. The other end of the USB cable will be attached to one of the USB ports on the back of the MAS when you set up remote access. USB port A is recommended as shown in [Figure 2-19](#).

Note: Do not actually plug the cable into the USB port until directed in "[Setting up remote access](#)" on page 4-20.

5. Connect the RJ-11 cable to the LINE connector on the modem.

Figure 2-19. Connecting a USB modem to an MAS server (rear view)



| | |
|---|--|
| 1 | USB modem |
| 2 | USB cable to the MAS server |
| 3 | USB connector on the server (port A is recommended as shown) |
| 4 | RJ-11 cable to the corporate switch |

6. The other end of the cable should be connected to an analog line on the corporate switching system. The entity responsible for maintaining the corporate switch should make this connection (see the customer contract or the statement of work).
7. Repeat steps 1 through 5 for each MAS modem that needs to be installed.

Connecting the MSS RMB

A Remote Maintenance Board (RMB) is installed in every MSS unit. This board sends system alarms to a remote maintenance center, and allows Services personnel to dial in to repair or update the S3400 system.

The RMB setup varies depending on your location:

- A domestic (United States) setup uses an on-board modem. See [Figure 2-20](#) on page 2-35.
- An international setup uses an external modem that meets the operating requirements for that region. See [Figure 2-21](#) on page 2-36 for a sample setup.

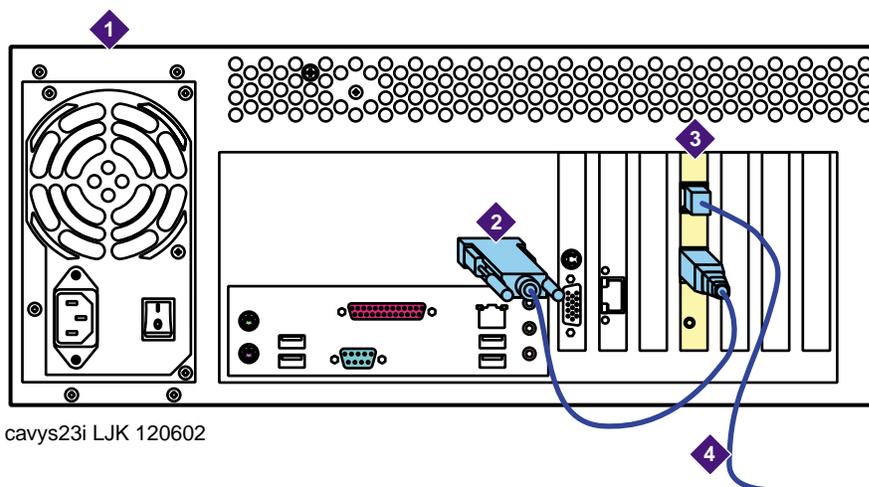
| |
|---|
| <p>Note: The type of external modem used with the RMB varies depending on geographical location. See the documentation included with your modem if you have questions about modem installation, setup, or operation.</p> |
|---|

To install the RMB:

1. Connect the adapter end of the RMB-to-COM2 cable to the COM2 serial port on the back of the MSS. Tighten the thumbscrews on the adapter.
2. Attach the other end of the cable to the lower RJ45 jack on the RMB faceplate. Make sure the jack snaps securely in place.
3. Make the appropriate connections based on the type of RMB installed: either an on-board model or an external modem.

- *On-board modem (United States):* Connect a standard modular telephone cord to the RJ11 jack near the top of the RMB faceplate. See [Figure 2-20](#).

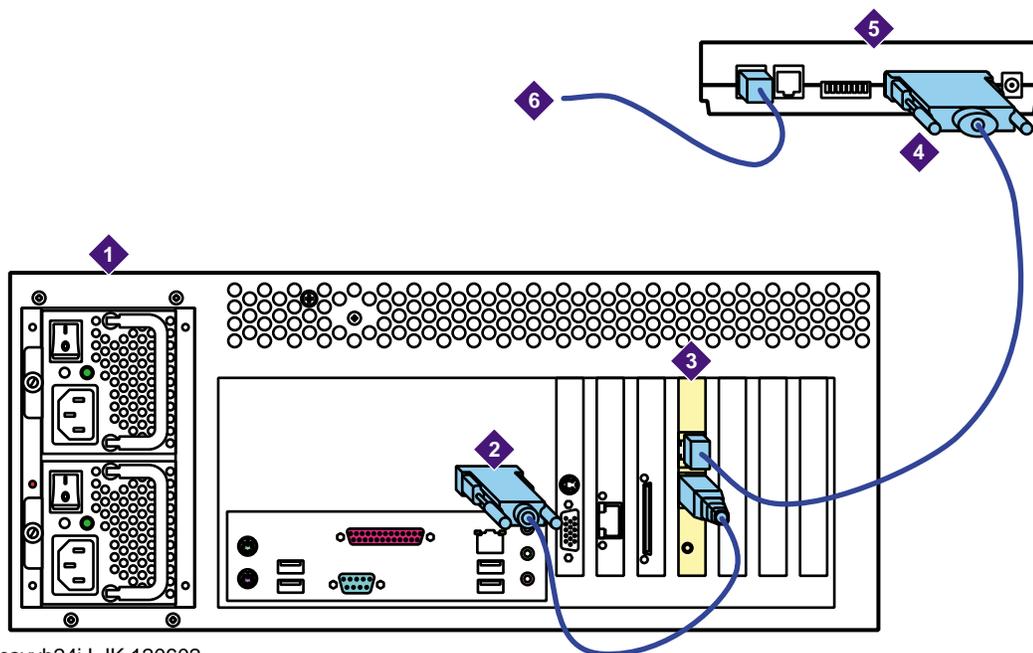
Figure 2-20. Connecting an RMB with an on-board modem (rear view)



| | |
|---|--|
| 1 | MSS-S unit (for example purposes only; could also be an MSS-H) |
| 2 | RMB-to-COM2 serial port adapter cable |
| 3 | RMB faceplate |
| 4 | Telephone cord to tip/ring connection on the corporate switch |

- *External modem (international):* Connect the RMB as described. See your modem documentation for details if needed:
 - Connect the modular end of the RMB-to-modem adapter cable to the upper modular jack on the RMB. See [Figure 2-21](#) on page 2-36.
 - Plug the adapter end of the cable into the external modem's RS-232 connector. Tighten the thumbscrews on the adapter.
 - Connect the required telephone cord to the external modem.

Figure 2-21. Connecting an RMB with an external modem (rear view)



cavyh24i LJK 120602

| | |
|---|--|
| 1 | MSS-H unit (for example purposes only; could also be an MSS-S) |
| 2 | RMB-to-COM2 serial port adapter cable |
| 3 | RMB faceplate |
| 4 | RMB-to-modem's RS-232 port adapter cable |
| 5 | External modem (model varies per region) |
| 6 | Telephone cord to tip/ring connection on the corporate switch |

4. The other end of the telephone cord should be connected to an analog line on the corporate switching system. The entity responsible for maintaining the corporate switch should make this connection (see the customer contract or the statement of work).

3

Powering up the system and performing initial MSS administration

This chapter describes how to power up the S3400 system and perform initial administration on the Message Storage Server (MSS).

Note: Before you can successfully complete the tasks in this section, you must have successfully completed the hardware installation tasks in Chapter 2, "Installing the system hardware."

| Section | Page |
|--|------|
| Powering up the S3400 system | 3-2 |
| Logging in to the MSS server | 3-3 |
| Setting up the monitor | 3-4 |
| Setting the time and date | 3-5 |
| Setting up network addressing | 3-6 |
| Administering the message core | 3-10 |
| <ul style="list-style-type: none">Accessing the messaging administration screens | 3-10 |
| <ul style="list-style-type: none">Setting up the MSS host machine profile | 3-11 |
| <ul style="list-style-type: none">Setting up the trusted servers | 3-12 |
| Rebooting the MSS | 3-14 |

Powering up the S3400 system

This task assumes that you have already assembled and correctly connected all required hardware components.

To power up the S3400 system:

1. Verify that the power cables for the S3400 servers and all peripheral equipment are connected to the UPS or an appropriate AC power outlet. See [Figure 2-14](#) on page 2-23 for an example:
 - UPS (if present): connected to an appropriate AC power outlet.
 - MSS and any MAS units: each connected to the UPS (if present), or to an appropriate AC power outlet.
 - KVM switch and monitor: optionally connected to the UPS (if present), or to an appropriate AC power outlet.
 - Ethernet switch: connected to the UPS (if present), or to an appropriate AC power outlet.
 - External modems: *if a power cord is required*, it may optionally be connected to the UPS (if present), or to an appropriate AC power outlet.
2. *If a UPS is present*: Press the On button located on the front of the UPS. The appropriate lamps should light (see your UPS documentation).

| |
|--|
| Note: Always power up the UPS first, if a UPS is installed. |
|--|

3. Press the monitor's power button.

The power lamp on the monitor should light.
4. *If an external modem is present*, press the On button if needed. The appropriate lamps should light (see your modem documentation).
5. Verify that the power lamps for the Ethernet switch and KVM switch are lit (these units do not have on/off buttons).
6. Power up the MSS unit first.
 - a. Toggle the power switch at the rear of the unit to on (I is on, 0 is off).
 - b. Press the power button on the front of the unit.

The LEDs on the front of the unit will flash once, then the LEDs will light to indicate system power and drive activity.
 - c. Wait up to 1 minute for the display to appear on the monitor.

7. Power up the MAS units next, using the same procedures as in step 6.
 - See the figures in “[Installing the S3400 servers](#)” on page 2-12 if you need help locating the power switch or power button on each server.
 - The power lamp on the front of each server should light when the unit is powered on.

Logging in to the MSS server

When the S3400 system is powered up, you must first log in to the MSS server. (either the MSS-S or MSS-H). Because this system is not yet administered, you can only access the MSS from the console (monitor) directly connected to the KVM switch.

To log in to the MSS from the console:

1. The KVM switch should be connected to the MSS through the first computer port (VGA 01). Verify that the monitor is showing the MSS boot procedure.
 - If the monitor is *not* showing the correct server boot procedure, see “[Connecting the KVM cables](#)” on page 2-26 and verify the cable connections. To correct cabling problems, power down the system correct the cabling, then power up the system again.
 - *For a Belkin OmniView Pro2 KVM:* To have the monitor show a different server, press slowly in sequence Scroll Lock, then Scroll Lock, then the up (or down) arrow key to change to the server connected to a higher or lower port number.

You can alternatively type the port number instead of pressing the up or down arrow key (such as 02 for port 2). See your KVM switch documentation for complete user instructions.

Note: You may need to load the operating system from a CD if new software was shipped with the system. In this case, continue with Appendix C, “Loading the operating system on an MSS.”

2. As the MSS boots up, a splash screen appears.

Optional: To bypass this screen and speed up the initial boot procedure:

- Press **Esc** to clear the splash screen.
 - Press the space bar to bypass the memory check.
3. When the boot completes and you see a “Press Enter to return to prompt...” message, press **Enter**.

4. At the localhost login prompt, log in to the MSS server as **craft** using the default password.
5. The Netscape license agreement screen appears the first time you log in. Click **Accept** to continue.

The server displays the Messaging Administration main menu.

Setting up the monitor

If the display quality is poor, you have to perform additional steps to correct it before attempting to administer the system.

- If the monitor displays system information well enough to do initial administration, continue with [“Setting the time and date”](#) on page 3-5.
- If the monitor does *not* display system information well enough to do initial administration, do the following procedure.

To adjust the monitor display:

1. Click **Log Off**.

If the display is so poor that you cannot see the mouse pointer well enough to exit or log off, you can exit by simultaneously pressing **CTRL+ALT+BACKSPACE**.

2. Log in at the console as **monitor** with the password of **monitor**.

The server displays the Monitor setup screen.

3. Attempt to find the brand name of the monitor to be used. Use the down arrow or PageDown keys to scroll through the list of many available monitors, or try typing the first letter of the brand name.
4. Highlight the name of the monitor that most closely matches the model you are using.
5. Tab to **Set** and press **Enter**.

The monitor screen flashes during testing and adjusting, then the cursor returns to the localhost login prompt.

6. Log in to the system as **craft** and see if the display has improved.
7. If the display is still poor, relogin as **monitor** and select one of the Generic monitor settings.

8. If there is still no improvement, the customer must supply a different monitor.

Setting the time and date

The first time you log in to a new MSS, you need to set the time and date.

- If you installed the operating system from a CD, you already set the time and date. Continue with [“Setting up network addressing”](#) on page 3-6.
- If you have not yet set the time and date, do the following procedure.

Set the time of day, date, and time zone as follows:

1. Starting from the Messaging Administration main menu, select:

```
Basic System Administration
  Date and Time Administration
```

The server displays the Linux Date and Time screen.

2. In the Date field, select the month and day. Type the current year (such as 2002).
3. In the AM/PM field, select the type of time you are using (AM, PM, or 24-hour clock), then select the hours and minutes in the Time field.
4. In the Time Zone field, select your current time zone.
5. When finished, click **Save**.

The new settings are saved, and you are prompted to log off.

| |
|--|
| <p>Note: If you did not make any changes to this screen (the time and date were already correct), you are not prompted to log off. Continue with “Setting up network addressing” on page 3-6.</p> |
|--|

6. Click **Log Off**.
7. Log in as **craft** using the default password.

Setting up network addressing

You need to set up the MSS to work correctly on the corporate local area network (LAN) and the private LAN to any MAS units.



CAUTION: Use the [S3400 system planning form](#) in Appendix A, “System planning forms,” to enter the correct values.

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

- Starting from the Messaging Administration main menu, select:

Basic System Administration
TCP/IP Administration
Network Addressing

The server displays the Network Addressing screen. See [Figure 3-1](#) for an example of a completed Network Addressing screen.

Figure 3-1. Network Addressing screen, sample Ethernet 0 interface

Network Addressing

[Status](#)

| | |
|---|--|
| Host Name: <input type="text" value="zigzag"/> | Default Gateway Address: <input type="text" value="10.9.83.254"/> |
|---|--|

| | |
|--|--|
| <p>TCP/IP Interface: <input type="text" value="eth0"/></p> <p>Primary Name + Domain: <input type="text" value="zigzag.loc.avaya.com"/></p> <p>IP Address: <input type="text" value="10.9.83.214"/></p> <p>Subnet Mask: <input type="text" value="255.255.255.0"/></p> <p>Network Media Type: <input type="text" value="Auto_Detect"/></p> | <p>Enable DNS ? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Domain Name: <input type="text" value="loc.avaya.com"/></p> <p>Name Server: <input type="text" value="10.9.1.39"/> <input type="text" value="10.9.1.2"/></p> <p>Search Order: <input type="text" value="loc.avaya.com"/> <input type="text" value="avaya.com"/></p> |
|--|--|

• [TCP/IP Diagnostics](#)

Complete the Networking Addressing screen using the information from the [S3400 system planning form](#) on page A-6. Click the **Help** button or field name for additional information about each field.

Note: The format of the Network Addressing screen varies depending on how it is accessed. For example, at the console interface, the Enable DNS field shows a diamond instead of a radio button. To enable DNS, verify that the Yes diamond is pushed in (looks gray or shaded).

2. Enter the MSS **Host Name**, also known as the NetBIOS machine name (such as zigzag). This is item **1** on the [S3400 system planning form](#) on page A-6.

Note: The first letter may not appear when you type the new name. Complete this procedure, then verify the name in step 8.

3. For **Default Gateway Address**, enter the corporate default gateway IP address for the MSS. This is item **10** on your planning form.



CAUTION: Use the information from the [S3400 system planning form](#) on page A-6 for these fields. *Do not* use the examples shown.

4. To administer the corporate LAN settings, select TCP/IP Interface **eth0**.
 - For **Primary Name + Domain**, enter the MSS corporate FQDN for Eth0 (such as zigzag.loc.avaya.com). This is item **7** on your planning form.
 - For **IP Address**, enter the MSS corporate IP address for Eth0 (see item **8** on your planning form).
 - For **Subnet Mask**, enter the MSS corporate subnet mask for Eth0 (such as 255.255.255.0). See item **9** on your planning form.
 - For **Network Media Type**, select the correct type (usually Auto_Detect).

The following fields must be filled in if a corporate DNS is used:

- Set **Enable DNS** to **Yes** if a corporate DNS is used (if this screen has a pushbutton, click the button so that it is dark).
- For **Domain Name**, enter the corporate domain name (see item **6** on your planning form).
- For **Name Server**, add any IP addresses listed for MSS corporate DNS servers IP addresses (see item **11** on your planning form). Press Enter after each IP address.

- For **Search Order**, always enter the domain shown in the Domain Name field *first*. Press **Enter**.

Add any other domain names listed for the MSS Search order of DNS domains, pressing Enter after each domain name (see item [12](#) on your planning form).

5. Click **Save**.
6. You always see a message to logoff and restart the browser when you change the host name. Click **OK**.
7. If you see a confirmation message, click **Continue Submission** to proceed.

| |
|---|
| <p>Note: You can deselect the “Show this alert next time” option in the message box (click the button so it is light in color) to prevent the confirmation message from appearing again. This message will not be noted again in these instructions.</p> |
|---|

8. Click **Logoff** to log off now.

| |
|--|
| <p>Note: Follow the instructions on the Logoff screen. For example, you may be advised to wait 1 minute before logging back in.</p> |
|--|

If you wait, the server logs you off automatically. The system then displays the following prompt:

host name login:

9. Verify that *host name* in the login prompt is the same name you entered in step 2. If not, you have to re-enter it in step 12, and relogin again.
10. Log back in to the MSS server as **craft** using the appropriate password.

The system displays the Messaging Administration main menu.

11. Access the Network Addressing screen again. Click the links for:

```
Basic System Administration
  TCP/IP Administration
    Network Addressing
```

12. Verify the private LAN settings as follows. See [Figure 3-2](#) on page 3-9 for an example.
 - Select TCP/IP Interface **eth1**.
 - For **Primary Name + Domain**, use the predefined MSS default private system name: **mss1** (see item [13](#) on the [S3400 system planning form](#) on page A-6).

- For **IP Address**, use the MSS private IP address for Eth1 (should be 192.168.1.1, as shown in item 14 on your planning form).
 - For **Subnet Mask**, use the MSS private subnet mask for Eth1 (should be 255.255.255.0, as shown in item 15 on the planning form).
 - For **Network Media Type**, verify that the correct type is selected (usually Auto_Detect).
13. If you made any adjustments, click **Save**.
14. Click **Return to Main**.

Figure 3-2. Network Addressing screen, sample Ethernet 1 interface

Network Addressing

[Status](#)

| | |
|---|--|
| Host Name: <input type="text" value="zigzag"/> | Default Gateway Address: <input type="text" value="10.9.83.254"/> |
|---|--|

| | |
|---|---|
| TCP/IP Interface: <input type="text" value="eth1"/> | Enable DNS ? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Primary Name + Domain: <input type="text" value="mss1"/> | Domain Name: <input type="text" value="loc.avaya.com"/> |
| IP Address: <input type="text" value="192.168.1.1"/> | Name Server: <input type="text" value="10.9.1.39"/> <input type="text" value="10.9.1.2"/> |
| Subnet Mask: <input type="text" value="255.255.255.0"/> | Search Order: <input type="text" value="loc.avaya.com"/> <input type="text" value="avaya.com"/> |
| Network Media Type: <input type="text" value="Auto_Detect"/> | |

• [TCP/IP Diagnostics](#)

| | | | |
|---|-------------------------------------|---------------------------------------|-------------------------------------|
| <input type="button" value="Return to Main"/> | <input type="button" value="Save"/> | <input type="button" value="Cancel"/> | <input type="button" value="Help"/> |
|---|-------------------------------------|---------------------------------------|-------------------------------------|

Administering the message core

Use the tasks in this section to set up basic messaging functions on the MSS. Message core administration is done through a command prompt screen. The tasks in this section must be completed in the order presented.

Accessing the messaging administration screens

To access the screens used to administer the message core:

- Starting from the Messaging Administration main menu, select:

```
Global Administration
  Messaging Administration
```

The system displays the administration command prompt screen and the SSH dialog box, which provides protection for this screen. You are re-prompted to enter your password for security reasons.

- Re-enter your login and password, then click **Login**.
- If you are prompted for a terminal type, use **vt100**.*

Note: The administration command prompt screen function keys do not always work from all terminal emulators. If the function keys are not working in your terminal emulator, try using the key sequences associated with each of the function keys as shown in [Table 3-1](#).

Table 3-1. Function key sequences

| Function | Key sequence | Function key |
|------------------------|--------------|--------------|
| Cancel | Ctrl+X | F1 |
| Refresh | Ctrl+L | F2 |
| Enter | Ctrl+E | F3 |
| Clear Field (ClrFld) | Ctrl+K | F4 |
| Help | Ctrl+W | F5 |
| Choices | Ctrl+C | F6 |
| Next Page (NextPg) | Ctrl+N | F7 |
| Previous Page (PrevPg) | Ctrl+P | F8 |
| Back space | Ctrl+H | — |

Table 3-1. Function key sequences

| Function | Key sequence | Function key |
|--|--------------------|--------------|
| Next Field | Ctrl+M | — |
| Break out of the webadmin interface and return to the Linux prompt | Ctrl+Alt+Backspace | — |

Setting up the MSS host machine profile

Set up a machine profile for the MSS. Use your [S3400 system planning form](#) on page A-6 and [Required switch and messaging information](#) on page A-12 to complete these fields.

To set up a machine profile for this MSS:

1. At the administration command prompt, type **change machine** and press **Enter**.

The system displays the Machine Profile screen.

2. Update the fields in the Machine Profile screen as shown in [Table 3-2](#).

Table 3-2. Machine Profile screen settings

| Field | Setting |
|-------------------|--|
| Machine Name | Change from "local" to the MSS host name (see item 1 on the S3400 system planning form on page A-6). |
| Machine Type | tcpip |
| Location | local [<i>display-only field</i>] |
| Voiced Name? | n |
| Extension Length | 3 through 10 |
| Voice ID | 0 [<i>display-only field</i>] |
| Default Community | 1 |
| Start Ext. | Enter the appropriate starting extension number for this dial plan's range. For example, for a five-digit dial plan, you might enter 00000 (see Required switch and messaging information on page A-12 for extension ranges). |
| End Ext. | Enter the appropriate ending extension number for this dial plan's range. For example, for a five-digit dial plan, you might enter 99999 . |

3. When finished, press **F7** (Next Page).

The server displays the Machine Profile screen, page 2.

4. Type a password to be used for SMTP networking with other messaging machines. This password will be known to other machines to allow them to communicate. See [Required switch and messaging information](#) on page A-12.
 - Do not change any other fields on this screen. Leave Updates In and Out set to **n**.
 - When finished, press **F3** (Enter).

Setting up the trusted servers

You must add a trusted server for every MAS unit and every MAS messaging service that will be in your domain. Use your [S3400 system planning form](#) on page A-6 and [S3400 password table](#) on page A-9 to provide the correct values for these fields.

To set up the required trusted servers:

1. At the command prompt, type the following command in the exact format as shown:

```
add trusted-server MASHOSTNAME messaging-application-server
```

Note: The MAS NetBIOS or host name *must* be in all-capital letters.

For example, type **add tru ZIPPY m** and press **Enter**.

The system displays the Trusted Server Profile screen as shown in [Table 3-3](#). The **m** suffix in the command prepopulates most of the fields.

Table 3-3. Trusted Server Profile screen host settings

| Field | Setting |
|----------------------------------|--|
| Trusted-Server Name | Shows the <i>host name</i> (NetBIOS name) for the MAS machine in all-capital letters (such as ZIPPY). See item 1 for this MAS on the S3400 system planning form on page A-6. |
| Password | Type a <i>password</i> that will be known to all machines in this network. All trusted servers that have Service Name Messaging Application Server <i>must</i> use the same password (see items P1 through P4 on the S3400 password table on page A-9). |
| IP Address | Type the <i>private IP address</i> for this MAS machine (such as 192.168.1.250 for the first MAS). See item 14 for this MAS on the S3400 system planning form on page A-6. |
| Service Name | Messaging Application Server <i>[This is a display-only field if you used the "m" suffix as shown; otherwise, type this in.]</i> |
| Access to Cross Domain Delivery? | n <i>[display-only field]</i> |

Table 3-3. Trusted Server Profile screen host settings

| Field | Setting |
|------------------------------------|---|
| Default Community Number | 1 <i>[display-only field]</i> |
| Trusted Server ID | <i>Field will be filled in automatically.</i> |
| Minutes of Inactivity Before Alarm | 10 |

- Update the password and IP address fields in the Trusted Server screen using your planning forms.

- When finished, press **F3** (Enter).

The Trusted Server ID field is populated automatically.

- If you are installing more than one MAS:* Repeat steps 1 through 3 for every MAS unit you plan to install. Use the names, passwords, and IP addresses on your completed [S3400 system planning form](#) on page A-6.

- Add a trusted server for the Message Waiting Indicator (MWI) server. At the command prompt, type **add tru VVSTS** and press Enter.

The system displays the Trusted Server Profile screen.

- Update the fields in the Trusted Server screen as shown in [Table 3-4](#).

Table 3-4. Trusted Server Profile screen service settings

| Field | Setting |
|------------------------------------|--|
| Trusted-Server Name | Shows VVSTS |
| Password | Type a <i>password</i> that will be known to all machines in this network. See item P5 on the S3400 password table on page A-9. |
| IP Address | Type the <i>private IP address</i> for the MAS machine that will have the MWI server installed. Check your MAS features list on page A-11 to verify which MAS this is. |
| Service Name | Type MWI Server (<i>enter this name exactly as shown</i>). |
| Access to Cross Domain Delivery? | n |
| Default Community Number | 1 |
| Trusted Server ID | <i>Field will be filled in automatically.</i> |
| Minutes of Inactivity Before Alarm | 0 |

- When finished, press **F3** (Enter).

The Trusted Server ID field is populated automatically.

8. Finally, you must modify the first IMAP trusted server to match the new settings.

At the administration command prompt, enter **change trusted-server Imap4TS1** and press Enter. Type the trusted server name exactly as shown in upper and lower case.

The system displays the Trusted Server Profile screen for this service.

9. Type the IMAP4 password (see item **P6** on the [S3400 password table](#) on page A-9).
10. Press **F3** (Enter).

Check the status line to verify that the trusted server information was successfully updated.
11. At the command prompt, type **exit** and press Enter.
12. Scroll down and click **Return to Main**.

Rebooting the MSS

To make sure that the MSS is working correctly, reboot it now as follows:

1. Starting from the Messaging Administration main menu, select:

```
Utilities
  Reboot System
```

The server displays the Reboot System screen.

2. Click **Reboot**.
3. At the reboot warning message, click **OK** to proceed.

Status messages display as the server shuts down the messaging software. This may take several minutes. Proceed with the installation.

4

Administering the MAS

This chapter describes how to perform basic administration on the Messaging Application Server (MAS).

| | |
|--------------|---|
| Note: | Before you can successfully complete the tasks in this section, you must have successfully completed the initial MSS administration tasks in Chapter 3, "Powering up the system and performing initial MSS administration." |
|--------------|---|

| Section | Page |
|--|------|
| Introduction | 4-2 |
| Setting up the MAS machine | 4-3 |
| Changing the administrator account name and password | 4-5 |
| Changing the machine name | 4-6 |
| Assigning IP addresses for this MAS | 4-7 |
| Setting up the first MAS as the domain controller | 4-14 |
| Creating user accounts and adding them to groups | 4-16 |
| Adding an MAS to the Windows domain | 4-18 |
| Setting up remote access | 4-20 |
| Updating the Modular Messaging account settings | 4-25 |
| Synchronizing the time and date with the MSS | 4-26 |
| Configuring and testing the port boards | 4-27 |
| Setting up the MAS messaging services | 4-37 |

Introduction

You need to set up the MAS to work correctly on the corporate local area network (LAN) and the private LAN (the required MSS and any other MAS units). You also need to configure the port boards and install any required MAS services.

To successfully install an MAS, you need:

- A completed copy of all the forms in Appendix A, “System planning forms.” These include the [S3400 system planning form](#), the [S3400 password table](#), the [S3400 logon accounts form](#), the [MAS features list](#), and the [Required switch and messaging information form](#).



CAUTION: Use your completed planning forms from Appendix A, “System planning forms,” to enter the correct values. You cannot use these examples or guess at the values. If you try, the current operation of the customer LAN may be damaged.

- The software and documentation listed in ["Required software and documentation"](#) on page 2-5.
- All required hardware, including the MAS voice port boards, installed as described in Chapter 2, “Installing the system hardware.”
- Initial MSS administration completed as described in Chapter 3, “Powering up the system and performing initial MSS administration.”

Because an S3400 system installation requires many steps, use your copy of the checklist in Appendix B, “Installation checklist.” Check off items as you complete them to track your progress.

Setting up the MAS machine

Do this task on every MAS machine.

Switching the monitor to show the correct server

The KVM switch is normally connected to the required MAS through the second computer port (VGA 02). Subsequent MASs (if present) are connected to computer ports VGA03, VGA 04, and so on.

To switch the monitor to show the server that you need to administer:

1. *For a Belkin OmniView Pro2 KVM:* Press slowly in sequence Scroll Lock, then Scroll Lock, then the up (or down) arrow key to change to the server connected to a higher or lower port number.

You can alternatively type the port number instead of pressing the up or down arrow key (such as 02 for port 2). See your KVM switch documentation for complete user instructions.

2. If you cannot access the correct server, see ["Connecting the KVM cables"](#) on page 2-26 and verify the cable connections. To correct cabling problems, power down the system correct the cabling, then power up the system again.

Logging in for the first time

You must log in as the known administrator to begin administration of an MAS unit.

| | |
|--------------|---|
| Note: | If new MAS software is provided, it must be copied to the hard disk on each new MAS server before administration can begin. To reload the operating system, continue with Appendix D, "Loading the operating system on an MAS." |
|--------------|---|

The machine begins to boot after power up. To log in to a newly installed MAS:

1. *Optional:* When the system begins to boot, you can:
 - Press **Esc** when the splash screen appears.
 - Press the space bar to skip the memory check.

| | |
|--------------|--|
| Note: | If you are installing more than one MAS, you see an error message about an IP address conflict with another system on the network. Press OK to ignore the message. This error persists until a unique IP address is assigned to each MAS. |
|--------------|--|

2. When the boot completes, press **Ctrl+Alt+Del** to log on as follows:
 - a. On the Log On to Windows screen, verify that the logon name is VSSystemAdmin.
 - b. Enter this password exactly as shown: **3825_STul**
 - c. Press Enter or click **OK**.

Setting up regional settings, date, and time

Set up this MAS for its region and time zone.

1. Set up regional settings as follows:
 - a. Click the **Start** button, then select Settings, then select Control Panel.

| |
|---|
| <p>Note: Submenu choices are indicated with a right angle sign (>) in the rest of this document. For example, the procedure above would appear as Start > Settings > Control Panel.</p> |
|---|

- b. In the Control Panel window, double-click **Regional Options**.
 - c. On the Regional Options window, on the General tab:
 - (1) Select your locale from the drop-down list.
 - (2) Update your language settings if needed.
 - d. Click the other tabs in order, and verify that your **Numbers**, **Currency**, **Time**, and **Date** settings are correct for this system. The defaults should be adjusted to reflect the locale you selected.
 - e. Click the **Input Locales** tab. Verify your locale and keyboard settings.
 - f. When finished, click **OK** to close the Regional Options window.
 - g. *If you removed the default locale*, you are prompted that it will be removed the next time you reboot the system. Click **OK**.
 2. Set the time and date as follows:
 - a. In the Control Panel window, double-click **Date/Time**.
 - b. On the Date/Time Properties window, click the **Time Zone** tab.
 - c. Set the time zone and daylight savings values as needed.
 - d. Click **Apply**.

| |
|--|
| <p>Note: Set and apply the time zone <i>first</i>. If you enter the time first, it may become incorrect when you set the time zone.</p> |
|--|

- e. Click the **Date & Time** tab.
- f. Set the date, year, and time.
- g. Verify your settings, then click **OK**.
- h. Close the Date/Time Properties window.
- i. Close the Control Panel window.

Changing the administrator account name and password

Do this task on every MAS machine.

You need to change the default administrator account name and password on every MAS for security reasons.

Note: This account on MAS#1 will become the domain administrator account. It is important to set it up correctly now, as it will be very difficult to change later. See the [S3400 logon accounts form](#) on page A-10 for the account names and passwords to use at this site.

To rename the default administrator account:

1. Right-click **My Computer** and select **Manage**.
2. On the Computer Management window, under System Tools, click **Local Users and Groups**, then click **Users**.

The VSSystemAdmin account is listed in the **Users** container.

3. Right-click the account name and select **Rename**.
 - a. Rename the account as appropriate for this MAS (case is not important). See items **A1** to **A4** on the [S3400 logon accounts form](#) on page A-10.

Note: In this document, the example **dom-admin** is used for the first MAS, which is the domain administrator. Each subsequent MAS will have a unique, local administrator account name (for example, **mas2-admin**). *Do not* leave the account name set to VSSystemAdmin for security reasons.

- b. Type the new name and press Enter.
4. Right-click the new administrator account name and select **Set Password**.

- a. Enter and confirm the new password (case *is* important). See items **A1** to **A4** on the [S3400 logon accounts form](#) on page A-10.
 - b. Click **OK**.
 - c. Click **OK** again if prompted to continue.
5. Close the Computer Management window.

Changing the machine name

Do this task on every MAS machine.

You need to change the machine name from GENERIC-VS as follows:

1. Right-click My Computer and select **Properties**.
2. On the System Properties window, click the **Network Identification** tab.
3. Click the **Properties** button. The Identification Changes window appears.
 - a. Change the Computer name to the required host name (NetBIOS name) for this MAS (such as zippy). See item **1** on your [S3400 system planning form](#) on page A-6.
 - b. Make sure the Member of **Workgroup** radio button is selected. Click **OK**.
 - c. Click **OK** when prompted to reboot the computer.
 - d. Click **OK** to close the System Properties window.
4. Do *not* restart the machine when prompted (click **No**).

You will restart the machine after you assign the IP addresses.

Note: The default is to reboot the system. If you just press enter, the system will reboot.

If you are installing more than one MAS, you again see an error message about an IP address conflict with another system on the network. Press **OK** to ignore the message. This error persists until a unique IP address is assigned to each MAS.

Assigning IP addresses for this MAS

Do this task on every MAS machine.

You need to assign IP addresses and other TCP/IP properties for the corporate and private LANs that this MAS will use. Use your completed [S3400 system planning form](#) on page A-6 to enter the correct values.

Setting up the corporate LAN interface

To assign *corporate* IP addresses to this MAS:

1. Click Start > Settings > Network and Dial-up Connections.

The Network and Dial-up Connections window appears.

2. Rename the two Local Area Connection items as follows:

- a. Right-click **Local Area Connection** and click **Rename**.

- b. Change the name to **Private LAN**.

- c. Right-click **Local Area Connection 2** and click **Rename**.

- d. Change the name to **Corporate LAN**.

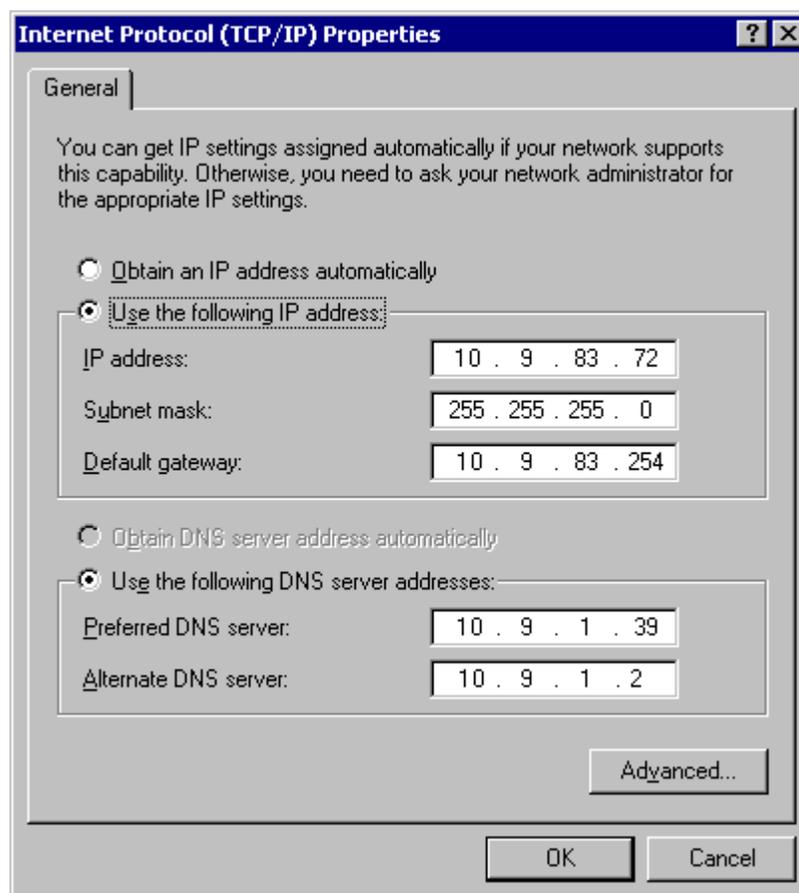
3. Right-click **Corporate LAN** and select **Properties**.

The Corporate LAN Properties window appears.

4. On the General tab, select **Internet Protocol (TCP/IP)** and click **Properties**.

The Internet Protocol (TCP/IP) Properties window appears. See [Figure 4-1](#) on page 4-8 for an example.

Figure 4-1. Sample corporate LAN TCP/IP properties

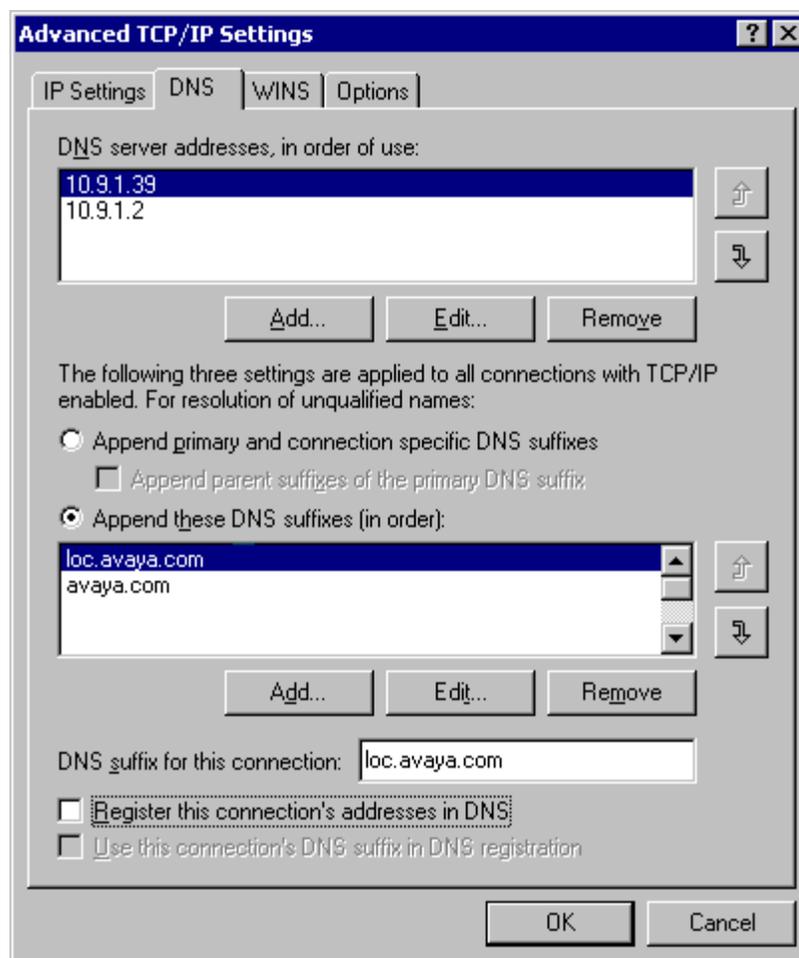


5. On the Internet Protocol (TCP/IP) Properties window:
 - a. Click the “Use the following IP address” radio button.
 - b. Change the IP address, Subnet mask, and Default gateway to the corporate LAN values for this MAS listed in the [S3400 system planning form](#) on page A-6 (items [8](#), [9](#), and [10](#)).
 - c. Click “Use the following DNS server addresses.” Specify the corporate DNS IP addresses as follows:
 - (1) For the Preferred DNS server, enter the first Corporate DNS server IP address from your planning form (item [11](#), if any).
 - (2) For the Alternate DNS server, enter the next Corporate DNS server IP address from your planning form (item [11](#), if any).
 - (3) Click the **Advanced** button.

The Advanced TCP/IP Settings window appears.

(4) Click the **DNS** tab. See [Figure 4-2](#) for an example.

Figure 4-2. Sample advanced TCP/IP settings for the corporate LAN



(5) On the Advanced TCP/IP Settings **DNS** tab, enter the following:

- If you need to add IP addresses for any additional corporate DNS servers, click **Add** (see item 11 on the [S3400 system planning form](#) on page A-6). Click **OK** to approve each entry.
- Select the radio button for “Append these DNS suffixes (in order)”. Click **Add**.
- On the TCP/IP Domain Suffix window, in the Domain suffix field, enter any corporate domain suffixes listed for Search order of DNS domains using item 12 on the system planning form (for example, loc.avaya.com and avaya.com). After each entry, click **Add**. Repeat as needed to add all required suffixes.
- In the “DNS suffix for this connection” text box, enter the suffix for the fully qualified corporate LAN domain name (do *not* include the

machine name). For example, loc.avaya.com (see item [6](#) on the [S3400 system planning form](#) on page A-6).

- (6) Click **OK** to return to the Internet Protocol (TCP/IP) Properties window.
6. Click **OK** to close the Internet Protocol (TCP/IP) Properties window.
7. Click **OK** to close the Corporate LAN Properties window.

Setting up the private LAN interface

To assign *private* IP addresses to this MAS:

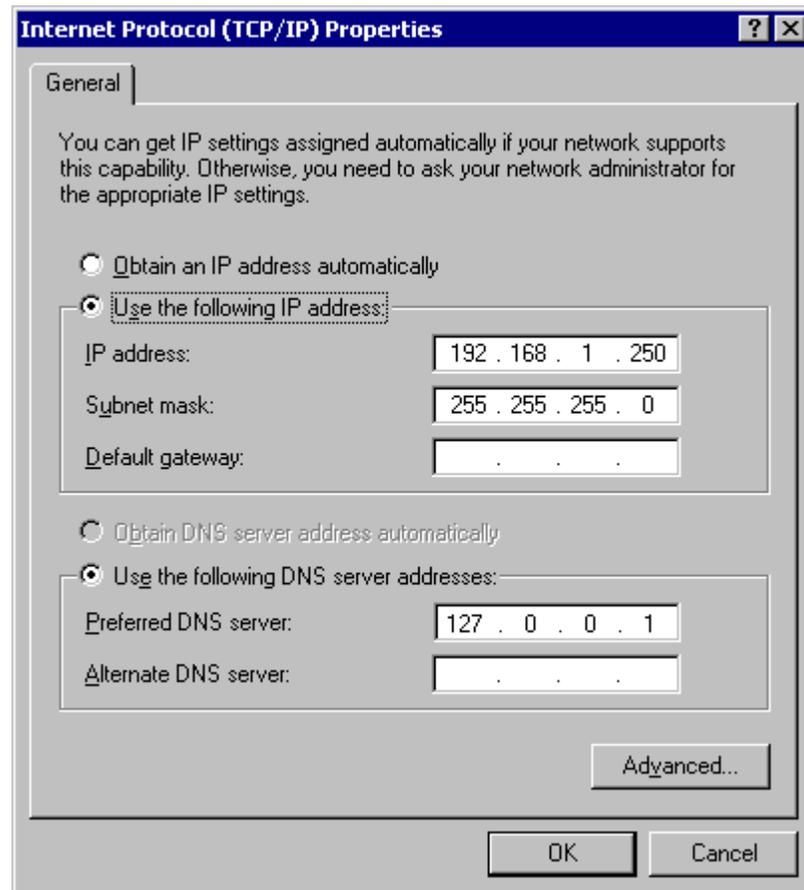
1. On the Network and Dial-up Connections window, right-click **Private LAN** and select **Properties**.

The properties window for the *private* LAN connection appears.

2. In the scroll box, select **Internet Protocol (TCP/IP)** and click **Properties**.

The Internet Protocol (TCP/IP) Properties window appears. See [Figure 4-3](#) for an example.

Figure 4-3. Sample private LAN TCP/IP properties



3. On the Internet Protocol (TCP/IP) Properties window:
 - a. Click the **Use the following IP address** radio button.
 - (1) Verify or update the IP address for this particular MAS as follows:
 - *For the first MAS*, you should be able to use the default IP settings as shown (such as 192.168.1.250).
 - *For an additional MAS*, you need to change the default settings as listed in item 14 on your [S3400 system planning form](#) on page A-6. For example, the second MAS should be 192.168.1.249.
 - (2) Use the default subnet mask (255.255.255.0).
 - (3) Leave Default gateway blank.
 - (4) Leave the Preferred DNS server as shown (blank is okay).
 - (5) Leave the Alternate DNS server blank.

- b. Click **OK** to close the Internet Protocol (TCP/IP) Properties window.
 - c. If you see an error message that the DNS server list is empty, click **OK**.
4. Click **OK** to close the Private LAN Properties window.
5. Restart the system now:
 - a. Click Start > Shut Down.
 - b. On the Shut Down Windows screen, select **Restart**, then click **OK**.

Testing IP addresses on the private network

To test if the IP addresses are correct and working on the private Ethernet interface:

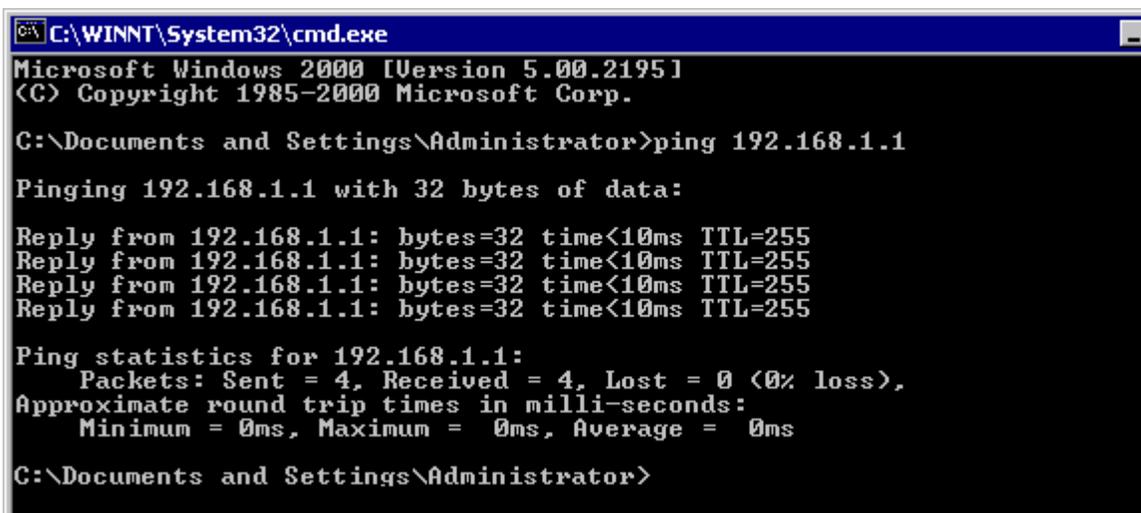
1. When the reboot completes, press **Ctrl+Alt+Del** and log in as follows:
 - a. On the Log On to Windows screen, change the user name to your new administrator account name (such as dom-admin). See items **A1** to **A4** on the [S3400 logon accounts form](#) on page A-10.
 - b. Enter the password for this account (see the logon accounts form).
 - c. Press Enter or click **OK**.

| |
|---|
| <p>Note: If you skipped a Found New Hardware wizard by pressing Esc, the wizard runs now. Complete the wizard to continue. See Appendix D, "Loading the operating system on an MAS," for details if needed.</p> |
|---|

2. Click Start > Run to open a Command prompt window. In the Run box, type **cmd** in the Open field and press Enter.
3. Test ping over the private Ethernet interface.
 - a. At the command prompt, ping all IP addresses administered on the private network. For example, **ping 192.168.1.1** and verify success. See item **14** on your [S3400 system planning form](#) on page A-6.
 - b. If the ping test fails, verify that your network connections between the MAS and MSS are good. If so, check your administration.

See [Figure 4-4](#) for an example of a successful ping by IP address.

Figure 4-4. Example of successful ping by IP address



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<10ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\Administrator>
```

- c. *Optional:* If you are using a corporate DNS, you may also want to test ping over the corporate Ethernet interface to make sure it is set up correctly. For example, you could ping any corporate IP addresses on your system (such as items [8](#) through [11](#) on your [S3400 system planning form](#) on page A-6).

You could also ping the MSS machine the corporate FQDN (such as **ping zigzag.loc.avaya.com**). Any name tests should show the *corporate* IP address for the entity you ping.

Note: In order for a name test to succeed, the MSS names must be administered on the corporate DNS. If a corporate DNS is not used, ping will not be able to resolve the corporate name.

4. When finished, close all open windows.

Continue with administration depending on your MAS

Continue with MAS administration as follows:

- If you are setting up the first MAS in the system, continue with "[Setting up the first MAS as the domain controller](#)" on page 4-14.
- If you are adding an MAS to a multiple MAS setup, continue with "[Adding an MAS to the Windows domain](#)" on page 4-18.

Setting up the first MAS as the domain controller

One MAS in every system must be set up as the domain controller. This setup provides an easily administrable, scalable, and secure solution for the S3400 system.



CAUTION: Do this task on the first MAS only.

Temporarily enabling DNS service on the first MAS

To enable the pre-installed DNS service on the first MAS:

1. Double-click the **Monitor** icon on the desktop.

Note: This icon has a .msc extension and is labeled **Monitor.msc**.

The **Services (Local)** item in the left-hand pane should be selected. If it isn't, click it now.

2. Double-click **DNS Server** in the right-hand pane of the Monitor window.

Note: To show entries in the right-hand pane alphabetically, click the **Name** column header.

3. On the DNS Server Properties window, on the General tab, set the "Startup type" to **Manual**, and click **Apply**.
4. Click **Start**.
5. Wait for services to start, then click **OK** to close the Properties window.
6. Close the Monitor window.

Promote the first MAS to a domain controller using DCPromo

You need to run the DCPromo program to make the first MAS a domain controller. You must have a working private LAN connection for DCPromo to install successfully.

A script file named **answer.txt** has been supplied on the C:\ drive. To update this file:

1. Open the answer.txt file for editing:
 - a. Click Start > Run.
 - b. In the Run box Open field, type **notepad C:\answer.txt** and press Enter.

2. Customize the answer.txt file for this installation as follows:
 - NewDomainDNSName=AVMM.com (*Replace AVMM.com with the MAS#1 private FQDN item 2 on the [S3400 system planning form](#) on page A-6, such as zodiac.com*)
 - DomainNetbiosName=AVMM (*Replace AVMM with the Windows NetBIOS domain name item 3 on the S3400 planning form, such as zodiac*)
 - SafeModeAdminPassword=AVMM (*Replace AVMM with the safe mode administrator account password, item A8 on the [S3400 logon accounts form](#) on page A-10*)
3. When finished, click File > Save, then close the editor.
4. Run DCPromo using the answer.txt file as follows:
 - a. Click Start > Run.
 - b. In the Run box, in the Open field, type the following and press Enter:

dcpromo /answer:c:\answer.txt

This step takes about 10 minutes, then the machine reboots. Windows start up will be slow as it does its configuration in the background.

Disabling DNS service on the first MAS

Disable DNS service on the first MAS as follows:

1. When the reboot completes, press **Ctrl+Alt+Del** to log back in using the domain administrator account name (such as dom-admin) and password. Press Enter or click **OK**.
2. Double-click the **Monitor** icon on the desktop.

The **Services (Local)** item in the left-hand pane should be selected.
3. Double-click **DNS Server** in the right-hand pane.
4. On the DNS Server Properties window, on the General tab, set the “Startup type” to **Disabled**, and click **Apply**.
5. Verify that “Service status” is stopped. If needed, click **Stop** to stop service.
6. Click **OK** to close the DNS Server Properties window.
7. Close the Monitor window.

Creating user accounts and adding them to groups



CAUTION: Do this task on the first MAS only.

You need to create three new user accounts on the first MAS that will be used by all MAS units in the system. The new accounts are automatically added to the Domain Admins group so that they can log on to and install software on the MAS.

To create the user accounts and add them to the appropriate groups:

1. Click Start > Run.
2. In the Run box, type the following in the Open field and press Enter:

```
cscript c:\avaya_support\scripts\createmmaccount.vbs <mmlogon>  
<password>
```

where *<mmlogon>* and *<password>* are the customer-provided Modular Messaging account logon name (such as mmacct) and its password. See item [A5](#) on the [S3400 logon accounts form](#) on page A-10.

Wait up to 1 minute for this command to set up the account.

3. Click Start > Run again.
4. In the Run box, type the following in the Open field and press Enter:

```
cscript c:\avaya_support\scripts\createsvcaccount.vbs <svclgon>  
<password>
```

where *<svclgon>* and *<password>* are the customer-provided Services account logon name (such as craft) and its password. See item [A6](#) on the [S3400 logon accounts form](#) on page A-10.

5. Click Start > Run again.
6. In the Run box, type the following in the Open field and press Enter:

```
cscript c:\avaya_support\scripts\createcustomeraccount.vbs  
<customerlogon> <password>
```

where *<customerlogon>* and *<password>* are the customer-provided Customer account logon name (such as custacct) and its password. See item [A7](#) on the [S3400 logon accounts form](#) on page A-10.

7. *Optional.* To verify that the accounts were created correctly:

a. Double-click the **Configure** icon on the desktop.

| |
|---|
| Note: This icon has a .msc extension and is labeled Configure.msc . |
|---|

b. In the left-hand pane of the Configure window:

(1) Expand the **Active Directory Users and Computers** directory.

(2) Expand the directory for the domain name (for example, zodiac.com).

(3) Click **Users**.

c. In the right-hand pane on the Configure window, verify that the three following accounts have been created:

- Customer Account

- MM Account

- Services Account

d. If any of the accounts are missing, rerun the appropriate script to create that account (see steps 1 through 6).

When all three accounts are present, continue.

8. Log in to the newly created Modular Messaging account:

a. Click Start > Log off *admin-account*.

b. On the Log Off Windows screen, click **Yes**.

c. Press **Ctrl+Alt+Del** to log on.

d. On the Log On to Windows screen, change the User name to the Modular Messaging account name (such as mmacct).

e. Enter the password for this account. See item **A5** on the [S3400 logon accounts form](#) on page A-10.

f. Press Enter or click **OK**.

9. Continue with "[Setting up remote access](#)" on page 4-20.

Adding an MAS to the Windows domain



CAUTION: Do this task *only* on an additional (second, third, or fourth) MAS unit.

If you are adding an additional MAS to the system, it must join the Windows domain that you already created for the first MAS so that it can be administered.

To add an MAS to the existing Windows domain:

1. Right-click **My Computer** and select **Properties**.
2. On the System Properties window, click the **Network Identification** tab.



CAUTION: If you are restoring an additional MAS to service after a catastrophic disk failure, you need to first create a workgroup entry before you can join the domain. See [Recovering from a catastrophic disk failure](#) on page F-1 for details.

3. Click the **Properties** button. The Identification Changes window appears.
 - a. Click the Member of **Domain** radio button.
 - b. Enter the name of the Windows domain that you already created (such as zodiac). See item **3** on the [S3400 system planning form](#) on page A-6).
 - c. Click **OK**.
 - d. On the Domain Username And Password window:
 - (1) Enter the Modular Messaging account name (such as mmacct) in the format *domain\account name* (such as zodiac\mmacct). See item **A5** on the [S3400 logon accounts form](#) on page A-10.
 - (2) Enter the Modular Messaging account password.
 - (3) Click **OK**.

It may take several minutes to join the domain.
 - e. A Network Identification box welcomes you to the domain. Click **OK** to close this box.
 - f. When prompted to reboot, click **OK**.
 - g. Click **OK** to close the System Properties window.
4. Restart the machine when prompted (click **Yes**).

5. When the reboot completes, press **Ctrl+Alt+Del** to log back in using the Modular Messaging account name for this system.
 - a. On the Log On to Windows screen, click **Options**.
 - b. Expand the “Log on to” drop-down list and select the Windows domain (such as zodiac).

| |
|--|
| <p>Note: It may take a few minutes for the personal settings to load.</p> |
|--|

- c. Change the user name to the Modular Messaging account name (such as mmacct).
- d. Enter the password for this account. See item **A5** on the [S3400 logon accounts form](#) on page A-10.
- e. Click **OK**.

Setting up remote access

Do this task on every MAS.

You should now be logged on to the server using the MAS Modular Messaging logon (such as mmacct) and its password. See item **A5** on the [S3400 logon accounts form](#) on page A-10.

To set up this MAS for remote access:

1. Disable digital signature checking as follows:
 - a. Right-click **My Computer** and select **Properties**.
 - b. On the System Properties screen, click the **Hardware** tab.
 - c. Under Device Manager, click **Driver Signing**.
 - d. On the Driver Signing Options screen, click the **Ignore** radio button.
 - e. Click **OK**.
 - f. Click **OK** to close the System Properties screen.
2. Connect the USB cable for each MAS's external modem to the recommended USB port A on the back of the MAS. See "[Connecting the USB modem on the MAS](#)" on page 2-32 for complete steps.

A Found New Hardware message appears when the system locates the modem.
3. Double-click the **Monitor** icon on the desktop.

The **Services (Local)** item in the left-hand pane should be selected. If it isn't, select it now.
4. In the Monitor window, scroll down to **Routing and Remote Access** in the right-hand pane. Double-click it to bring up the Properties window.
5. On the Routing and Remote Access 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 service to start, then click **OK** to close this window.
6. Close the Monitor window.

7. Double-click the **Configure** icon on the desktop.

Note: This icon has a .msc extension and is labeled **Configure.msc**.

8. Expand **Routing and Remote Access**.
 - a. Expand the server name (such as ZIPPY).

Note the green upward-pointing arrow on the server's icon that indicates that remote access service (RAS) is running.
 - b. Right-click **Ports** and select **Properties**.
 - c. On the Ports Properties window, make sure the modem is highlighted, then click **Configure**.
 - d. On the Configure Device - <model> Modem window, verify that the box to activate **Remote access connection (inbound only)** is checked.
 - e. Click **OK**.
 - f. Click **OK** to close the Ports Properties window.
 - g. Click **Ports** in the left-hand pane.
 - h. In the right-hand pane, verify that there is an entry for the modem attached to this MAS, such as MultiTech ZBA-USB-V92.
 - If the modem entry is present, go to step 9.
 - If the modem entry is missing:
 - (1) Verify that the modem is plugged into the recommended USB port on the MAS (see "[Connecting the USB modem on the MAS](#)" on page 2-32).
 - (2) Click Start > Settings > Control Panel.
 - (3) Double-click **Phone And Modem Options**.
 - (4) The first time you select Phone and Modem Options, a wizard runs. Complete the wizard following the steps on each screen to configure your locale settings. When finished, your new entry appears in the **Locations** box on the **Dialing Rules** tab.
 - (5) On the Phone And Modem Options window, click the **Modems** tab.
 - (6) Verify that the modem is present and attached to a port (typically COM3 if you used the recommended USB port).
 - (7) *If the modem is not present or attached to a port, you may need to remove the modem entry, then reinstall the modem.*

- (8) When finished, click **OK** to close the Phone And Modem Options window.
 - (9) Close the Control Panel.
 - (10) Return to step 8-g and verify that the modem is now present.
9. Set up a static IP address pool as follows:
- a. In the left-hand pane, right-click the server name (such as ZIPPY) and select Properties.
 - b. Click the IP tab.
 - c. Under "IP address assignment," select "Static address pool".
 - d. If an IP address range of 0000 to 0000 appears, select it and click **Edit**. (If no address appears, click **Add**.)
 - e. In the New Address Range properties box, enter the start and end IP addresses depending on the MAS you are installing as follows:
 - MAS#1: 192.168.2.200 to 192.168.2.201
 - MAS#2: 192.168.2.202 to 192.168.2.203
 - MAS#3: 192.168.2.204 to 192.168.2.205
 - MAS#4: 192.168.2.206 to 192.168.2.207

| |
|---|
| Note: These IP addresses use a 2 (not a 1) in the third number place. |
|---|

- f. Number of addresses is automatically assigned 2.
 - g. Click **OK**.
 - h. For the Adapter field, select "Allow RAS to select adapter."
 - i. Click **OK** to close the Properties window.
10. Proceed with remote access administration as follows:
- If you are administering the first MAS, continue with "[Administering the first MAS for remote access](#)" on page 4-23.
 - If you are administering a subsequent MAS, continue with "[Adding a subsequent MAS to the remote access group](#)" on page 4-24.

Administering the first MAS for remote access

Continue the previous procedure on the first MAS as follows:

1. In the left-hand pane of the Configure window:
 - a. Expand the **Active Directory Users and Computers** directory.
 - b. Expand the directory for the domain name (for example, zodiac.com).
 - c. Click **Users**.
2. In the right-hand pane on the Configure window, double-click **RAS and IAS Servers** to bring up the Properties window.
3. On the RAS and IAS Servers Properties window:
 - a. Click the **Members** tab.
 - b. Click **Add**.
 - c. In the Select Users, Contacts, Computers or Groups window, locate this MAS (such as ZIPPY); it will have a blue terminal icon beside it. Double-click it.
 - d. Verify that the correct computer name appears underlined in the list box.
 - e. Click **OK** to close this window.
 - f. Click **OK** again to close the RAS and IAS Servers Properties window.
4. In the right-hand pane, double-click **Services Account** to bring up the Properties window.
5. On the Services Account Properties window:
 - a. Click the **Dial-in** tab.
 - b. Under Remote Access Permission (Dial-in or VPN), click the radio button to select **Allow access**.
 - c. CallBack Options should be left at **No Callback**.
 - d. Click **OK**.
6. Close the Configure window.
7. Continue with "[Updating the Modular Messaging account settings](#)" on page 4-25.

Adding a subsequent MAS to the remote access group

Add subsequent MAS units to the existing remote access group as follows:

1. Close the Configure window on the MAS that you are administering now.

| |
|---|
| <p>Note: If you are installing three or four MAS units, you may want to do this procedure on the final MAS you are installing. That way you only have to do this procedure once.</p> |
|---|

2. Switch the monitor to show the first MAS. See "[Switching the monitor to show the correct server](#)" on page 4-3 for this procedure if needed.

| |
|--|
| <p>Note: Do this procedure on the first MAS only.</p> |
|--|

3. *On the first MAS:* Double-click the **Configure** icon on the desktop.
4. In the left-hand pane of the Configure window:
 - a. Expand the **Active Directory Users and Computers** directory.
 - b. Expand the directory for the domain name (for example, zodiac.com).
 - c. Click **Users**.
5. In the right-hand pane on the Configure window, double-click **RAS and IAS Servers** to bring up the Properties window.
6. On the RAS and IAS Servers Properties window:
 - a. Click the **Members** tab.
 - b. Click **Add**.
 - c. In the Select Users, Contacts, Computers or Groups window, locate this MAS (such as ZORRO); it will have a blue terminal icon beside it. Double-click it.
 - d. Verify that the correct computer name appears underlined in the list box.
 - e. Repeat steps c and d to add all MAS units to this list. See the [S3400 system planning form](#) on page A-6.
 - f. Click **OK** to close this window.
 - g. Click **OK** again to close the RAS and IAS Servers Properties window.
7. Close the Configure window.
8. Switch the monitor back to show the MAS that you are currently installing. Continue with the installation.

Updating the Modular Messaging account settings

Do this task on every MAS machine.

To update settings for the Modular Messaging account:

1. Double-click the **Monitor** icon on the desktop.

The **Services (Local)** item in the left-hand pane should be selected.

2. On the Monitor window for local services, make sure that the MAS messaging service is stopped as follows:
 - a. Scroll down to **MM Messaging Application Server** in the right-hand pane and check the status.
 - If the Status column shows nothing, the service is already stopped.
 - If needed, right-click **MM Messaging Application Server** and select **Stop**.
 - b. Next, double-click **MM Messaging Application Server** to open the Properties window.
 - c. On the MM Messaging Application Server Properties (Local Computer) window, click the **Log On** tab.
 - (1) *For the first MAS only:* Click the **Browse** button. Locate the new Modular Messaging account (such as mmacct), then double-click it. See item **A5** on the [S3400 logon accounts form](#) on page A-10.
 - (2) *For a subsequent MAS:* Clear the “This account” data-entry field. Type the *Windows domain\MM account* name in the exact format shown (such as zodiac\mmacct). See item **3** on the [S3400 system planning form](#) on page A-6 for the domain name.
 - (3) Enter and confirm the account password.
 - (4) Click **OK** to close the Properties window.
 - d. When the “Granted Log On As A Service right” console message appears, click **OK**.
 - e. Close the Monitor - Services (Local) window.
3. Update the following settings:
 - a. Click Start > Run.
 - b. In the Run box, type **dcomcnfg** in the Open field and press Enter.

The Distributed COM Configuration Properties window appears.

- c. In the Applications box, double-click **Modular Messaging Messaging Application Server**.
- d. On the Properties window, click the **Identity** tab.
- e. Make sure **This user** is selected, then click **Browse**.
- f. On the Browse for Users window, locate the Modular Messaging account (such as mmacct), then double-click it. It appears as *Windows domain\account name* (such as ZIPPY\mmacct).
- g. Click **OK** to close this window.
- h. On the Properties window, enter and confirm the password.
- i. Click **OK** to close the Properties window.
- j. Click **OK** to close the Distributed COM Configuration Properties window.

Synchronizing the time and date with the MSS

Do this task on every MAS machine.

You must synchronize the time on the MSS and MAS servers as follows:

1. Click Start > Run to open a Command prompt window.
2. In the Run box, type the following in the Open field and press Enter:

c:\avaya_support\cmd\time.bat

The clocks on the MSS and MAS servers will soon show the same time.

Configuring and testing the port boards

Do this task on every MAS that contains port boards.



CAUTION: You can only install this system by using the required configuration notes for your switch or PBX. The port boards *must* be administered on the switch before you can proceed.

Drivers for all supported port boards are already installed. However, the port boards on the MAS units must be configured and tested as described in this section.

- Use the configuration notes to administer the port boards for your particular PBX or switch integration. See "[Required software and documentation](#)" on page 2-5 for instructions on obtaining the configuration notes.
- See [Table 4-5](#) lists supported Dialogic port boards and their associated documents (copies are on the documentation CD). The type of port boards installed may vary on different MAS units.

Table 4-5. Supported MAS port boards

| Protocol | Ports | Port boards | Max # | Dialogic documents on CD |
|------------------------------|------------------|---|--------|---|
| Analog | 4 - 8 12 - 48 | Dialogic 4-port T/R board Dialogic 12-port T/R board | 2 4 | D/41JCT-LS (PDF 133K) D/120JCT-LS (PDF 131K) |
| Digital Set Emulation | 8 - 40 | Dialogic D/82JCT-U | 5 | D/82JCT-U (PDF 240K) |
| T1-QSIG | 23 - 69 | Dialogic D/480JCT-T1 (dual) | 3 | Span JCT boards (PDF 99K) |
| E1-QSIG | 30 - 60 | Dialogic D/600JCT-E1 | 2 | Span JCT boards (PDF 99K) |

Continue with the appropriate section for the type of port boards installed on your MAS:

- "[Configuring analog port boards](#)" on page 4-28
- "[Configuring set emulation boards](#)" on page 4-30
- "[Configuring T1- or E1-QSIG boards](#)" on page 4-32

Configuring analog port boards

You may have up to four analog port boards installed in your MAS:

- Dialogic 4-port Tip/Ring board (up to 2; see [D/41JCT-LS](#) for details)
- Dialogic 12-port Tip/Ring board (up to 4; see [D/120JCT-LS](#) for details)

To configure either of these analog cards:

1. *If D/41JCT-LS boards are installed, do the following to add the correct settings to the system:*
 - a. Click Start > Run.
 - b. In the Run box Open field, type the following and press Enter:
c:\Avaya_Support\Registry_Keys\tsffilename.reg
2. Click Start > Programs > Dialogic System Software > Dialogic Configuration Manager - DCM.

The Dialogic Configuration Manager window appears.

3. In the Computer Name popup window, make sure that the radio button for **Local** is selected (verify the MAS name, such as ZIPPY).
4. Click **Connect**.

The Dialogic Configuration Manager locates any installed port boards.

5. Under Configured Devices, double-click the name of the first Dialogic board shown (such as #0).



CAUTION: If you can't find a suitable TSF file for your PBX, you need to build an appropriate tone file now or the integration will not work. **Cancel** out of this screen, then see Appendix E, "Creating a new tone file."

6. On the Dialogic Configuration Manager Properties window:
 - a. Click the **Files** tab.

The **TSFFilename** parameter should be selected.

Note: If you are using a D/41JCT-LS card, you must highlight the "Configured Devices" parameter on the DCM display when selecting Configure Device. This is necessary to be able to view the TSFFilename parameter.

6. Locate the prerecorded TSF file for your PBX or switch:

- (1) Click the ... button to browse, then navigate to the C:\Avaya Support\Tone_Files directory.
- (2) On the Search File window, select a TSF file that is appropriate for the PBX to which you are connecting (for example, Avaya-G3-US.tsf). Double-click the file name.

The appropriate TSF file is inserted in the Value field.

7. After an appropriate TSF file is selected, click the **Misc** tab.
 - a. *For a D/120JCT-LS board:* Click the **FirmwareFile** parameter, then type **spfax.fwl** in the Value field.
 - b. Click the **TSFFileSupport** parameter.
 - c. Select **Yes** from the Value drop-down list.

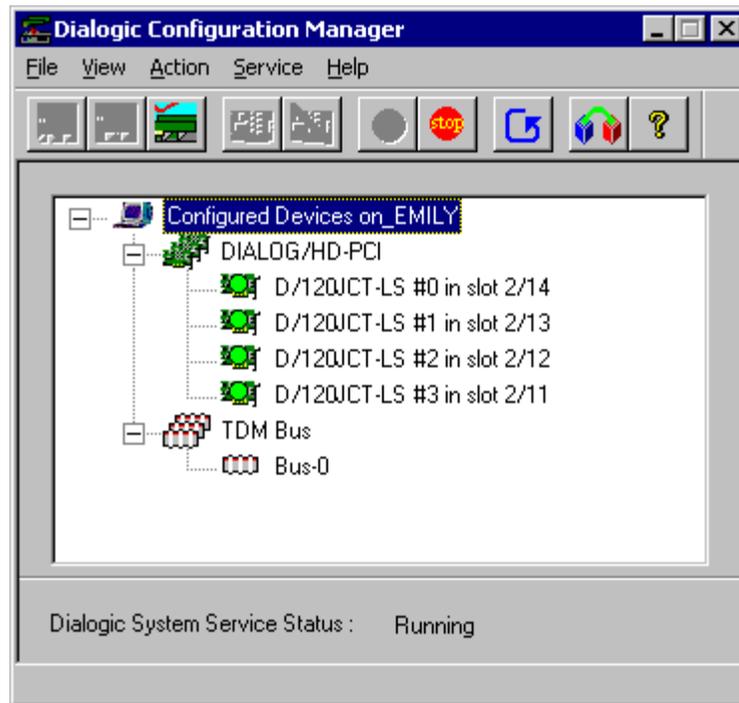
| |
|--|
| <p>Note: You must have selected an appropriate TSF file for your PBX or switch before setting the TSFFileSupport parameter to Yes, or errors may occur.</p> |
|--|

- d. Click the **DisconnectTone** parameter.
 - e. Select **Yes** from the Value drop-down list.
 - f. Click **OK** to close the Properties window.
8. Repeat steps 5 through 7 for any other installed Dialogic boards (such as #1). Most of the first board's settings will persist between boards, except for the **FirmwareFile** parameter.
9. When all boards are configured, click the green Start Service button on the button bar.

Wait for service to start. The installed boards show a green light when service is started, and the Stop Service button becomes active. See [Figure 4-5](#) on page 4-30 for an example.

10. Close the Dialogic Configuration Manager.
11. Continue with "[Testing the port boards](#)" on page 4-35.

Figure 4-5. Sample Dialogic Configuration Manager analog window - service started



Configuring set emulation boards

You may have up to five 8-port Dialogic Digital Set Emulation boards installed in your MAS. See [D/82JCT-U](#) for more information on this type of board.

To configure your digital set emulation boards:

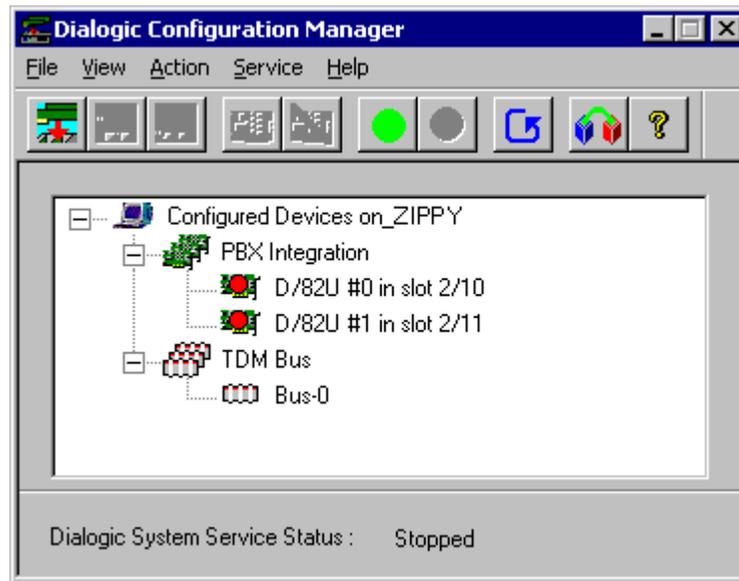
1. Click Start > Programs > Dialogic System Software > Dialogic Configuration Manager - DCM.

The Dialogic Configuration Manager window appears.

2. In the Computer Name popup window, make sure that the radio button for **Local** is selected (verify the MAS name, such as ZIPPY).
3. Click **Connect**.

The Dialogic Configuration Manager locates any installed port boards. See [Figure 4-6](#) for an example.

Figure 4-6. Sample Dialogic Configuration Manager DSE window - service not started



4. Under Configured Devices, double-click the name of the first Dialogic board shown (such as #0).
5. On the Dialogic 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. Typically, **A-Law** is Europe and **μ-Law** is United States.
 - c. Click the **Misc** tab and select the **PBXSwitch** parameter.
 - d. On the pull-down list of values, select the name of the PBX (for example, use Lucent 2-wire for an Avaya G3 switch).
 - e. Click the **Country** tab and select the **Country** parameter.
 - f. On the pull-down list of values, select your country.
 - g. Click **OK** to close the Dialogic Configuration Manager Properties window.
6. Repeat steps 4 and 5 for any other installed Dialogic boards (such as #1).
7. When all boards are configured, click the green Start Service button on the button bar.

Wait for service to start. The installed boards show a green light when service is started, and the Stop Service button becomes active.

8. Check that the boards are operating correctly.
 - a. Check the LED display on the Dialogic board faceplate. It flashes a code for each port consecutively as follows:
 - Ports that are connected to a phone line and functioning correctly show 0 and the port number (such as 00 or 01).
 - Ports that are not connected to a phone line or not functioning correctly show **En**, where **n** is the port number. For example, the display reads E3 if there is an error on port 3.
 - b. If any errors (**En** codes) are present, check your board configuration, the physical connections between the board and the PBX, or the PBX configuration itself. (For example, make sure you have configured the correct PBX). Repeat steps 4 through 8 as needed.
9. Close the Dialogic Configuration Manager.
10. Continue with "[Testing the port boards](#)" on page 4-35.

Configuring T1- or E1-QSIG boards

You may have either of the following QSIG port boards installed in your MAS. See [Span JCT boards](#) on the documentation CD for more information.

- Dialogic D/480JCT-T1 board (up to 3 boards per MAS)
- Dialogic D/600JCT-E1 board (up to 2 boards per MAS)

To configure either of these QSIG boards:

1. Click Start > Programs > Dialogic System Software > Dialogic Configuration Manager - DCM.

The Dialogic Configuration Manager window appears.

2. In the Computer Name popup window, make sure that the radio button for **Local** is selected (verify the MAS name, such as ZIPPY).
3. Click **Connect**.

The Dialogic Configuration Manager locates any installed port boards.

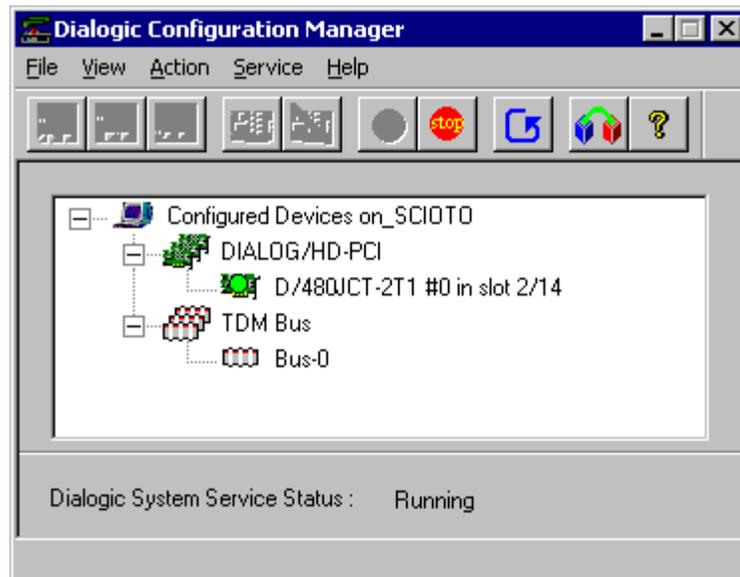
4. Under Configured Devices, double-click the name of the first Dialogic board shown (such as #0).
5. On the Dialogic Configuration Manager Properties window:
 - a. Click the **Interface** tab and select the **ISDNProtocol** parameter.
 - b. Select the correct value for this type of board from the pull-down 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 this type of board from the pull-down list:
 - For E1-QSIG: select **A-Law**
 - For T1-QSIG: select **μ-Law**
 - e. Click the **Misc** tab:
 - (1) Select the **FirmwareFile** parameter. Type **Default** in the Value field.
 - (2) Select the **FirmwareFile2** parameter. Type **spfax.fwl** in the Value field.
 - f. Click the **Country** tab and select the **Country** parameter.
 - g. On the pull-down list of values, *always* use United States for either type of board.
 - h. Click **OK** to close the properties window.
6. Repeat steps 4 and 5 for any other installed Dialogic boards (such as #1).
7. When all boards are configured, click the green Start Service button on the button bar.

Wait for service to start. The installed boards show a green light when service is started, and the Stop Service button becomes active. See [Figure 4-7](#) on page 4-34 for an example.

8. Check that the boards are operating correctly.
- a. Check the LED display on the Dialogic board faceplate.
 - A red status LED appears on the back of the voice card during driver start-up.
 - If the drivers start successfully, the LED of the board whose port is connected to the PBX is replaced by a green LED within about 20 to 30 seconds. LEDs on the other boards remain red.
 - b. If a problem occurs, check your board configuration, the physical connections between the board and the PBX, or the PBX configuration itself. Repeat steps 4 through 8 as needed.

Figure 4-7. Sample Dialogic Configuration Manager QSIG window - service started



9. Close the Dialogic Configuration Manager.
10. Set up the T1 QSIG or E1 QISG boards for testing as follows:
 - a. Select Start > Programs > Avaya Modular Messaging > Dialogic Line Tester.
 - b. In the Dialogic Line Test Application window, select Tools > Options.
 - c. In the Options window, select the correct values for each field as follows:
 - For Layer 1 Protocol, select your 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 your configuration notes.

11. Continue with "[Testing the port boards](#)" on page 4-35.

Testing the port boards

Before continuing with administration, test all port boards and channels to verify that they can receive calls.

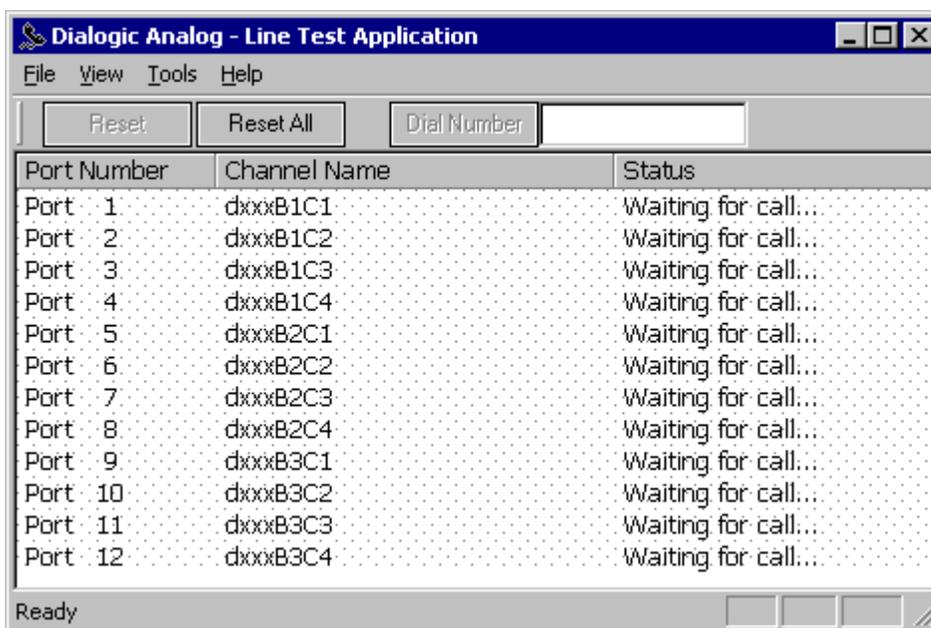
To test port board functionality:

1. Test the incoming call connectivity of all ports as follows:
 - a. Select Start > Programs > Avaya Modular Messaging > Dialogic Line Tester.

The Dialogic Analog - Line Test Application (or DLTest) window appears. The name of the window varies slightly depending on the type of port boards installed.

All port numbers and channel designations should be listed. See [Figure 4-7](#) for an example.

Figure 4-8. Sample Dialogic Analog - Line Test Application window



- b. From a handset on the same PBX, dial each port individually.
 - For analog and set emulation boards, use the individual port extensions from [Required switch and messaging information](#) on page A-12.
 - For QSIG cards, repeatedly dial the number for that group of ports. The switch connects to the next port in the list each time you dial.

- c. Check the **Status** column. Verify that each port shows “Received call” followed by “Connected.” See [Table 4-6](#) for different status conditions.

The system should answer each connected call with a standard welcome message.

Table 4-6. DL Test status messages

| 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 dialled to make on 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. | A incoming call or outgoing call was answered so the call is now connected. | Normal |
| Call was disconnected. | A Incoming or Outgoing was disconnected. | Normal |
| Error. | A general error with channel occurred. | Error |
| Error, No Dial tone detected. | An outgoing call was made but no dial tone was detected before dialling. | Error |

2. Test the outcalling capability of all ports as follows:
 - a. Type the number of an extension on this PBX in the Dial Number field near the top of the window.
 - b. Select a Port Number on the Dialogic Line Test Application window.
 - 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 have been tested.
 - g. When finished, close this window.
3. If a problem occurs, check your board configuration, the physical connections between the board and the PBX, or the PBX configuration itself. For example, make sure that you have configured the correct PBX and administered it according to the appropriate configuration notes.

Setting up the MAS messaging services

Do this task on every MAS machine.

To set up messaging services on the MAS, the following steps are required:

- ["Setting up MAS messaging service"](#) on page 4-37
- ["Installing additional MAS messaging software"](#) on page 4-39
- ["Configuring the voice mail system"](#) on page 4-40
- ["Setting up and starting messaging services"](#) on page 4-45

Use your completed [S3400 system planning form](#) on page A-6, [S3400 password table](#) on page A-9, and [MAS features list](#) on page A-11 to complete the steps in this section.

Setting up MAS messaging service

To continue setting up messaging services on the MAS:

1. Double-click the desktop icon labeled "Continue with MM Setup".

The Messaging Application Server - Configuration Wizard appears.

2. For the Peer Messaging Storage Server Selection screen:
 - Enter the name of the Peer Messaging Storage Server. This is always the MSS private system name **mss1**.
 - Click **Next**.

The Service configuration may take several minutes.

3. For the Voice Mail Domain Selection screen:
 - *For the first MAS:* Click the radio button for "First server in a new voice mail domain."
 - *For an additional MAS:* Click the radio button for "Subsequent server in an existing voice mail domain."
 - Click **Next**.



CAUTION: If you are restoring an MAS to service after a disk failure, you need to do a different procedure here. See [Recovering from a catastrophic disk failure](#) on page F-1 for details.

4. On the first Messaging Application Server Credentials screen:
 - Enter the password for the LDAP service that you previously administered on the MSS in both boxes. This is the MAS trusted server password specified in "[Setting up the trusted servers](#)" on page 3-12. See items **P1** through **P4** on the [S3400 password table](#) on page A-9, using the password for the appropriate MAS.
 - Click **Next**.
5. *For the first MAS only:* Another Messaging Application Server Credentials screen appears.
 - Enter the password for the IMAPI service that you previously administered on the MSS. This is the password for the MWI trusted server that activates message-waiting lamps, currently called VVSTS. See item **P5** on the password table.
 - Click **Next**.
6. *For the first MAS only:* A third Messaging Application Server Credentials screen appears.
 - Enter the password for the IMAP4 service that you previously administered on the MSS. This is the Imap4TS1 trusted server password. See item **P6** on the password table.
 - Click **Next**.
7. On the Voice Mail Domain Selection screen:
 - *For the first MAS:* Enter the unique voice mail domain name for this pair of MAS and MSS servers (such as zebra). See item **4** on the [S3400 system planning form](#) on page A-6.
 - *For an additional MAS:* Select the existing voice mail domain name from the voice mail domain (VMD) drop-down box (such as zebra).
 - Click **Next**.

The VMD configuration may take several minutes.
8. *For a subsequent MAS:* The Caller Application screen appears if Caller Applications are deployed in the domain.
 - Use the default setting for this step.
 - Click **Next**.
9. For the User Information screen, just click **Next**.
10. For the Setup Complete screen, click **Finish**.

Installing additional MAS messaging software

You need to install additional required messaging software on the MAS to bring it into full service. Check your [MAS features list](#) on page A-11 for the software packages that are required for this particular MAS.

To install the additional required messaging software:

1. Run the Modular Messaging Installation wizard as follows:
 - a. Click Start > Run.
 - b. In the Run box Open field, type **C:\mm_install\install\setup** and press Enter.

The software searches for components to install, then the Modular Messaging - Installation Wizard configuration window appears.

2. In the components list, check the boxes for any messaging services you need to install on this MAS. See the [MAS features list](#) on page A-11.

Services include:

- Call Me Server (includes the Mailbox Monitor Server)
- Caller Applications Editor
- Fax Sender Server
- Message Waiting Indicator (MWI) Server (also includes the Mailbox Monitor Server)
- Tracing Server
- Voice Server Prompt Files for additional languages

| |
|--|
| <p>Note: Administration Tools, Diagnostic Tools, Messaging Application Server, and one set of prompt files are already installed on each MAS.</p> |
|--|

3. When all required services are selected, click **Install**.
4. Wizards run for all the Modular Messaging software packages you selected. Complete each wizard as required. For example:
 - a. When the Mailbox Monitor Server installation wizard runs, click **Next**.
 - b. When prompted, enter name of this MAS machine (such as zippy). Click **Next**.
 - c. When prompted, enter the password for the MAS Modular Messaging account (such as mmacct). See item **A5** on the [S3400 logon accounts form](#) on page A-10. Click **Next**.
 - d. Click **Install**.

- e. When done, click **Finish**.
5. Each wizard prompts for the same information as shown in step 4. Complete all wizards as they appear.
6. When finished with all wizards, click **Close**.
7. Click **Restart** when prompted to restart the system now.

Configuring the voice mail system

This procedure can only be completed using the configuration notes for your particular PBX or switch integration. Use the [MAS features list](#) on page A-11 and [Required switch and messaging information](#) on page A-12 to complete this section.



CAUTION: You cannot install this system without using the required configuration notes for your PBX or switch. See "[Required software and documentation](#)" on page 2-5 for instructions on obtaining the configuration notes.

To configure the MAS for correct PBX integration:

1. When the reboot completes, press **Ctrl+Alt+Del** to log back in. Use the Modular Messaging account name (such as mmacct) and its password (see item **A5** on the [S3400 logon accounts form](#) on page A-10).
2. Start the MAS messaging service as follows:
 - a. Double-click the **Monitor** icon on the desktop.

The **Services (Local)** item in the left-hand pane should be selected.

- b. In the right-hand pane of the Monitor window, scroll down to **MM Messaging Application Server**. Right-click it and select **Start**.

The system begins a messaging service startup.

Note: When you restart messaging service, the Monitor window immediately shows a status of Started. However, the service may actually take up to 5 minutes to start, depending on the number of port boards installed.

- c. Use the following procedure to monitor startup progress:
 - (1) In the left pane, expand **Event Viewer (Local)**, then click **Application**.
 - (2) Refresh the window periodically until you see Telephony User Interface event 1241, "TUI service has been enabled." It is now safe to proceed.

- d. When service is started, minimize the Monitor window.
3. Click **Start > Programs > Avaya Modular Messaging > Voice Mail System Configuration**.

The Voice Mail System Configuration window appears. All MAS units present in the S3400 system are listed.

Note: Although you are prompted to restart service several times during this procedure, you actually need to restart service only before entering the port board extension numbers in step 13 and at the end, when configuration is complete.

4. *On the first MAS:* Double-click **Telephone User Interface**.
 - a. On the **General** tab, set the “Number of Digits in a Mailbox” to match the number of digits in the extension numbers on the customer’s PBX. See [Required switch and messaging information](#) on page A-12.
 - b. Click **OK** to close this window.
 - c. If prompted that your extension number changes will invalidate all previous mailboxes, click **Yes**.
5. *To set up Call Me service:* Do this procedure after the Call Me Server is installed on any MAS. See the [MAS features list](#) on page A-11.
 - a. Double-click **Call Me**.
 - b. On the Call Me - Voice Mail Domain window, on the General tab, check the box to **Enable Call Me**.
 - c. For **Call Me server**, specify the MAS machine name (such as ZIPPY). If this field is blank:
 - Click the ... button next to the field.
 - On the Select Computer window, double-click the name of the first MAS that supports Call Me (such as ZIPPY).
 - Click **OK** to close this window.
6. *To set up MWI service:* Do this procedure after the Message Waiting Indicator Server is installed on any MAS. See the [MAS features list](#) on page A-11.
 - a. Double-click **Message Waiting Indicator**.
 - b. On the Message Waiting Indicator - Voice Mail Domain window, on the General tab, check the box to **Enable Message Waiting Indicator (MWI)**.
 - c. For **MAS MWI server**, specify the machine name (such as ZIPPY). If this field is blank:
 - Click the ... button next to the field.

- On the Select Computer window, double-click the name of the first MAS that supports MWI (such as ZIPPY).
 - d. In the “Messaging Application Servers that support MWI” box, list all MAS servers that have the MWI software installed. To add a server’s name:
 - Double-click inside the top of the big list box (or click the **Add** dashed-box button just above the list box).
 - A data entry field and ... button appear in the list box. Click the ... button.
 - On the Select Computer window, double-click the name of the first MAS that supports MWI (such as ZIPPY).
 - e. Click **OK** to close this window.
- 7. *To set up fax service:* Do this procedure if the Fax Sender Server is installed on any MAS. See the [MAS features list](#) on page A-11.
 - a. Double-click **Fax**.
 - b. On the Fax - Voice Mail Domain window, on the **General** tab:
 - (1) Check the box for **Fax Enable**.
 - (2) Next to **MAS Fax Sender server**, click **Browse**.
 - (3) On the Select Computer window, double-click the name of the MAS machine that contains the Fax Server software. See the [MAS features list](#) on page A-11.
 - (4) For **Fax Mailbox**, enter the extension for the fax mailbox (this mailbox must be set up on the MSS as well). See the [Required switch and messaging information](#) on page A-12.
 - (5) For **Company Fax Number**, enter the externally diallable number that callers should use to send faxes to subscribers. This number also appears on any outgoing fax cover page.
 - c. Click the **Advanced** button.
 - (1) On the Advanced Fax window, change the **Max Concurrent Outgoing Calls** number to a customer-specified number to allow faxes to be sent. See the [MAS features list](#) on page A-11.
 - (2) Adjust any other options if required.
 - (3) When finished, click **OK** to close this window.
 - d. Click **OK** to close the Fax - Voice Mail Domain window.
 - e. On the Voice Mail System Configuration window, expand **Security**.
 - f. Double-click **Messaging Servers Administration**.

- g. On the Message Servers - Voice Mail Domain window, on the **Message Servers** tab:
 - (1) The Credentials list shows entries for LDAP, IMAPI, and IMAP4.
 - (2) Click the key button above the list to add a new entry for fax.

The **FAX** value should appear in the box.
 - (3) Click in the Password column next to the new Fax entry.
 - (4) Type the password for the fax mailbox and press **Enter**. This value must be numeric (see the [Required switch and messaging information](#) on page A-12).
 - (5) Click **OK** to close this window.
8. *On the first MAS:* Set up access permissions for the system.
 - a. On the Voice Mail System Configuration window, expand **Security** (if not already expanded).
 - b. Double-click **System Administration**.
 - (1) On the Permissions for System Administration window, click **Add**.
 - (2) On the Select Users, Computers, or Groups window, scroll down to **Domain Admins**. Double-click it, then click **OK**.
 - (3) Click **OK** to close this window.
 - c. Double-click **Subscriber Administration**.
 - (1) On the Permissions for Subscriber Administration window, click **Add**.
 - (2) On the Select Users, Computers, or Groups window, scroll down to **Domain Admins**. Double-click it, then click **OK**.
 - (3) Click **OK** to close this window.
9. *On the first MAS:* Set up the PBX service for the system.
 - a. On the Voice Mail System Configuration window, right-click **PBXs** and select **Add New PBX Type**.
 - b. For Telephony Type, select the type of Dialogic board that is installed in this MAS (such as Dialogic Analog).
 - c. In the PBX field, select the type of switch you have (such as Dialogic Avaya G3).
 - d. Click **OK** to close this window.
 - e. Return to the Voice Mail System Configuration window and expand **PBXs**.

- f. Double-click the PBX entry you just added.
- g. Using the configuration notes for your PBX or switch, set up the specific PBX parameters required for this integration of the system.



CAUTION: PBX configuration should be done on the first MAS only. CLAN, Inband, DSE, and QSIG integrations are supported.

10. On the Voice Mail System Configuration window, expand **Messaging Application Servers**.
 - a. *For the first MAS:* The first time you access this item, a Telephony Configuration Wizard runs to help you set up the basic PBX integration details for all MASs in this domain. Complete the wizard as prompted.

Note: If the wizard does not start automatically, right-click the server name (such as ZIPPY), then select **Telephony Configuration Wizard**.

- b. *For a subsequent MAS:* Right-click the server name (such as ZORRO), then select **Telephony Configuration Wizard** to run the wizard. Complete all steps in the wizard as prompted.
11. When the wizard completes:
 - a. Expand **Messaging Application Servers** again, then expand the directory for this server's name.
 - b. Check your configuration notes and add any additional detailed data that are dependent on the switch and the integration type.
12. When the configuration note programming is complete, restart service as follows:
 - a. Return to the Monitor window.
 - b. Click **Services (Local)** in the left-hand pane.
 - c. Scroll down to **MM Messaging Application Server**. Right-click it, then select **Stop**.
 - d. When service is stopped, right-click **MM Messaging Application Server** again and select **Start**.
 - e. Restart can take up to 5 minutes. To monitor startup progress:
 - (1) In the left pane, expand **Event Viewer (Local)**, then click **Application**.
 - (2) Refresh the window periodically until you see Telephony User Interface event 1241, "TUI service has been enabled." It is now safe to proceed.
 - f. When service is restarted, minimize the Monitor window.

13. On the Voice Mail System Configuration window, expand **Messaging Application Servers**.

Note: Some values may already be set. Follow the configuration notes for your PBX integration.

- a. Expand the entry for your server name (for example, ZIPPY).
- b. Double-click **Telephony Interface**. Configure the port boards in this MAS. Use your configuration notes. See the [Required switch and messaging information](#) on page A-12 for port board extensions.
- c. Click **PBX Type**. Select the same type of PBX service as you did in step 9.
- d. Click **PBX Integration** and configure the integration type for your system. Use your configuration notes to specify or confirm the detailed settings required by your switch integration.

Note: To set the maximum number of MWI sessions allowed at one time, see [MAS features list](#) on page A-11.

14. When configuration is complete, restart service again (see step 12).
15. When finished, close the Monitor and Voice Mail System Configuration windows.

Setting up and starting messaging services

To set up recovery procedures and start MAS messaging services:

1. Click Start > Run.
2. In the Run box Open field, type the following and press Enter:

c:\lavaya_support\scripts\serverrecovery.vbs

The script takes a few seconds to run. When it completes, all installed MM services will be started.

3. *Optional.* To verify that all services are started:
 - a. Double-click the **Monitor** icon on the desktop.

The **Services (Local)** item in the left-hand pane should be selected.
 - b. In the Monitor window, scroll down to the list of Modular Messaging (MM) services. Make sure that the Status column shows that service is started for each installed messaging service.
 - c. If service is stopped or the Status column is blank, right-click on the appropriate MM service and select **Start**.

Continue with administration as required

Continue with administration as required based on the number of MASs in the system:

- If you have another new MAS to install (up to four may be present), return to ["Setting up the MAS machine"](#) on page 4-3. Follow the instructions in each section for setting up an additional MAS.
- If all your MASs are now installed, continue with Chapter 5, "Completing initial administration," and complete all steps in order.

5

Completing initial administration

This chapter describes how to complete the basic administration on the Message Storage Server (MSS) and the Messaging Application Server (MAS) to bring the S3400 system into full service.

Note: Before you can successfully complete the tasks in this section, you must have successfully completed the installation tasks in Chapter 4, “Administering the MAS.”

| Section | Page |
|--|------|
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| • Verifying customer options | 5-2 |
| • Administering Internet messaging | 5-3 |
| • Updating MAS host information | 5-4 |
| • Placing the MSS in the Windows domain | 5-6 |
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Completing required administration on the MSS

After you complete the initial administration of all MAS units in your S3400 system, you need to return to the MSS to complete the basic messaging administration and perform acceptance tests. The amount of administration varies depending on the optional features the customer has chosen to implement.

Final administration tasks include:

- ["Verifying customer options"](#) on page 5-2
- ["Administering Internet messaging"](#) on page 5-3
- ["Updating MAS host information"](#) on page 5-4
- ["Placing the MSS in the Windows domain"](#) on page 5-6
- ["Administering special mailboxes and classes of service"](#) on page 5-7
- ["Adding a test subscriber"](#) on page 5-9

Verifying customer options

To make sure that the customer has enough mailboxes to support all subscribers:

1. Switch the monitor to show the MSS server.
 - *For a Belkin OmniView Pro2 KVM:* Press slowly in sequence Scroll Lock, then Scroll Lock, then the down arrow key to change to the MSS server (usually connected to port one).
 - See ["Switching the monitor to show the correct server"](#) on page 4-3 for more information if needed.

You rebooted the MSS at the end of Chapter 3, "Powering up the system and performing initial MSS administration." You need to relogin now.

2. You should see a "Press Enter to return to prompt..." message. Press **Enter**.
3. At the login prompt, log in to the MSS server as **craft** using the current password.

The server displays the Messaging Administration main menu.

4. Starting from the Messaging Administration main menu, select:

```
Global Administration
  Customer Options
```

The Customer Options screen appears.

5. Check that the number of mailboxes purchased on the system is sufficient to provide every subscriber with a mailbox.

If the number of mailboxes is insufficient, contact the remote service center.

6. Click **Return to Main**.

Administering Internet messaging

Complete the following task to activate Internet messaging. Plan to activate Internet messaging before load is running or when server usage is low.

To activate Internet messaging:

1. Starting from the Messaging Administration main menu, select:

```
Feature Administration
  Internet Messaging
    General Options and Settings
```

The General Options and Settings screen appears.

2. Click on the **Yes** radio buttons to enable POP3 and IMAP4.

Enabling these protocols allows other clients such as Microsoft Outlook to access their mailboxes using these protocols.

3. Click **Submit** to save your changes.

| |
|---|
| <p>Note: A security certificate acceptance dialog box may appear when you make changes to this screen. Use the default values to accept the certificate, and then proceed.</p> |
|---|

4. Click **Return to Main**.

Updating MAS host information

Host information for each MAS must be entered and then sent to all machines in the S3400 system. See your [S3400 system planning form](#) on page A-6 for system information.

To update the host information for one or more MAS machines:

1. Starting from the Messaging Administration main menu, select:

```
Basic System Administration
  TCP/IP Administration
    MAS Host Information Setup
```

The MAS Host Information Setup screen appears.

2. Select the MAS machine whose information you want to change (MAS1 through MAS4). Click **Edit**.
3. On the MAS Host Information Setup screen, update the host information to identify this MAS on the corporate and private networks:
 - a. **Public System Name** is the corporate fully qualified domain name or FQDN of the MAS (such as `zippy.loc.avaya.com`). See item **7** on your [S3400 system planning form](#) on page A-6.

If this name has a domain qualifier (such as `loc.avaya.com`), then you should include just the host name (such as `zippy`) as an alias.
 - b. **Public IP Address** is the corporate IP address of the MAS (see item **8** on your planning form).
 - c. **Public Aliases** *must* include at least the following:
 - The host name of the public MAS system name (such as `zippy` for `zippy.loc.avaya.com`). See item **1** on your planning form.
 - Any other required aliases. Separate names with a space.
 - d. *Do not change* any information in the Private System Name and Private IP Address fields for a new system.
 - e. **Private Aliases** *must* include the private FQDN for the private network (such as `zippy.zodiac.com`). See item **5** on your [S3400 system planning form](#) on page A-6.



CAUTION: It is strongly recommended that you do *not* change any default private host information (such as the private host machine name or its IP address). A change to these values could prevent the system from working.

4. For **Administrator Login**, enter the MAS domain administration account login (such as dom-admin) and its password to make any changes. See the [S3400 logon accounts form](#) on page A-10.
5. When finished, click **Save**.

The MSS system updates its internal information, and then sends this information to all MASs in the network.

- The system reports whether or not the information was successfully updated. Check that all machines in the network were updated.
- *If an update to a machine failed*, check your network operation using a ping test as follows:
 - a. Click **Return to Main**.
 - b. Starting from the Messaging Administration main menu, select:

```
Diagnostics
TCP/IP Diagnostics
  Send & Receive Packets To & From (Ping Test)
```
 - c. On the ping test screen, enter the name or IP address of the MAS machine to establish connectivity.
 - d. Repeat the test as needed to try to isolate the problem.
 - e. Once the problem is corrected, try to send the host information again using the MAS Host Information Send screen (under Basic System Administration > TCP/IP Administration).

6. Continue as follows:
 - If you have one MAS, click **Return to Main**.
 - If you have more than one MAS:
 - a. Click **Back**, then click **Back** again to return to the MAS Host Information Setup screen.
 - b. Repeat steps 2 through 5 for every MAS in this system.
 - c. When finished, click **Return to Main**.
7. *If you changed a private MAS IP address (NOT recommended)*, you need to repeat the procedure for ["Synchronizing the time and date with the MSS"](#) on page 4-26.

Placing the MSS in the Windows domain

The MSS must be added to the Windows domain you set up on the MAS.

To add the MSS to the Windows domain:

1. Starting from the Messaging Administration main menu, select:

Basic System Administration
TCP/IP Administration
Windows Domain Setup

The Windows Domain Setup screen appears.

2. Enter the following information in each field:
 - a. In the Eth1 NetBIOS Name field, type the MSS private system name **mss1** (see item **13** on the [S3400 system planning form](#) on page A-6).
 - b. In the NetBIOS Domain Name field, type the Windows NetBIOS domain name (such as zodiac) that was created on the first MAS (see item **3** on your planning form).
 - c. In the Fully Qualified Domain Controller Name field, type the MAS private system name for the first MAS (by default **mas1** as shown in item **13** on your planning form).
 - d. In the Domain Controller Administrator field, type the domain administrator account name (such as dom-admin). See item **A1** on the [S3400 logon accounts form](#) on page A-10.



CAUTION: This same account *must* be used to set up system backups on every MAS (see "[Backing up the system](#)" on page 5-22).

- e. In the Domain Controller Administrator Password field, type the password for this account.
3. When finished, click **Save**.
 4. Click **Return to Main**.

Administering special mailboxes and classes of service

You need to administer a class of service that will be used for the PostMaster and fax mailboxes and for the required test subscribers. Use the [Required switch and messaging information](#) on page A-12 to complete the information in this section.

To set up a new class of service and the required mailboxes:

1. From the Messaging Administration main menu, select:

```
Global Administration
Subscriber Management
  Manage Classes-of-Service
```

The Manage Classes-of-Service screen appears.

- a. Select the class of service to modify (such as class00). You may set up different classes of service if required (for example, you may use a different class of service for the PostMaster and fax-enabled subscribers).
 - b. Click **Edit the Selected COS**.
 - c. On the Edit a Class-of-Service screen, scroll down to **Subscriber Features and Services**. Activate the following features:
 - (1) Set Outbound Fax Calls to **Yes** (required for fax service).
 - (2) Set Record Mailbox Greetings to **Yes**.
 - (3) Adjust other feature values if directed. Generally, you enable features that you have installed and must test.
 - d. When finished, click **Save**.
 - e. Click **Back**.
2. Set up the mailbox for the subscriber who is to receive PostMaster messages. Use the name and extension specified on the [Required switch and messaging information](#) on page A-12.

| |
|---|
| <p>Note: Typically an existing subscriber such as the system administrator is set up to receive postmaster messages. If the PostMaster message volume is large, you may set up a secondary mailbox for a subscriber to receive postmaster messages, but that secondary mailbox must be checked regularly (on a daily basis if possible).</p> |
|---|

On the Managing Subscribers submenu, next to Local Subscribers for this MSS machine (such as zigzag), click **Manage**.

The Manage Local Subscribers screen appears.

- a. Click **Add a New Subscriber**.

- b. On the Add Local Subscriber screen, enter the following information:
 - (1) In the Last Name field, type the last name of the subscriber who is to receive the postmaster messages.
 - (2) In the First Name field, type the subscriber's first name.
 - (3) Enter the subscriber's mailbox password (see the planning form).
 - (4) In the Mailbox Number field, type a valid mailbox extension number; enter 3-to-10 digits as required by your dial plan.
 - (5) In the Numeric Address field, type a unique number for that mailbox in the network. For example, you could prepend a **1** or the area code to the mailbox number.
 - (6) Select the required class of service.
- c. Scroll down and click **Save**.
3. *If fax service is installed:* Set up the required fax service mailbox using the [Required switch and messaging information](#) on page A-12.

On the Manage Local Subscribers screen:

- a. Click **Add a New Subscriber**.
- b. On the Add Local Subscriber screen, enter the following information:
 - (1) In the Last Name field, type **fax**.
 - (2) Enter a password (see the planning form).
 - (3) In the Mailbox Number field, type a valid mailbox extension number. This number should *not* be a real telephone extension on your system, or the fax feature will not work correctly.
 - (4) In the Numeric Address field, type a unique number for that mailbox in the network.
 - (5) Select the required class of service.
- c. Scroll down and click **Save**.
4. Click **Back** to return to the Managing Subscribers submenu.
5. From the Managing Subscribers submenu, select:

Configure Subscriber Management

The Configure Subscriber Management screen appears.

- a. In the **Special Subscribers** section:

- (1) For the **Fax Mailbox Number**, enter the extension for the Mailbox Number that you used in step 3.
- (2) For the **Internet Postmaster Mailbox Number**, enter the extension for the Mailbox Number that you used in step 2.

b. Click **Save**.

You return to the Managing Subscribers submenu.

Adding a test subscriber

You need to set up at least one local subscriber to test the system.

To add a test subscriber:

1. From the Managing Subscribers submenu, next to Local Subscribers for this MSS machine (such as zigzag), click **Manage**.

The Manage Local Subscribers screen appears.

2. Click **Add a New Subscriber**.

The Add Local Subscriber screen appears.

3. Fill in the fields in the Subscriber Information section as shown in [Table 5-1](#) on page 5-9. Use the [Required switch and messaging information](#) on page A-12 for mailbox extension numbers and passwords.

Click **Help** if you need details about completing any fields on this screen.

Table 5-1. Subscriber screen sample settings

| Field | Setting |
|-----------------|---|
| Last Name | Smith |
| First Name | Test |
| Password | 1111 <i>(must comply with minimum password length)</i> |
| Mailbox Number | Type a valid mailbox extension number; enter 3-to-10 digits as required by your dial plan. |
| COS | <i>0 (Use the one you modified or as directed; it must have all the features that you need to test activated.)</i> |
| Numeric Address | Type a unique number for that mailbox in the network (for example, you could prepend a 1 or the area code to the mailbox number) |

4. When finished, scroll down and click **Save**.
5. Click **Return to Main**.

Performing acceptance tests

After installing the system, verify that it is working correctly by doing the following tests.



CAUTION: You must wait 5 minutes for the MSS and MAS to synchronize their data after adding any test subscribers. Otherwise, the acceptance tests will not run correctly.

Creating and sending a call answer message

The following test works only if call-coverage has been assigned on the switch to route unanswered calls to the test subscriber's extension.

To create and send a call answer test message:

1. Call the test-subscriber extension from any other telephone. Allow the S3400 messaging system to answer.
2. Speak into the telephone and record the following or a similar test message after the tone:

"This is a test call answer message."
3. Hang up the telephone to disconnect.

Retrieving test messages in integrated mode

Test the fully integrated operation of the system as directed below. You need access to the actual telephone whose extension number is assigned to the test-subscriber mailbox to perform this test.

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

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

Note: The message-waiting lamp may 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 call was received:

- a. Check that the Mailbox Monitor and MWI services are started. Double-click the **Monitor** icon on the MAS desktop, then scroll down to these MM services in the right-hand pane and verify status. If needed, select **Start**.

- b. If service is started, check for a problem with the test subscriber administration, the switch integration or switch integration software, or the switch number administration for the test telephone.
2. From the test-subscriber telephone, dial the S3400 messaging system message retrieval number.

The system voices the test subscriber's name.
3. Enter the password for this mailbox and press **#**.
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.
5. After the mailbox is set up, press **1** to review your new messages.
6. Press **1** to retrieve a voice message.
7. Listen to the message. If the message does not play properly, contact your remote support center.
8. Press **7** to erase this message.
9. Follow the voice prompts to retrieve the next message (if any), or press ***** to return to the main menu.
10. Hang up the telephone to disconnect when finished.
11. *If MWI is installed:* Check the MWI on the test-subscriber telephone. The MWI should be off. If it is not off, check your MWI administration.

Creating and sending a test message in nonintegrated mode

To create and send a test message in nonintegrated mode:

1. Dial the S3400 messaging system message retrieval number from any telephone that is not administered on the system.

The system voices the "Welcome to Avaya Messaging" prompt.
2. Press **#** to skip the system introduction.
3. Enter the extension number for test-subscriber mailbox and press **#**.
4. Enter the password for this mailbox and press **#**.
5. Press **2** to create a new message.
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 **[#]** to approve your message.
8. Enter the mailbox number for the test subscriber when prompted for the extension, followed by **[#]**.
9. Press **[#]** twice (as prompted) to approve the message.
10. Press **[#]** 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 5-10.

Creating and printing a fax message

Do this test if the Fax Sender Server is installed.

To create and send a test fax message:

1. From a fax machine, send a fax to the test-subscriber mailbox. This subscriber mailbox should have been set up to be fax enabled.
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 the fax machine, dial the S3400 messaging system message retrieval number for that telephone.
4. Press **[#]** to access the test subscriber's mailbox.
5. Enter the extension number for the test-subscriber mailbox and press **[#]**.
6. Enter the password and press **[#]**.
7. Press **[1]** to retrieve new messages.
8. Press **[3]** to retrieve the fax message.
9. When the prompt finishes, press **[2]** to print the fax.
10. Press **[3]** to print the fax at this fax machine.
11. Press the Start key on the fax machine.
12. Verify that the fax prints correctly. The call is then disconnected.
13. *If MWI is installed:* Check the MWI on the test-subscriber telephone again. The MWI should be off.

Testing the outcalling capability

Test the outcalling capability of the system using the Subscriber Options package.

To test system outcalling:

1. Switch the monitor to show the MAS server. See ["Switching the monitor to show the correct server"](#) on page 4-3 if needed.
2. To run the Subscriber Options package, click Start > Programs > Avaya Modular Messaging > Subscriber Options.
3. On the User Logon window:
 - a. Enter the mailbox number and password for the test subscriber. See [Required switch and messaging information](#) on page A-12.
 - b. Use the host name for the first MAS (such as ZIPPY). See item **1** on the [S3400 system planning form](#) on page A-6.
 - c. Click **OK**.
4. *If a message appears about not having multimedia, click **OK**.*
5. Play back the spoken name to test outcalling as follows:
 - a. On the Modular Messaging Software User Properties window, click the **Record Greetings** tab.
 - b. Under Standard Greetings, click the **Spoken Name** radio button.
 - c. Verify that the telephone will be used for name playback:
 - (1) Check the icon to the left of the status display. If it shows a telephone, continue with step d.
 - (2) If the icon shows a terminal, right-click and select **Telephone**. The icon changes to show a telephone. Continue with step d.
 - d. Click the **Play** button (large black single arrow) on the player near the bottom of the window.
 - e. Answer the telephone when it rings.

The picture of the phone should change to become off-hook.
 - f. Listen for the system to play the spoken name of the test subscriber.
 - g. Hang up the telephone.

The picture of the phone should change back to being on-hook (this may take a couple of seconds).
6. When finished, click **OK** to close the Modular Messaging Software User Properties window.

7. Switch the monitor back to the MSS server.

Removing the test subscriber

Do this procedure on the MSS.

When acceptance testing is completed, remove the test subscriber as follows:

1. Starting from the Messaging Administration main menu, select:

Global Administration
Subscriber Management
2. On the Managing Subscribers submenu, next to Local Subscribers for this MSS machine (such as zigzag), click **Manage**.

The Manage Local Subscribers screen appears.
3. Select the test subscriber.
4. Click **Delete the Selected Subscriber**.

Setting up remote access on the MSS

Do this procedure on the MSS.

Complete the steps in this section to allow a remote service center to dial in to the MSS to perform troubleshooting or system maintenance. Steps include:

- ["Administering PPP logins and passwords"](#) on page 5-15
- ["Activating the RMB modem \(external modems only\)"](#) on page 5-16
- ["Setting up the PPP server configuration"](#) on page 5-16
- ["Activating alarm origination"](#) on page 5-17

Administering PPP logins and passwords

It is necessary to administer point-to-point protocol (PPP) logins and passwords for all systems. These logins are used for maintenance purposes. See [PPP logins, passwords, and IP addresses](#) on page A-13 for the required PPP logins and passwords that must be administered.

To administer PPP logins:

1. Starting from the Messaging Administration main menu, select:

```
Basic System Administration
  Password Administration
    Assign/Change Password
```

The Assign/Change Password screen appears.

2. At the Login drop-down box, select the PPP login that you want to administer (for example, sappp).
3. Enter the appropriate PPP password in the New Password field. See [PPP logins, passwords, and IP addresses](#) on page A-13 for passwords.
4. In the Re-enter New Password field, type the PPP password again for verification.
5. Click **Save**.

The system displays a confirmation message.
6. Click the **Back** arrow in your web browser to return the Assign/Change Password screen.
7. Complete steps 2 through 6 for each additional PPP login that needs administration.

8. When finished, click **Return to Main**.

Activating the RMB modem (external modems only)

The on-board modem for the model of RMB installed in the United States is automatically activated. However, international users must activate the external modem that is required for their RMB boards.

To activate the modem for an external RMB board:

1. Starting from the Messaging Administration main menu, select:

```
Basic System Administration
  Modem and Terminal Administration
    Install Modem/Terminal Software
```

The Install Modem/Terminal Software screen appears.

2. Locate Device Type **RMB** and update the fields for the modem you are using. Click **Help** for information about completing each field.
3. When finished, click **Save**.
4. Click **Return to Main**.

Setting up the PPP server configuration

Use this page to identify the local and remote IP addresses that are required for remote access to the system.

To set up PPP service on this machine:

1. Starting from the Messaging Administration main menu, select:

```
Basic System Administration
  TCP/IP Administration
    PPP Server Configuration
```

The PPP Server Configuration screen appears.

2. For each logon that you are to administer, enter the following information. See [PPP logins, passwords, and IP addresses](#) on page A-13.
 - a. For Local IP Address, type the customer-provided IP address for PPP access through the MSS modem.
 - b. For the Remote IP Address, type the customer- or Services-provided IP address for the remote device that will connect to this MSS.
3. Repeat step 2 for each of the PPP logins you need to set up.

4. When finished, click **Save**.
5. Click **Return to Main**.

Activating alarm origination

Activating alarm origination causes a remote location, such as the remote service center, to receive notification of alarms that occur on the S3400 system. Notification can only occur if the maintenance modem for the RMB is installed and active.

To set up alarm origination:

1. Clear all alarms.
2. Insert a labeled writable DVD into the DVD drive for the nightly backup. The backup disc *must* be in place before you activate alarm origination.
3. Starting from the Messaging Administration main menu, select:

Basic System Administration
Alarming Administration

The Alarm Management screen appears.

4. Provide the **Product ID** and **Alarm Destination** telephone number. See [PPP logins, passwords, and IP addresses](#) on page A-13.
5. Complete the remaining fields as required. Generally:
 - a. Alarm Origination should be **Active**.
 - b. Alarm Suppression should be **Inactive**.
 - c. Click **Help** for information about completing each field.
6. When finished, click **Save**.
7. Click **Return to Main**.
8. Continue the installation as follows:
 - If customers want to implement SMTP networking, continue with ["Administering SMTP networking \(if required\)"](#) on page 5-18.
 - For all other customers, continue with ["Setting up Mailbox Manager"](#) on page 5-19.

Administering SMTP networking (if required)

SMTP (MIME) networking is an optional feature that provides customers with the ability to exchange messages with users on other Avaya S3400 messaging systems or those connected to an Avaya™ Message Networking Server.

| |
|---|
| <p>Note: SMTP networking is an optional feature. If the customer does <i>not</i> require messaging networking, skip this task.</p> |
|---|

To administer SMTP networking, you must enter information about the local and remote machine on both the local MSS and on the remote machine. Because you already entered the local MSS machine information in a previous task, you now only have to enter the remote machine information (the machine you want to network to).

To enter information for the remote machine:

1. Starting from the Messaging Administration main menu, select:

```
Global Administration
  Messaging Administration
```

The system displays the administration command prompt screen and the SSH dialog box, which provides protection for this screen.

2. Log in as **craft** using the craft username and default password.
3. At the command prompt, enter **add *machine name*** where *machine name* is the name of the remote machine.
4. On Machine Profile screen, set the remote machine name, machine type, extension length, start extension, and end extension as needed.
5. Press **F7** (NextPage).

The Machine Profile screen, page 2, appears.

6. Enter the IP address of the remote machine in the IP Address field.
7. In the Password field, enter the networking password for the remote machine.
8. Verify that both Updates In and Out fields are set to **n**.
9. Press **F3** (Enter).
10. Perform the required set-up steps on the remote machine.

| |
|--|
| <p>Note: For additional information about networking, check the documentation for the remote system that you want to network and networking procedures on the S3400 documentation CD.</p> |
|--|

Setting up Mailbox Manager

Set up the Mailbox Manager (MBM) software package for the system administrator and verify its operation as described in this section.

Mailbox Manager (MBM) is a Windows interface for administering the MSS. With this software tool, administrators can create, edit, and delete subscribers, and edit COS profiles. They can also use MBM to Configure Subscriber Management.

Note: Remote services must force a nightly audit to run from a tsc login (**runmp AUD_NIGHTLY** from the /VM/bin directory) before you can complete the installation and configuration of MBM. The audit initializes certain MSS fields that MBM requires to gather subscriber and class-of-service information.

Installing Mailbox Manager

Mailbox Manager is typically installed on a desktop or laptop PC used by the system administrator. It can be installed on their current workstation, providing it meets minimum requirements as described in the *Mailbox Manager User Guide* ([PDF 1 MB](#)), under the Reference section of the documentation CD, and has a static IP address needed for the Trusted Server connection. However, if the corporate network has a dynamic host configuration protocol (DHCP) environment, Mailbox Manager must be installed on the MAS.

This section describes how to set up your trusted server, install Mailbox Manager, configure its connection to the MSS, and download your current MSS information.

1. Before you can install MBM, you must set up an additional trusted-server on the MSS, following the steps in "[Setting up the trusted servers](#)" on page 3-12. Use the data in [Table 5-2](#) to set up the MBM trusted-server profile:

Table 5-2. Setting up a Mailbox Manager trusted server

| Field | Setting |
|----------------------------------|--|
| Trusted-Server Name | mbmserver |
| Password | Create a password and note for use in this procedure. |
| IP Address | Corporate IP address of the PC where Mailbox Manager will be installed. If installing on the MAS, use Corporate IP address of MAS#1 from the S3400 system planning form on page A-6. |
| Service Name | Mailbox Manager Server |
| Access to Cross Domain Delivery? | n |

Table 5-2. Setting up a Mailbox Manager trusted server

| Field | Setting |
|------------------------------------|--|
| Default Community Number | 1 |
| Trusted Server ID | <i>will be filled in automatically</i> |
| Minutes of Inactivity Before Alarm | 0 |

2. Install the MBM software using the directions found in the *Mailbox Manager User Guide* (PDF 1 MB) under the Reference section of the documentation CD.
3. Configure the network connection between Mailbox Manager and the MSS using the instructions in the *Mailbox Manager User Guide*.
4. Download your current system information using the Autoconfigure Procedure in the *Mailbox Manager User Guide*.

If your company's DHCP environment required you to install Mailbox Manager on the MAS, continue with step 5. If you were able to install Mailbox Manager on your regular workstation PC, continue with ["Adding MBM test subscribers"](#) on page 5-20.

5. Install Remote Desktop Connection on the System Administrator's regular work PC. This will allow the user to run MBM on the MAS from their desktop or laptop.
6. Continue with ["Adding MBM test subscribers"](#) on page 5-20.

Adding MBM test subscribers

Create at least one subscriber to test Mailbox Manager for acceptance.

Create the subscriber using the procedure for Creating a Subscriber in the *Mailbox Manager User Guide*. Use the information in [Table 5-3](#) for an example.

Table 5-3. Subscriber record sample settings

| Field | Setting |
|----------------|---|
| Last Name | Jones |
| First Name | Test |
| Password | 1111 <i>(must comply with minimum password length)</i> |
| Mailbox Number | Type the mailbox extension number; enter 3-to-10 digits as required by your dial plan |
| COS | 0 |

Table 5-3. Subscriber record sample settings

| Field | Setting |
|-----------------|--|
| Community ID | 1 |
| Numeric Address | Type a unique number for that mailbox in the network (for example, you could prepend a 1 or the area code to the mailbox number) |

Right-click on any field you have a question about and select **What's This?** for an explanation.

Removing MBM test subscribers

Remove any Mailbox Manager test subscribers as follows:

1. If Mailbox Manager is not already running, launch it by selecting Windows Start > Programs > Mailbox Manager > Mailbox Manager.
2. In the Workspace, expand **Enterprise Systems**, then your system, so that you can see **Classes of Service**, **Ranges**, and **Subscribers**.
3. Double-click **Subscribers**. A list of all the systems current subscribers will appear. It should include your test subscribers and the PostMaster.
4. In the list, select all of the test subscribers by holding down your shift key and selecting each test subscriber line, taking care not to select your PostMaster. Each of the test subscriber lines should be shaded.
5. Press the Delete key on your keyboard. A **Delete Subscriber** window will appear. Each of the test subscribers should be displayed in this window in red type with a line through them.

Make sure that your PostMaster mailbox does not appear in this list. If it does, click once on the PostMaster line and click the **Delete** check-box so that the check-mark is removed. The line will no longer appear in red.

6. Click **Send Now**. A Send Now dialog will appear.
7. Click **Send Now** to send the delete commands to your system.

Backing up the system

As a final installation task, set up the system to perform regular, scheduled backups. Do an attended backup to verify the backup function.

Setting up and running backups on every MAS

Do this task on every MAS machine.

You need to send MAS backup data to the MSS (a nightly basis is recommended), so that it can be backed up with the rest of the system data on DVD-RAM.

To set up a scheduled backup of data on this MAS machine:

1. Switch the monitor to show the first MAS. See "[Switching the monitor to show the correct server](#)" on page 4-3 if needed.
2. To set up a scheduled backup on this MAS, double-click the **Scheduled Tasks** icon on the desktop.
3. In the Scheduled Tasks window, double-click **Add Scheduled Task**.
4. The Scheduled Task Wizard window appears. Do the following:
 - a. On the first screen, click **Next**.
 - b. On the next screen, to locate the backup script, click **Browse**.
 - c. In the Select Program to Schedule window, navigate to the script as follows: double-click **Avaya_Support**, then double-click **CMD**, then double-click **BackupScript.bat**.
 - d. On the next screen, specify the task name and frequency:
 - (1) Type a name for this task (such as BackupMAS1), or you can use the default name.
 - (2) Select the radio button for **Daily**.
 - (3) Click **Next**.
 - e. On the next screen, set up the time and frequency of the backup:
 - (1) Enter a Start time for this task as follows:
 - For the first MAS, the backup time should be 11 PM. *Do not* run backups from midnight to 4 AM.
 - Set the time for each subsequent MAS to run 15 minutes earlier. For example, set MAS#2 to run at 10:45 PM, MAS#3 to run at 10:30 PM, and so on.

- (2) For Perform this task, select the radio button for **Every Day**.
 - (3) Verify that the Start date shows the current date.
 - (4) Click **Next**.
- f. On the next screen, set up the account to run the backup:
- (1) For User Name, verify that the Windows domain and domain administrator account appear in the format *domain\account name* (for example, ZODIAC\dom-admin).



CAUTION: Use the same account here that you used for the MSS to join the Windows domain or backups will not work. See ["Placing the MSS in the Windows domain"](#) on page 5-6.

- (2) Enter and confirm the correct password. See item **A1** on the [S3400 logon accounts form](#) on page A-10.
 - (3) Click **Next**.
- g. On the final screen:
- (1) Verify that the checkbox to "Open advanced properties" is clear.
 - (2) Click **Finish**.
5. Immediately run an attended backup on this MAS as follows:
- a. In the Scheduled Tasks window, right-click the task you just created (such as BackupMAS1).
 - b. Select **Run**.

In Scheduled Tasks window, the Status column shows Running as the system immediately begins to back up the data on this MAS to the MSS. The Status column goes blank (shows nothing) when the backup completes.
 - c. *Optional.* To verify that the backup completed correctly:
 - (1) Click Start > Run. In the Open field, type **\\mss1\masbackup**

You are prompted for an account name and password.
 - (2) In the Connect As window, use the domain administrator account name (for example, dom-admin) and password. See item **A1** on the [S3400 logon accounts form](#) on page A-9. Click **OK**.

Windows Explorer will launch.
 - (3) Confirm that a backup file has been created on the MSS with the correct time and date (such as ZIPPYDailyBackup.bkf, where

ZIPPY is the host name of this MAS). You can expect an initial file size of approximately 264 MB.

If a backup file has *not* been successfully created, check your configuration. Make sure that the account used to join the MSS to the Windows domain matches the account that the scheduled task runs under (this should always be the domain administrator account, such as ZODIAC\dom-admin).

6. Close the Scheduled Tasks window.
7. Repeat this procedure for every MAS unit installed.

Setting up and running an attended backup of the MSS

After you have run an attended backup of every MAS machine, run an attended backup on the MSS.

See the documentation CD-ROM for information on:

- [Backing up system files \(attended\)](#)
- [Backing up system files \(unattended\)](#)

When finished, log off of the system.

A

System planning forms

Overview

A new S3400 system installation requires careful network planning. Server names, IP addresses, domain names, accounts, extensions, and passwords *must* be administered correctly on each of the servers in the system. Some information must be provided by the customer in advance, or the installation cannot proceed.

This appendix provides an overview of system planning and a set of forms for you to fill out prior to installation with the help of the local LAN, switch, and messaging administrators. Information includes:

- [Terminology](#) on page A-2
- [Guidelines for completing the forms](#) on page A-4
- [S3400 system planning form](#) on page A-6
- [S3400 system planning form \(completed example\)](#) on page A-8
- [S3400 password table](#) on page A-9
- [S3400 logon accounts form](#) on page A-10
- [MAS features list](#) on page A-11
- [Required switch and messaging information](#) on page A-12
- [Services logins and passwords](#) on page A-13
- [PPP logins, passwords, and IP addresses](#) on page A-13

Terminology

The following terminology applies to the LAN administration process.

Host name – The unique name of the machine. In Microsoft Windows terminology, this is often called the NetBIOS machine name. This name may or may not match one of the network interface names. This is often the short name of the public IP interface.

NetBIOS name – The Microsoft Windows term for a host name, also called a NetBIOS machine name.

Domain name – A unique designator used to identify a group of related computers on the internet (for example, avaya.com). Domain names are hierarchical, and the labels go from more specific on the left to more general on the right. There can be any number of levels in the hierarchy.

Domain Name Service (DNS) – An Internet protocol service most often used to resolve symbolic names to IP addresses. The DNS service is constructed on hierarchical domains with different sets of servers serving each hierarchical layer.

DNS server – A machine that has the DNS service active. Such a machine can resolve symbolic names for the DNS domain it serves to an IP address.

Fully Qualified Domain Name (FQDN) – A domain name which identifies an individual computer and the network on which it resides (such as zippy.loc.avaya.com). The leftmost label is the host name of the computer.

Private FQDN – An FQDN containing the host name and the private domain name (such as zippy.zodiac.com).

Public (corporate) FQDN – An FQDN containing the host name and public domain name (such as zippy.loc.avaya.com).

NetBIOS domain – A Microsoft Windows domain that is not fully qualified (has no periods). For example, zodiac.

IP address – A value used to identify a computer connected to a network. If a machine has multiple network interfaces, then the machine will have multiple IP addresses, one for each connection to a different network. IP addresses are usually specified as four numbers separated by a period (for example, 10.9.55.183).

Subnet mask – A value used to tell which bits of an associated IP address are the network portion and which bits identify the specific host on the network. Each network interface has an IP address and an associated subnet mask.

Corporate IP LAN and interface – Each S3400 server has two network IP interfaces. One is connected to the LAN infrastructure constructed and maintained by the enterprise that purchased the system. The LAN is the corporate IP LAN and the interface connected to it is the corporate IP interface. This LAN is also identified as Ethernet interface 0, Local Area Connection, or Corporate LAC. This LAN gives the S3400 system access to other machines and users.

Private IP LAN and interface – The second network IP interface in each S3400 server is connected to an Ethernet switch provided by Avaya as part of the product. The LAN is the private IP LAN and the interface connected to it is the private IP interface. This LAN is identified as Ethernet interface 1, Local Area Connection 2, or the Private LAC. It is used only to send information between the S3400 servers.

IP gateway – An IP gateway is an IP address where IP packets are routed if the specified IP address is not on the network directly connected to an interface on the machine. An IP gateway is usually an interface on a router.

Default IP gateway – The IP gateway to use if no other specified gateway is available. Each S3400 server has at most one default gateway connected to the corporate IP interface. There is *no* IP gateway on the private LAN.

PPP – Point-to-Point Protocol, an Internet standard protocol used for serial line connections, such as dial-up modems.

Voice Mail Domain (VMD) – A group of one or more messaging servers (up to 4 machines for an S3400 system). Voice Servers in a VMD share configuration properties of the VMD and subscribers to the VMD.

Windows domain – A grouping of network objects, such as users, groups, and computers. All objects in a domain are stored in Active Directory. Active Directory can reside on one or more domain controllers within a domain.

Guidelines for completing the forms

Use the following guidelines to complete the [S3400 system planning form](#) on page A-6 for each S3400 system you need to install.

- Anything in the form that is labeled —NOT USED— is not needed for that S3400 item.
- Anything already filled in must not be changed unless it causes a conflict with the corporate network. Work with the LAN administrator to identify and correct any addressing problems or conflicts.

Note: It is crucial to coordinate the IP addresses that will be used on the S3400 system with those on the corporate LAN. If you specify an Ethernet address for an Avaya server that conflicts with another Ethernet endpoint, the resulting problems with traffic on the local area network may be extremely difficult to diagnose and solve.

See the [S3400 system planning form \(completed example\)](#) on page A-8 for a sample completed form.

To complete the S3400 system planning form:

1. Choose unique NetBIOS machine (host) names for the MSS and all MAS units (for example, zigzag, zippy, and zorro). You *must* keep track of what machine you are administering. In this guide, zigzag is the MSS, zippy is the first MAS, and zorro is a subsequent MAS.

Note: Names shorter than 10 characters long are recommended for ease in completing the online screens. (For CLAN integrations, the MSS host name *must* be no longer than 7 characters.) The host and domain names can be any term you want, as long as they are unique and comply with your local conventions.

2. *For MAS#1:* Select a fully qualified domain name (FQDN) for the Windows domain (for example, zodiac.com). Coordinate this name with the LAN administrator (see step 6).

Note: All domain names (FQDN, Windows domain, and VMD) should be unique to avoid confusion. See the [S3400 system planning form \(completed example\)](#) on page A-8.

3. *For MAS#1:* The Windows NetBIOS domain name is everything up to the first period of the previously specified FQDN (for example, zodiac).
4. *For MAS#1:* The voice mail domain (VMD) is a simple term different from the Windows domain (such as zebra).
5. The private FQDN for an MAS machine is used only on the private network (for example, zippy.zodiac.com).

6. The corporate FQDN, LAN addresses, domain names, and default gateway (if any) must be supplied by the corporate LAN administrator. See items [6](#) through [12](#) in the [S3400 system planning form](#).

Note: It is strongly recommended that only static IP addresses be assigned to the interfaces and machines in an S3400 system.

IP addresses should be configured on the corporate DNS servers (if used) by LAN personnel in keeping with local policy and practices. Customers must also register the corporate FQDNs for the MSS and each MAS on any relevant corporate DNS servers.

- The IP address for any required DNS servers are on the corporate LAN and must be supplied by the corporate IP administrator.
 - The domain search order and any domain names must be supplied by the corporate LAN administrator in the order required.
7. The default system name for the private LAN, the associated IP addresses, and subnet masks (items [13](#) through [15](#) in the [S3400 system planning form](#)) are already specified and do not normally change.
 8. Complete the [S3400 password table](#) on page A-9 so you can supply the correct passwords for all required services and trusted servers on the MSS and MAS machines.
 9. Complete the [S3400 logon accounts form](#) on page A-10 using the customer-provided account names and passwords required for this site.
 10. Have the customer specify the messaging services that they want to install on each MAS machine using the [MAS features list](#) on page A-11.
 11. Complete the [Required switch and messaging information](#) on page A-12 with help from the relevant messaging or switch administrator.
 12. Complete the forms for [Services logins and passwords](#) on page A-13 and [PPP logins, passwords, and IP addresses](#) on page A-13 with help from the customer and the entity responsible for providing ongoing services maintenance of the system.

Note: Keep a copy of the completed planning forms handy during initial administration and system configuration. Save your planning forms in a safe place when installation is complete in case changes or upgrades are made to the system.

Be sure to file records of passwords and account names securely.

S3400 system planning form

| # | Item | MSS | MAS #1 | MAS #2 |
|----|--|------------------|---------------|------------------|
| 1 | Host name (machine or NetBIOS name) | | | |
| 2 | Private fully qualified domain name (FQDN) | —USE MAS#1 NAME— | | —USE MAS#1 NAME— |
| 3 | Windows NetBIOS domain | —USE MAS#1 NAME— | | —USE MAS#1 NAME— |
| 4 | Voice mail domain | —NOT USED— | | |
| 5 | Private FQDN for Eth1 | —NOT USED— | | |
| 6 | Corporate domain name | | | |
| 7 | Corporate FQDN for Eth0 | | | |
| 8 | Corporate IP address for Eth0 | | | |
| 9 | Corporate subnet mask for Eth0 | | | |
| 10 | Corporate default gateway IP address | | | |
| 11 | Corporate DNS servers IP addresses | | | |
| 12 | Search order of DNS domains | | | |
| 13 | Private system name | mss1 | mas1 | mas2 |
| 14 | Private IP address for Eth1 | 192.168.1.1 | 192.168.1.250 | 192.168.1.249 |
| 15 | Private subnet mask for Eth1 | 255.255.255.0 | 255.255.255.0 | 255.255.255.0 |

S3400 system planning form (continued)

| # | Item | MAS #3 | MAS #4 |
|----|--|------------------|------------------|
| 1 | Host name (machine or NetBIOS name) | | |
| 2 | Private fully qualified domain name (FQDN) | —USE MAS#1 NAME— | —USE MAS#1 NAME— |
| 3 | Windows NetBIOS domain | —USE MAS#1 NAME— | —USE MAS#1 NAME— |
| 4 | Voice mail domain | | |
| 5 | Private FQDN for Eth1 | | |
| 6 | Corporate domain name | | |
| 7 | Corporate FQDN for Eth0 | | |
| 8 | Corporate IP address for Eth0 | | |
| 9 | Corporate subnet mask for Eth0 | | |
| 10 | Corporate default gateway IP address | | |
| 11 | Corporate DNS servers IP addresses | | |
| 12 | Search order of DNS domains | | |
| 13 | Private system name | mas3 | mas4 |
| 14 | Private IP address for Eth1 | 192.168.1.248 | 192.168.1.247 |
| 15 | Private subnet mask for Eth1 | 255.255.255.0 | 255.255.255.0 |

The following planning form shows a completed example for a two MAS system. These sample values are used in this guide for illustration purposes.

S3400 system planning form (completed example)

| # | Item | MSS | MAS #1 | MAS #2 |
|----|--|----------------------------|----------------------------|----------------------------|
| 1 | Host name (machine or NetBIOS name) | zigzag | zippy | zorro |
| 2 | Private fully qualified domain name (FQDN) | —USE MAS#1 NAME— | zodiac.com | —USE MAS#1 NAME— |
| 3 | Windows NetBIOS domain | —USE MAS#1 NAME— | zodiac | —USE MAS#1 NAME— |
| 4 | Voice mail domain | —NOT USED— | zebra | zebra |
| 5 | Private FQDN for Eth1 | —NOT USED— | zippy.zodiac.com | zorro.zodiac.com |
| 6 | Corporate domain name | loc.avaya.com | loc.avaya.com | loc.avaya.com |
| 7 | Corporate FQDN for Eth0 | zigzag.loc.avaya.com | zippy.loc.avaya.com | zorro.loc.avaya.com |
| 8 | Corporate IP address for Eth0 | 10.9.83.214 | 10.9.83.72 | 10.9.83.39 |
| 9 | Corporate subnet mask for Eth0 | 255.255.255.0 | 255.255.255.0 | 255.255.255.0 |
| 10 | Corporate default gateway IP address | 10.9.83.254 | 10.9.83.254 | 10.9.83.254 |
| 11 | Corporate DNS servers IP addresses | 10.9.1.39 10.9.1.2 | 10.9.1.39 10.9.1.2 | 10.9.1.39 10.9.1.2 |
| 12 | Search order of DNS domains | loc.avaya.com avaya.com | loc.avaya.com avaya.com | loc.avaya.com avaya.com |
| 13 | Private system name | mss1 | mas1 | mas2 |
| 14 | Private IP address for Eth1 | 192.168.1.1 | 192.168.1.250 | 192.168.1.249 |
| 15 | Private subnet mask for Eth1 | 255.255.255.0 | 255.255.255.0 | 255.255.255.0 |

Account and password tables

Fill out the following tables with the customer to assign the passwords, account names, and login names at this site.

S3400 password table

| # | Trusted server on MSS | MSS calls this: | MAS calls this: | Password |
|----|--|-----------------------------|-------------------------------------|---------------------|
| P1 | MAS #1 host name (NetBIOS name) | trusted-server MAS#1NAME | LDAP | |
| P2 | MAS #2 (if present) | trusted-server MAS#2NAME | LDAP | use MAS #1 password |
| P3 | MAS #3 (if present) | trusted-server MAS#3NAME | LDAP | use MAS #1 password |
| P4 | MAS #4 (if present) | trusted-server MAS#4NAME | LDAP | use MAS #1 password |
| P5 | Message Waiting Indication (MWI) server | VVSTS | IMAPI | |
| P6 | IMAP trusted server | Imap4TS1 | IMAP4 | |
| P7 | Mailbox Manager (if installed) | mbmsserver | cn value for Connection settings | |



CAUTION: Passwords should be at least 8 characters long and not composed of easily guessed words or numeric combinations, including sequential or repeated numbers. For best security, use a combination of alphanumeric characters (case is not important for trusted-server passwords). At least one of the first 7 characters should be a symbol (such as a # sign or punctuation mark).

Be sure to file records of passwords securely.

Account logon names and passwords should be site-specific for security reasons.

S3400 logon accounts form

| # | Account | Logon name (should be customer specified) | Password | Used for |
|----|---|--|---|---|
| A1 | Domain administrator account for MAS#1 (required) | <i>customer specified</i> (for example, dom-admin) | | Domain controller administration and system backups |
| A2 | Local administrator account for MAS #2 (if present) | <i>customer specified</i> (for example, mas2-admin) | | Local administration for this MAS |
| A3 | Local administrator account for MAS #3 (if present) | <i>customer specified</i> (for example, mas3-admin) | | Local administration for this MAS |
| A4 | Local administrator account for MAS #4 (if present) | <i>customer specified</i> (for example, mas4-admin) | | Local administration for this MAS |
| A5 | Modular Messaging (MM) account | <i>customer specified</i> (for example, mmacct) | | MAS messaging services administration |
| A6 | Services account | <i>customer specified</i> (for example, craft) | | Services administration |
| A7 | Customer account | <i>customer specified</i> (for example, custacct) | | Customer administration |
| A8 | Safe mode administration | Administrator | SafeModeAdminPassword (set in answer.txt file) | Safe mode login used for system state restoration |



CAUTION: Passwords and account names on the MAS should be at least 8 characters long and not composed of easily guessed words or numeric combinations, including sequential or repeated numbers. For best security, use a combination of upper-case, lower-case, and alphanumeric characters. At least one of the first 7 characters should be a symbol (such as a # sign or punctuation mark), but *not* a % symbol.

Do not use the examples shown above as the actual account names; they are provided for example purposes only.

MAS services and features

Fill out the following table with the customer to specify the messaging services to install on each MAS machine. Guidelines include:

- If only one MAS is installed, all required services are installed on that machine. Check the services that the customer wants to install in the MAS#1 column.
- If more than one MAS is installed:
 - Install the Call Me Server and MWI Server software on the same MAS. These services must be co-resident with the Mailbox Monitor Service, and should be installed on the MAS with the smallest number of ports if possible, or the second smallest number of ports if the Tracing Server is installed.
 - Install the Tracing Server on a *different* MAS than the one that is hosting the Call Me and/or MWI software. Always put the Tracing Server service on the MAS with the smallest number of ports, or on its own machine if possible.

MAS features list

| Messaging service to install | Max. # of concurrent sessions:* | on MAS#1 | on MAS#2 | on MAS#3 | on MAS#4 |
|---|---------------------------------|----------|----------|----------|----------|
| Call Me Server Message Waiting Indicator (MWI) Server <i>(both use Mailbox Monitor Server and should be on same MAS)</i> | | | | | |
| Caller Applications Editor | N/A | | | | |
| Fax Sender Server | | | | | |
| Tracing Server | N/A | | | | |
| Voice Server Prompt Files Specify additional languages to install if needed; list the desired default language first. <i>Install the same set of languages on each MAS.</i> | N/A | | | | |

* Specify the maximum number of concurrent sessions for each feature based on the customer's expected usage.

Switch and messaging information

Collect the required information from the relevant administrator prior to installation.



CAUTION: You cannot install an S3400 system without obtaining the required configuration notes for your switch or PBX. See [“Required software and documentation”](#) on page 2-5.

Required switch and messaging information

| Item | Value | Notes |
|--|--|--------------------------------------|
| Extension numbers for the port boards on the MAS, and the switch ports to which they connect. Note: Distribute the port board extensions over a number of switch boards if possible for greater reliability. | <i>Use format: cabinet carrier slot port</i> | <i>Connects to extension number:</i> |
| DID numbers used for: <ul style="list-style-type: none"> • MM hunt group for messaging services: • MSS alarm port number (RMB): • MAS dial-in number (modem): | | <i>Complete dial-in number</i> |
| Extension number range for subscriber mailboxes in customer dial plan | <i>Starting number</i> | <i>Ending number</i> |
| SMTP networking password used for messaging networking (optional feature) | | — |
| Subscriber to act as PostMaster: <ul style="list-style-type: none"> • subscriber's extension number • password (must be numeric) • class of service (cos) to use | | — |
| Fax mailbox extension number: <ul style="list-style-type: none"> • password (must be numeric) • complete company fax printer number • class of service (cos) to use | | — |
| Test subscriber information: <ul style="list-style-type: none"> • extension number to test telephone • password (must be numeric) • class of service (cos) to use | | — |

Services information

Use the following table if you install new software in Appendix C, "Loading the operating system on an MSS."

Services logins and passwords

| Login | Password |
|----------|----------|
| root | |
| craft | |
| tsc | |
| craftppp | |

Use the following table to record required customer- or services-provided information for establishing a remote access point-to-point (PPP) connection to the Services modem on the MSS.

PPP logins, passwords, and IP addresses

| Login | Password | Local IP address for PPP access through MSS modem (customer-provided) | Remote IP address for PPP access through remote modem (may be customer- or Services-provided) |
|----------|----------|---|---|
| sapp | | | |
| craftppp | | | |
| | | | |

Other required Services information includes:

Product ID number:

Alarm destination telephone number:

B

Installation checklist

Overview

The following checklist applies to the S3400 system installation. As you complete a procedure, make a check mark in the “✓” column.

S3400 system installation checklist

| Task | Description | Comments | ✓ |
|------|---|---|---|
| | Complete preinstallation planning: | | |
| 1. | Complete the planning forms in Appendix A. | See the LAN, messaging, and switch administrators as needed. Requires customer input. | |
| 2. | Obtain virus-checking software for the MAS. | Customer obtains and installs if required for this site. | |
| 3. | Arrange for administration of the LAN for the S3400 system. Some LANs may be administered in advance; others require that new machine administration be done at the time of installation. Note: Avaya Inc. is not responsible for the installation, administration, or test of communications between customer PCs and the LAN. | See the LAN administrator. | |
| 4. | Verify that the switch is administered. | See the switch administrator. | |
| 5. | Review preinstallation site requirements, including: <ul style="list-style-type: none">• environmental requirements• weight and space requirements• installation area requirements• power and grounding requirements | | |
| 6. | Review demarcation points. | | |

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S3400 system installation checklist

| Task | Description | Comments | ✓ |
|------|--|--|---|
| 7. | Review security issues. | | |
| | Gather tools and documentation: | | |
| 8. | Gather the necessary tools and test equipment. | | |
| 9. | Assemble the required documentation. | CD and web access is required. | |
| | Install the hardware: | | |
| 10. | Unpack the S3400 system and peripheral components. | Open boxes as instructed to reuse packing materials. | |
| 11. | Assemble and identify the system components. | | |
| 12. | Attach mounting brackets and handles to UPS and any EBM units as needed, then cable the units together. | A UPS is optional for an MSS-S, but required for an MSS-H; EBMs are always optional. | |
| 13. | Attach the front bezel to each MSS or MAS unit. | | |
| 14. | Attach rails for rack-mount or rubber spacers for stackable configuration to each MSS or MAS unit. | | |
| 15. | Connect the S3400 system power cables. | | |
| 16. | Connect the MAS port boards to the switch or PBX. | See the Dialogic documentation. | |
| 17. | Assemble the KVM switch. Steps include: <ul style="list-style-type: none"> • Attach mounting brackets to KVM switch (if needed). • Connect KVM switch to the monitor and keyboard/mouse. | Procedure varies depending on type of KVM switch purchased. | |
| 18. | Connect the KVM switch to each MSS and MAS unit. | | |
| 19. | Connect each MSS and MAS unit to the Ethernet switch (private LAN) and to the corporate LAN. | | |
| 20. | Attach ferrites to the required video and QSIG cables. | | |
| 21. | Set up the external modem for each MAS unit. | | |
| 22. | Connect the RMB (and its external modem if required) to the MSS and the switch. | | |
| | Do initial MSS administration: | | |
| 23. | Power up the S3400 system and peripheral components. | | |
| 24. | Log in to the MSS unit. | | |
| 25. | Adjust the monitor settings if needed. | | |
| 26. | Set the date and time on the system. | | |
| 27. | Set up network addressing on the private and corporate LANs. | | |

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S3400 system installation checklist

| Task | Description | Comments | ✓ |
|------|---|--|---|
| 28. | Administer the message core including: <ul style="list-style-type: none"> Set up the MSS host machine profile. Set up all required MAS and MWI trusted servers. | Requires information from LAN and messaging administrators (use the planning forms). | |
| 29. | Reboot the MSS. | | |
| | Do initial MAS administration: | | |
| 30. | Switch the monitor to show the correct MAS. | | |
| 31. | Install the hard disk image from the boot image CD. | Do only if new CDs are provided. | |
| 32. | Login as the known administrator. | | |
| 33. | Install new hardware if found. | Complete wizards as prompted. | |
| 34. | Set up regional settings, time and date. | | |
| 35. | Change administrator account name and password. | Use your planning forms. | |
| 36. | Change the machine name. | Use the S3400 system planning form. | |
| 37. | Set up the corporate LAN interface. | | |
| 38. | Set up the private LAN interface. | | |
| 39. | Test the IP addresses on the private network using ping. | | |
| 40. | Test IP addresses on the corporate network using ping. | Optional but recommended. | |
| 41. | Set up the first MAS as the domain controller. | Do this on MAS#1 only. | |
| 42. | Create user accounts and add them to groups. | Do this on MAS#1 only. | |
| 43. | Add an MAS to the Windows domain. | Do this on each additional MAS. | |
| 44. | Set up remote access on each MAS. | | |
| 45. | Add all MAS units to the remote access group. | Do this on MAS#1 only. | |
| 46. | Update the Modular Messaging account settings. | | |
| 47. | Synchronize the MAS time and date with the MSS. | | |
| 48. | Configure and test the port boards. | Configuration notes required. | |
| 49. | Set up MAS messaging service. | | |
| 50. | Install additional MAS messaging service software as needed. | | |
| 51. | Configure the MAS for the PBX. | Configuration notes required. | |
| 52. | Start MAS messaging services. | | |

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S3400 system installation checklist

| Task | Description | Comments | ✓ |
|------|--|--|---|
| 53. | Administer each additional MAS. | Repeat Chapter 4 as needed. | |
| 54. | Install virus-checking software on every MAS. | Customer obtains and installs if required for this site. | |
| | Complete initial administration: | Do these tasks on the MSS unless otherwise noted. | |
| 55. | Verify customer option settings. | | |
| 56. | Administer Internet messaging. | | |
| 57. | Update MAS host information and test using ping. | | |
| 58. | Place the MSS in the Windows domain. | | |
| 59. | Modify classes of service for special mailboxes. | | |
| 60. | Set up the PostMaster and fax mailboxes. | | |
| 61. | Administer a test subscriber. | | |
| 62. | Perform acceptance tests. These include: <ul style="list-style-type: none"> • Creating and receiving test messages in both integrated and nonintegrated mode • Creating and printing faxes (if fax service is installed) • Testing system outcalling using Subscriber Options | | |
| 63. | Remove the test subscriber. | | |
| 64. | Set up remote access on the MSS, including: <ul style="list-style-type: none"> • Administering PPP logins and passwords • Activating the modem • Setting up the PPP server configuration • Activating alarm origination | | |
| 65. | Administer digital networking. | Optional - do if required. | |
| 66. | Set up Mailbox Manager for the administrator. | Do this on the MAS or another PC as directed. | |
| 67. | Schedule unattended backups and perform an attended backup on every MAS. | Do this on each MAS. | |
| 68. | Perform an attended backup on the MSS. | | |
| 69. | Set up unattended backups on the MSS. | | |
| 70. | Save the planning forms in a safe place. | | |

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Loading the operating system on an MSS

Overview

This appendix describes how to load operating system software on a Message Storage Server (MSS). This procedure may be used to install new software on a new system, or to put the operating system on the hard disk if the system suffered a catastrophic disk failure and the hard disks all had to be replaced.

The new MSS software is provided on a CD-ROM.

Loading new MSS software

To copy new software to the MSS:

1. The KVM switch should be connected to the MSS through the first computer port (VGA 01). Verify that the monitor is showing the MSS boot procedure.
 - If the monitor is *not* showing the correct server boot procedure, see [“Connecting the KVM cables”](#) on page 2-26 and verify the cable connections. To correct cabling problems, power down the system correct the cabling, then power up the system again.
 - *For a Belkin OmniView Pro2 KVM:* To have the monitor show a different server, press slowly in sequence Scroll Lock, then Scroll Lock, then the up (or down) arrow key to change to the server connected to a higher or lower port number.

You can alternatively type the port number instead of pressing the up or down arrow key (such as 02 for port 2). See your KVM switch documentation for complete user instructions.

2. Insert the software boot CD into the MSS's DVD drive.

Note: Make sure that the CD is seated solidly between the plastic clips.

- For a picture of the MSS-S, see [Figure 2-5](#) on page 2-12.
- For a picture of the MSS-H, see [Figure 2-7](#) on page 2-14.

3. To reboot the system, press **Ctrl + Alt + Del**.

The machine begins to boot, then displays the following options:

To install on a "standard availability" platform,
type: standard <ENTER>.

To install on a "high availability" platform, type:
high <ENTER>.

To reboot, remove the CD and press the
<Ctrl><Alt><Delete> keys.

4. Type the word for the model of MSS that you installed and press Enter:

- Type **standard** for the MSS-S (*no* drive handles on the front).
- Type **high** for the MSS-H (has drive handles on the front).

The system takes about 20 minutes to copy the software.

When the copy is finished, you are prompted to remove the CD from the drive as follows:

Please, remove the Install CD from the CD drive, and
press <ENTER>.

5. Remove the software CD from the MSS's DVD drive.

Note: *Do not* leave the CD in the drive, or the system will boot from it.

6. When the CD is removed, press **Enter** to reboot the system.
7. At the Avaya Messaging welcome screen, press Enter to select **OK**.

The server displays the Time Date Selection screen.

8. Set the time and date as follows:
 - a. Use the up or down arrow keys to highlight your time zone.
 - b. Press **Tab** 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** to move to the New Date section.
 - e. Enter the current time in *mm:dd:yy* (month, day, and year) format, such as 04/21/03 for April 21, 2003.
 - f. Make sure an asterisk (*) appears in the Set hardware clock to GMT box. If not, press the space bar to add one.
 - g. Press **Tab** to move to the **OK** field, then press **Enter**.
9. When prompted to log in, type **root** and press Enter.
 10. Put the MSS software CD back in the DVD drive.

Note: Wait for the drive's light to stop flashing before you proceed.

11. At the # prompt, type **autoinstall** and press Enter.
12. When prompted to continue or quit, press **Enter** to continue.
13. You are prompted to change several passwords.
 - Enter the passwords you are provided for the following logins: **root**, **craft**, **tsc**, and **craftppp**. See [Services logins and passwords](#) on page A-13.
 - It is okay to ignore any warnings that the passwords are too short.

When the autoinstall program completes, you are prompted to remove the MSS software CD from the drive as follows:

Please remove the Installation CD from the CD drive and press <ENTER>.

14. Remove the software CD from the MSS's DVD drive.



CAUTION: Do not leave the CD in the drive. If the system reboots from the CD, you *must* remove the CD and press **Ctrl + Alt + Del** when you see the menu listed in step 3. If you fail to do this and enter the machine type again, all your data will be erased, and you will have to install the software again.

15. When the CD is removed, press **Enter** to reboot the system.
16. Continue with step 2 in [“Logging in to the MSS server”](#) on page 3-3.

D

Loading the operating system on an MAS

Overview

This appendix describes how to load operating system software on a Messaging Application Server (MAS). This procedure may be used to install new software on a new system, or to put the operating system on the hard disk if the system suffered a catastrophic disk failure and an MAS hard disk had to be replaced.

The new MAS software is provided on two CD-ROMs.

Loading new MAS software

To copy new software to the MAS:

1. The KVM switch should be connected to the MAS through one of the computer ports (such as VGA 02). Verify that the monitor is showing the MAS boot procedure.
 - If the monitor is *not* showing the correct server boot procedure, see [“Connecting the KVM cables”](#) on page 2-26 and verify the cable connections. To correct cabling problems, power down the system correct the cabling, then power up the system again.
 - *For a Belkin OmniView Pro2 KVM:* To have the monitor show a different server, press slowly in sequence Scroll Lock, then Scroll Lock, then the up (or down) arrow key to change to the server connected to a higher or lower port number.

You can alternatively type the port number instead of pressing the up or down arrow key (such as 02 for port 2). See your KVM switch documentation for complete user instructions.

2. Insert the first boot-image CD into the MAS's CD drive. See [Figure 2-9](#) on page 2-16 if needed.
3. Press **Ctrl + Alt + Del** to reboot the system.
 - a. On the Windows Security window, click **Shut Down...**
 - b. On the Shut Down Windows screen, select **Restart** and click **OK**.

The machine begins to boot from the CD.



CAUTION: Do not touch the keyboard once the system begins to boot, or the software will not install properly.

- The CD image begins to copy to the MAS hard disk.
 - If you are prompted to Cancel, click **Yes**. This message only appears if you skipped the RAM test, which you should not do. Reload the software starting with step 3.
4. About 70% through completion (up to 10 minutes), you are prompted to "Insert media 2."
 - Remove the first boot-image CD, and place the second CD in the drive.
 - Wait for the CD to spin up, then press **OK**.

The entire copy procedure may take over 20 minutes. The system will reboot automatically on completion. When the reboot completes, a splash screen appears.

5. Remove the second boot CD from the drive.
6. On the Windows 2000 Server Setup screen, type the Windows product key for this MAS (each unit has a unique product key).

This number must be entered exactly as shown. It is located on a sticker or tag on the side or rear of each MAS machine.

Note: If you are installing an additional MAS, you see an error message about an IP address conflict with another system on the network. Press **OK** to ignore the message. This error persists until a unique IP address is assigned to the new MAS.

7. Click **Next**.
8. When the Licensing Modes screen appears, just wait. The installation should complete automatically from this point on. When finished, it automatically restarts the machine.

A splash screen appears as the system reboots.

9. When the boot completes, press **Ctrl+Alt+Del** to log on as follows:
 - a. On the Log On to Windows screen, verify that the logon name is VSSystemAdmin.
 - b. Enter this password exactly as shown: **3825_STul**
 - c. Press Enter or click **OK**.

Note: If you are installing an additional MAS, you see an error message about an IP address conflict with another system on the network. Press **OK** to ignore the message.

10. A Found New Hardware wizard appears for all new devices installed in the system (such as the Dialogic port boards). Follow the prompts to complete each wizard.

Note: If the wizard comes up in a tiny window, press **Esc** to cancel this wizard (subsequent wizards should run in a normal-sized window). The skipped wizard will reappear the next time the system restarts; run it then.

The hardware wizard appears once for every Dialogic port board installed in the system. Disable the Dialogic hardware for now as follows:

- a. On the Welcome screen, click **Next**.
 - b. On the Install Hardware Device Drivers screen, accept the default option (Search for a suitable driver) and click **Next**.
 - c. On the Locate Driver Files screen:
 - (1) Clear the checkbox for "Specify a location."
 - (2) Check the box for "CD-ROM drives." Click **Next**.
 - d. On the Driver Files Search Results screen, make sure that "Disable the device" is selected. Click **Finish**.
 - e. Repeat steps a through d for each repetition of the wizard.
11. *If a modem is already attached*, a Digital Signature Not Found wizard pops up. Click **Yes** to install the driver and continue the installation.

Note: After your next reboot, you may see a Found New Hardware wizard reporting a USB device error. Click **Finish** to continue.

12. After the wizards run, continue with ["Setting up regional settings, date, and time"](#) on page 4-4.

Creating a new tone file

Overview

This appendix describes how to build a tone file for analog port boards by using the PBXpert utility to learn PBX tones.

This procedure must be done after the port boards are administered on the switch, but before you configure them using the Dialogic Configuration Manager (see [“Configuring analog port boards”](#) on page 4-28).



CAUTION: Use the configuration notes to administer the port boards for your particular PBX or switch integration. See [“Required software and documentation”](#) on page 2-5 for instructions on obtaining the configuration notes. The port boards *must* be administered on the switch before you can proceed.

You can use PBXpert either automatically or manually to learn the call progress tones for your PBX and store them in a Tone Set File (TSF). Many tone sets can be stored in a single TSF file.

- *Automatic Learning:* PBXpert uses two different channels on the Dialogic voice board to set up tones and learn the resulting call progress tones automatically. See [Learning tones automatically](#) on page E-2.
- *Manual Learning:* PBXpert uses one channel on the Dialogic voice 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. See [Learning tones manually](#) on page E-7.

Note: If only one line is connected to the Dialogic voice board, you must use Manual Learning.

Learning tones automatically

This section describes the following procedures:

- [Running the PBXpert wizard](#) on page E-2
- [Consolidating and saving the TSF file](#) on page E-6
- [Using the new TSF in Dialogic Configuration Manager](#) on page E-6

Running the PBXpert wizard

The PBXpert wizard guides you through learning the tones used by your PBX and saving 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 voice cards.
 - a. You should have already started the Dialogic Configuration Manager. See steps 2 through 4 in [“Configuring analog port boards”](#) on page 4-28.
 - b. Click the green **Start Service** button on the button bar.

The installed boards show a green light when service is started, and the Stop Service button becomes active.

2. Click Start > Programs > Dialogic System Software > PBXpert.

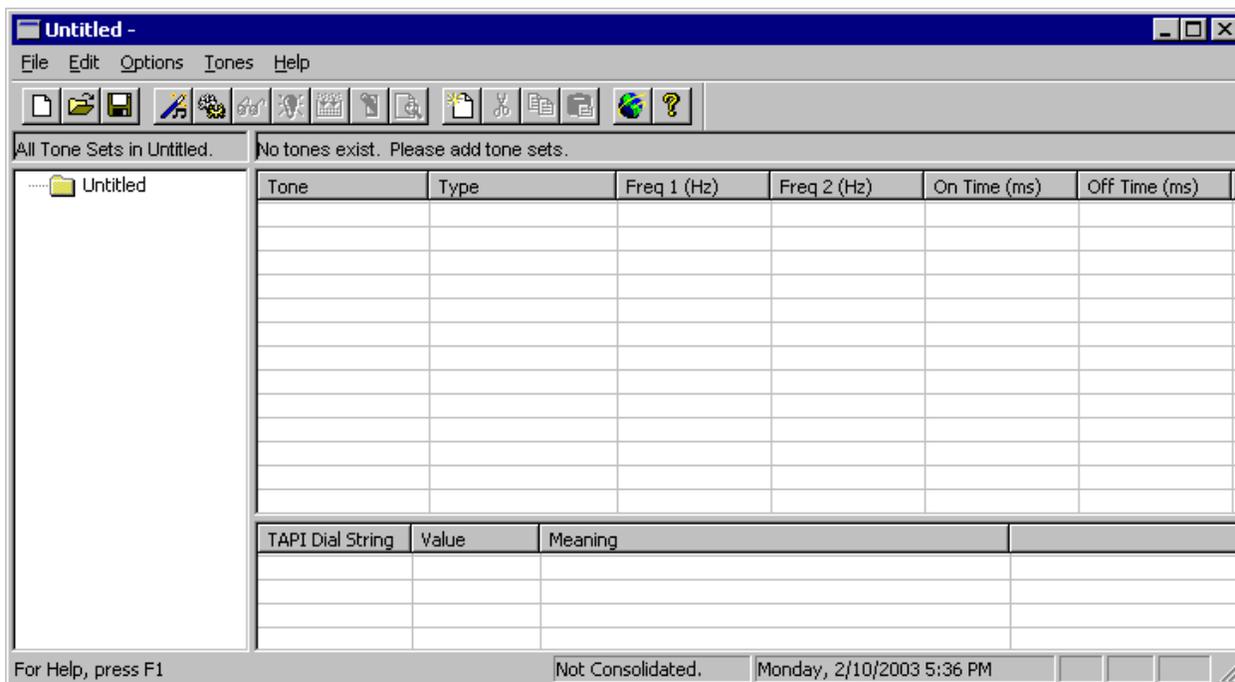
The PBXpert main window appears (see [Figure E-1](#) on page E-3). Most fields are blank until tones are learned.

- 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 your PBX environment and the Dialogic API. Any settings that you change are saved when you exit PBXpert. For help on a particular screen, click the **Help** button in the wizard.

Figure E-1. PBXpert main window



Complete the PBXpert wizard screens as follows:

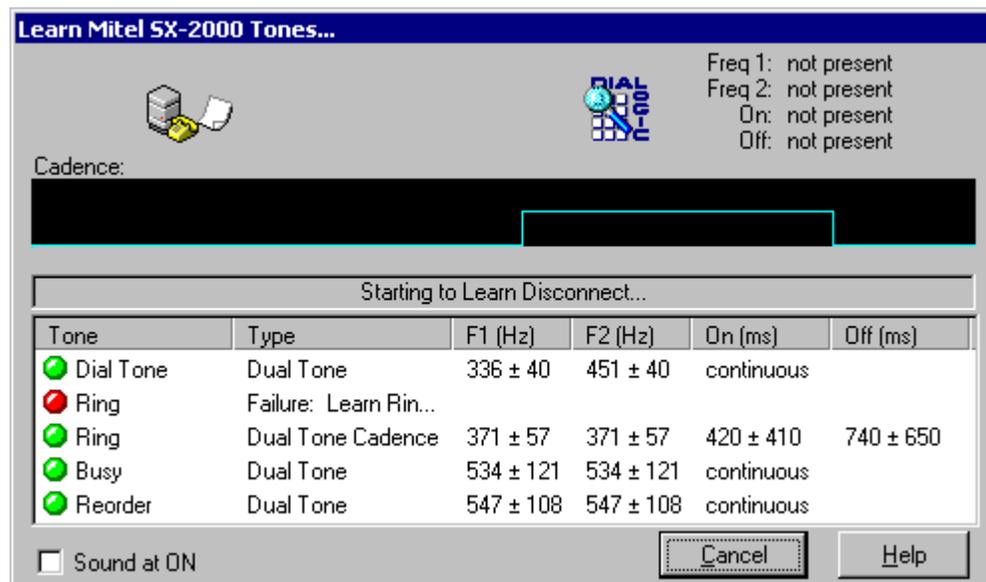
1. When the PBXpert Wizard Welcome screen appears, click **Next**.
2. On the PBX Information page:
 - Under PBX, enter the name of the manufacturer (such as Mitel) and the model of the PBX (such as SX-2000).
 - You can use the automatically created Tone Set File name as it appears, or alter it as desired.
 - Click **Next**.
3. On the TAPI Information page, just use the default values. Click **Next**.

4. On the Select a Board screen:
 - Select the Dialogic board to use.
 - Click **Next**.
5. On the Select the Calling Resource screen, for the Line A Calling Channel:
 - For “Select the Channel,” enter the port number or channel to use.
 - For “Phone Number,” enter the extension number of this port. See [Required switch and messaging information](#) on page A-12 for port board extensions.
 - Click **Next**.
6. On the Select the Calling Resource screen, for the Line B Called Channel:
 - For “Select the Channel,” enter a different port number or channel to use.
 - For “Phone Number,” enter the extension number of this port.
 - Click **Next**.
7. On the Settings Confirmation screen:
 - Verify your settings. Click **Back** if you need to change anything.
 - Make sure that the **Run Wizard Auto-Test** box is checked.
 - Click **Next**.
8. The Auto Line Test window appears while PBXpert verifies the connection between the two specified channels.
 - If you see a “Test finished successfully!” message, click **OK** to close this window and proceed.
 - If the line test fails, click **OK** to close this window. Click **Back** on the wizard, adjust your settings, and try the test again.
9. On the Learn Tones screen, click **Next** to begin learning tones automatically.

The Learn Tones window appears. See [Figure E-2](#) on page E-5.

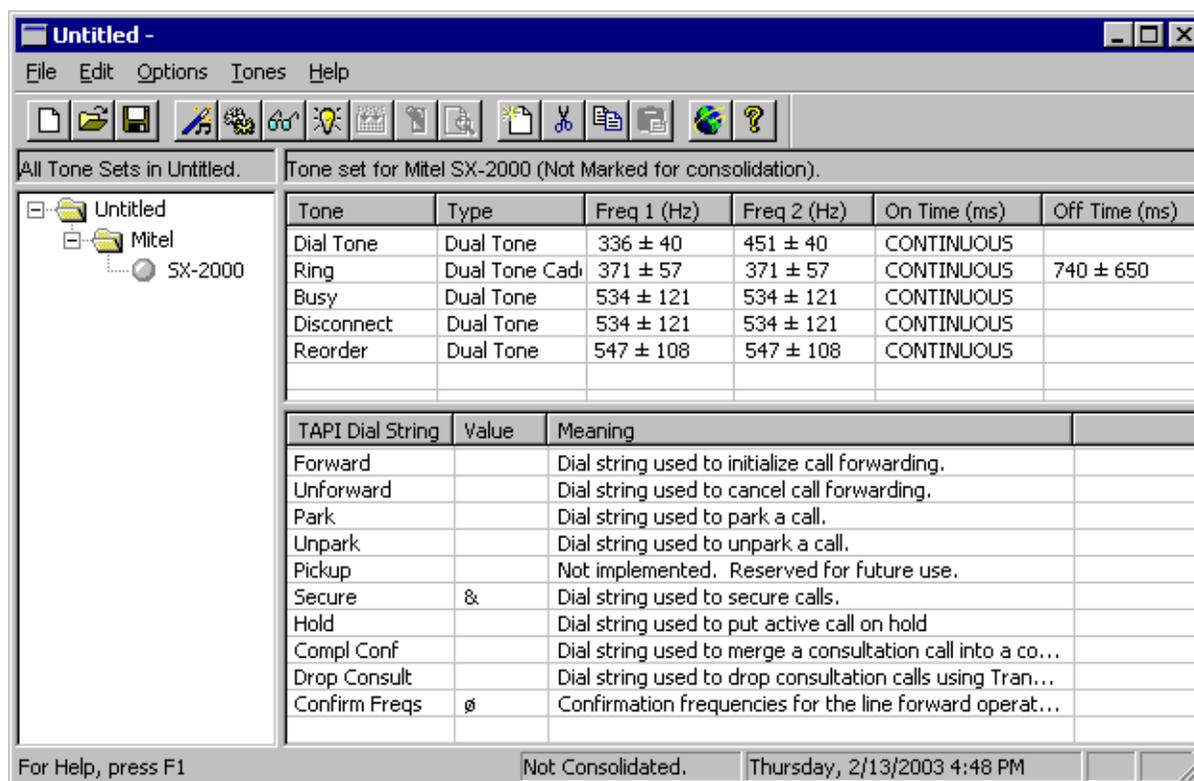
| |
|---|
| <p>Note: You can click Cancel at any time during the test to stop automated learning.</p> |
|---|

Figure E-2. Learn Tones window (learning in progress)



10. When PBXpert completes learning, buttons appear allowing you to keep or discard the data.
 - If the tones were learned without errors, select **Keep Data**. The Learn Tones window closes and you can proceed.
 - If errors occurred, select **Discard Data**. The window closes. Click **Back** on the wizard, adjust your settings, and try to learn the tones again. You cannot test or save the tone file if it contains errors.
11. 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 proceed.
 - **OK** to close this window. Click **Back** on the wizard, adjust your settings, and try the test again.
12. The Summary of Results page shows the final wizard status and tone definitions. Click **Finish**.
 Tone definitions are displayed in the main window (see [Figure E-3](#) on page E-6).

Figure E-3. Sample tone definitions in main window



Consolidating and saving the TSF file

You must consolidate and save the new TSF file so that you can use it with the Dialogic voice driver. To do this:

1. Click Tones > Consolidate.
2. When finished, click File > Save to save the new TSF file.
 - a. On the Save As screen, use the default DATA directory.
 - b. Specify a file name with file type of TSF (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 Dialogic Configuration Manager window.
2. Click the red **Stop Service** button on the button bar.

3. Return to step 5 in [“Configuring analog port boards”](#) on page 4-28 and complete board configuration and testing.

Learning tones manually

This section describes the following procedures:

- [Running PBXpert](#) on page E-7
- [Adding a new tone set](#) on page E-8
- [Learning tone definitions](#) on page E-8
- [Testing the tone set](#) on page E-10
- [Consolidating and saving the TSF file](#) on page E-10
- [Using the new TSF in Dialogic Configuration Manager](#) on page E-10

Running PBXpert

To run PBXpert manually:

1. Start the Dialogic voice cards.
 - a. You should have already started the Dialogic Configuration Manager. See steps 2 through 4 in [“Configuring analog port boards”](#) on page 4-28.
 - b. Click the green **Start Service** button on the button bar.

The installed boards show a green light when service is started, and the Stop Service button becomes active.

2. Click Start > Programs > Dialogic System Software > PBXpert.

The PBXpert main window appears (see [Figure E-1](#) on page E-3). Most fields are blank until tones are learned.

3. If you are using PBXpert for the first time after installation, the PBXpert wizard starts automatically. If the PBXpert32 Wizard starts, check the “Don’t run wizard at startup” checkbox and click the **Cancel** button.

A new, empty TSF is now active.

4. In the PBXpert main window, click **Settings** on the button bar.

5. In the Settings window:
 - a. For Line A, enter the **Board Number** (such as 1) and the **Channel Number** or port number.
 - b. The **Manual mode** checkbox should be checked.
 - c. For Line B, for **Phone Number**, enter extension for this port or channel. See [Required switch and messaging information](#) on page A-12 for port board extensions

You can use the default values for all the other fields on this screen. Click **Help** for more information if needed.

Note: If you are familiar with your PBX environment and the Dialogic API, you can change these default settings. Any settings that you change are saved when you exit PBXpert.

- d. 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 Tone Set window:
 - a. Enter the PBX **Manufacturer** (such as Mitel) and **Model** name (such as SX-2000).
 - b. Click **OK**.

The PBXpert main window shows the manufacturer and model names you entered. The tone definitions are set to zero.

Learning tone definitions

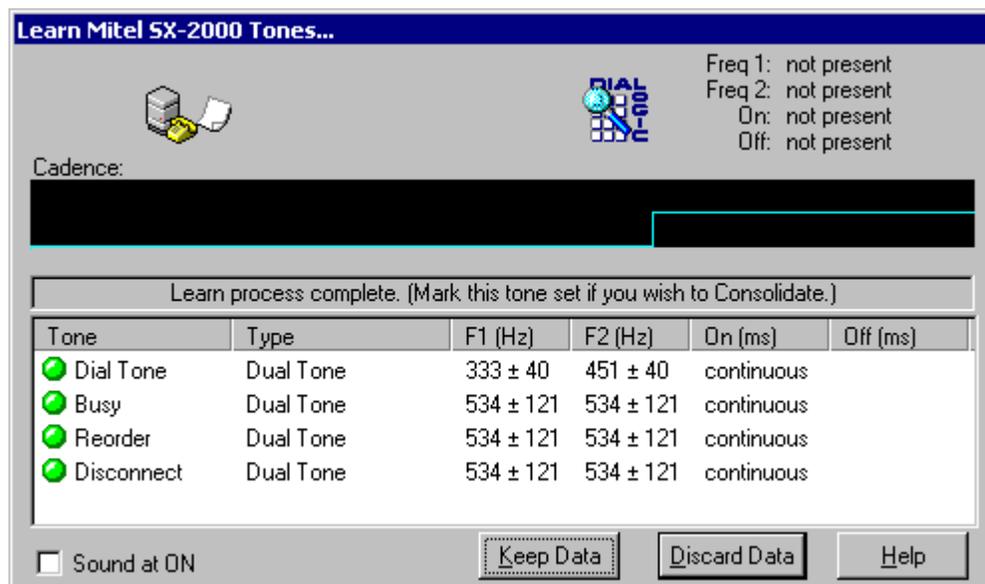
To add tone definitions to the new tone set:

1. From the PBXpert main window, click Tones > Learn.
2. On the Start Learn window:
 - a. Select the tones for the Dialogic cards to learn (the default is all tones).
 - b. Click **Start Learn** to have PBXpert start learning tones.

The Learn Tones window appears (see [Figure E-4](#) on page E-9).

Note: Click **Cancel** at any time to stop learning.

Figure E-4. Learn Tones window (learning complete)



3. You are prompted to listen for ringing, and to pick up or replace the telephone handset during the test. When the message box pops up, do the requested action, then click **OK**.
4. When the learning process has finished, tone definitions appear in the Learn window. Keep or discard the data as follows:
 - If the tones were learned without errors, select **Keep Data**. The Learn Tones window closes and you can proceed.
 - If errors occurred, select **Discard Data**. The window closes. Click **Back** on the wizard, adjust your settings, and try to learn the tones again. You cannot test or save the tone file if it contains errors.

The Learn window closes. The new tone definitions appear in the PBXpert main window. See [Figure E-3](#) on page E-6 for an example.

Testing the tone set

The Test function checks that the consolidated tone set in the active TSF works correctly with the Perfect Call call-progress analysis utility.

To test the newly learned tones:

1. In the main PBXpert window, Tones > Test.
2. A Test window appears.

When testing is complete, test results are displayed in the Test window.

3. Check that the tone definitions of the learned tones are correct.

Consolidating and saving the TSF file

You must consolidate and save the new TSF file so that you can use it with the Dialogic voice driver. To do this:

1. Click Tones > Consolidate.
2. When finished, click File > Save to save the new TSF file.
 - a. On the Save As screen, use the default DATA directory.
 - b. Specify a file name with file type of TSF (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 Dialogic Configuration Manager window.
2. Click the red **Stop Service** button on the button bar.
3. Return to step 5 in [“Configuring analog port boards”](#) on page 4-28 and complete board configuration and testing.

Recovering from a catastrophic disk failure

Overview

This appendix summarizes the procedure for restoring an MAS machine if the hard disk drive failed and had to be replaced. The procedures are slightly different if you are restoring the first MAS in the system, or a subsequent MAS.



CAUTION: This procedure is only valid for the following cases:

- The first MAS was damaged and there is no other MAS in the domain.
- A subsequent MAS was damaged but the first MAS is fine.

All other failure cases must be escalated at this time.

To recover from a catastrophic disk failure, you will need:

- Avaya™ Modular Messaging (MM) Release 1.0 for the Messaging Application Server (MAS) software, Issue 1 or later, ED75011-10G15 (two CDs).
- This guide and other required documentation for system installation. See [“Required software and documentation”](#) on page 2-5 for a complete list.
- A copy of the completed planning forms, which should be on file. See Appendix A, “System planning forms.”

Note: Make sure that the planning forms are accurate and up-to-date. When you restore the MAS machine, you must duplicate *exactly* the information from your original setup (machine names, domain names, passwords, and so on) to avoid problems.

Recovery procedure

To restore an MAS system following a catastrophic disk failure:

1. The faulty drive must be replaced and the system powered back up. See [“IDE drive replacement”](#) on the documentation CD for these steps.
2. Install the operating system on the new disk drive. Follow the steps in Appendix D, “Loading the operating system on an MAS.”
3. Continue restoring the system depending on the MAS as follows:
 - *If you are restoring the first MAS:* Continue with [“Restoring the first MAS”](#) on page F-2.
 - *If you are restoring a subsequent MAS:* Continue with [“Restoring a subsequent MAS”](#) on page F-3.

Restoring the first MAS

To restore the first MAS (which is also the domain controller):

1. Follow the steps in Chapter 4, “Administering the MAS,” from [“Setting up regional settings, date, and time”](#) on page 4-4, through [“Setting up the MAS messaging services”](#) on page 4-37.



CAUTION: The procedure for restoring the first MAS to service after a disk failure is slightly different from the procedure listed in [“Setting up MAS messaging service”](#) on page 4-37. Follow the instructions below exactly to restore the first MAS.

2. In the section [“Setting up MAS messaging service”](#) on page 4-37, for step 3 (the Voice Mail Domain Selection screen), you *must* select the radio button for “Subsequent server in an existing voice mail domain.”
3. Complete the rest of Chapter 4, “Administering the MAS.”
4. On the MSS machine, repeat the procedure for [“Placing the MSS in the Windows domain”](#) on page 5-6.
5. Continue with restoring the first MAS as follows:
 - *If this MAS is the only MAS in the system,* continue with [“Completing system restoration on every MAS”](#) on page F-4.
 - *If any additional MASs are in the system,* continue with step 6.

6. Log in to each subsequent MAS as the local administrator as follows:
 - a. On each additional MAS, click Start > Log off *admin-account*.
 - b. On the Log Off Windows screen, click **Yes**.
 - c. Press **Ctrl+Alt+Del** to log on.
 - d. On the Log On to Windows screen, change the User name to the Local Administrator account name for this MAS (such as mas2-admin). See items **A2** through **A4** on the “[S3400 logon accounts form](#)” on page A-10.
 - e. Enter the password for this account.
 - f. Log on to the machine name for this MAS (for example, zorro). See item **1** on the “[S3400 system planning form](#)” on page A-6.
 - g. Press Enter or click **OK**.
7. Now make this MAS a member of a workgroup as follows:
 - a. Right-click **My Computer** and select **Properties**.
 - b. On the System Properties window, click the **Network Identification** tab.
 - c. Click the **Properties** button. The Identification Changes window appears.
 - d. Click the Member of **Workgroup** radio button.
 - e. Name the workgroup (WORKGROUP is okay) and click **OK**.
 - f. Click **OK** to close the System Properties screen.
 - g. Reboot the system when prompted.
8. Log back in as the local machine administrator (the same account you used in step 6).
9. Do the section “[Adding an MAS to the Windows domain](#)” on page 4-18 to join the existing Windows domain (such as zodiac).
10. Repeat steps 6 through 9 for every additional MAS in the system.
11. To complete the system restoration, continue with “[Completing system restoration on every MAS](#)” on page F-4.

Restoring a subsequent MAS

To restore the second, third, or fourth MAS in a multiple-MAS system:

1. Follow the steps in Chapter 4, “Administering the MAS,” from “[Setting up regional settings, date, and time](#)” on page 4-4, through “[Configuring and testing the port boards](#)” on page 4-27.
2. *Before* you begin the section “[Setting up MAS messaging service](#)” on page 4-37, delete the old account for this machine as follows:

- a. Double-click the **Configure** icon on the desktop.
- b. In the left-hand pane of the Configure window, expand the **Active Directory Users and Computers** directory.
- c. Expand the **Computers** directory.
- d. Locate the name of the MAS machine that had the failed drive (the machine that you are now restoring).
- e. Right-click this machine name and select **Delete**.
- f. Close the Configure window.



CAUTION: You must delete the old account for this MAS before you begin [“Setting up MAS messaging service”](#) on page 4-37.

3. Continue with the section [“Setting up MAS messaging service”](#) on page 4-37 and complete the steps as documented.
4. Complete the rest of Chapter 4, “Administering the MAS.”
5. To complete the system restoration, continue with [“Completing system restoration on every MAS”](#) on page F-4.

Completing system restoration on every MAS

To complete restoring the system for any MAS:

1. Reinstall any previously installed patches on this MAS.
2. Restore data files from backup including spooled messages, customized caller applications and prompts, and the hosts file.



CAUTION: *Do not* restore the System State following a catastrophic disk failure.

- a. Run the Restore Wizard as described in [“Restoring backed-up MAS data \(after a non-catastrophic failure\)”](#) on the documentation CD.
- b. Restore the following:
 - hosts file
 - CABACKUP folder (contains Caller Applications)
 - Spool directory
 - custom prompt files (if they have been changed by the customer)

Note: *Do not* restore the System State.

- c. Complete the restoration wizard as directed.
3. To complete the restoration of Caller Applications, do the following:
 - a. Click Start > Run to open a Command prompt window.
 - b. In the Run box, type the following in the Open field and press Enter:

C:\Avaya_Support\CMD\CARestore.bat

| |
|--|
| <p>Note: This step works only on Release 1 systems after installing RFU1.01. Without this patch, the Caller Applications files could be lost unless they were backed up in another way.</p> |
|--|

4. As a precaution, preserve a copy of the existing backup file as follows:
 - a. Click Start > Run. In the Open field, type **\\mss1\masbackup**
You are prompted for an account name and password.
 - b. In the Connect As window, use the domain administrator account name (for example, dom-admin) and password. See item **A1** on the [“S3400 logon accounts form”](#) on page A-9. Click **OK**.

Windows Explorer will launch.
 - c. Locate the backup file for the MAS that you are restoring (such as ZIPPYDailyBackup.bkf, where *ZIPPY* is the host name of this MAS). Right-click the file name and select **Rename**.
 - d. Type a new name for this backup file (such as OldZIPPYDailyBackup.bkf) and press Enter.
5. Do [“Performing acceptance tests”](#) on page 5-10.
6. Reinstall other software if required.
 - a. If Mailbox Manager was installed on this MAS, reinstall it as directed in [“Setting up Mailbox Manager”](#) on page 5-19.
 - b. Reinstall any other software that was previously installed on this MAS (for example, virus-checking software).
7. When you are satisfied that the system is running correctly, do the [“Backing up the system”](#) on page 5-22 procedure for the MAS that you just restored.

| |
|--|
| <p>Note: If you restored the first MAS, when you repeat the procedure for “Setting up and running backups on every MAS” on page 5-22, you need to re-enter the domain-administrator account and password for every MAS in the system to schedule backups again.</p> |
|--|

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