



# **Implementing Survivable Modular Messaging Release 5.2 for Microsoft Exchange 2010**

April 2012  
CID: 156181

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# About this book

This book, *Implementing Survivable Modular Messaging Release 5.2 for Microsoft Exchange 2010*, contains instructions for the following:

- Setting up and configuring the Avaya Survivable Modular Messaging system in a Microsoft Exchange 2010 configuration.
- Switching service to the Avaya Survivable Modular Messaging system when the primary Modular Messaging system is unavailable.
- Restoring service to the primary Modular Messaging system from the Survivable Modular Messaging system.

**Note:**

This book describes the Avaya Survivable Modular Messaging system only in a Microsoft Exchange 2010 configuration. This book contains information for setting up the Avaya Survivable Modular Messaging system using the Avaya Messaging Application Server (Avaya MAS). For more information about installation procedures and requirements for a Customer Provided Equipment (CPE) server, see *Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades*.

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## Intended audience

This book is intended primarily for experienced technical support staff that is responsible for setting up and configuring the Survivable Modular Messaging system. The book is also intended for customer support staff responsible for maintaining the Survivable Modular Messaging system and for ensuring the readiness of the system to take over the messaging service.

The book describes features and procedures that are also documented in other sections of the Modular Messaging Release 5.2 documentation library. For more details about the features and procedures, see *Modular Messaging, Release 5.2, documentation library*.

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## Organization of the book

This book is divided into four chapters:

- [Chapter 1: System description](#) on page 5.  
Contains a description of the Survivable Modular Messaging system and the requirements to install the system.
- [Chapter 2: Installation and cutover checklists](#) on page 11.  
Contains procedural checklists to set up the Survivable Modular Messaging system, cutover service to the Survivable Modular Messaging system, and return service to the primary Modular Messaging system.
- [Chapter 3: Checklist procedures](#) on page 29.  
Contains detailed steps of the procedures included in the checklists.
- [Chapter 4: Survivable Modular Messaging planning form](#) on page 37.  
Contains a planning form that you must complete with information required for the setup and maintenance of the Survivable Modular Messaging system. You must complete most information before beginning the setup, though you complete several fields during the setup procedure.

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|-------------------|-------------------|
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| Voice mail or fax | 303-538-9625      |

In your communication, ensure that you include the name and date of release of this book:

*Implementing Survivable Modular Messaging Release 5.2 for Microsoft Exchange 2010*, Issue 1, April 2012.



# Chapter 1: System description

Survivable Modular Messaging provides a disaster recovery solution for Modular Messaging Release 5.2 systems that use the S3500, S8730, or S8800 1U family of servers. You cannot use Survivable Modular Messaging as a method for creating a distributed environment. The survivable configuration provides redundancy when infrastructure, including telephony, Active Directory, Exchange and Modular Messaging, at a primary site is lost.

The Survivable Modular Messaging system uses the same license file as the primary Modular Messaging system and is an extension to the primary Modular Messaging system. You can co-locate the Survivable Modular Messaging system with the primary system, but the system is typically installed at a remote location. Capacity rules, such as the maximum number of MAS servers, for a single Modular Messaging system apply to the Survivable Modular Messaging system.

The topology is considered as a single Active Directory (AD) forest and hence a single Microsoft Exchange enterprise. A single Exchange Database Availability Group (DAG) spans two Active Directory sites, one each for the primary location and the survivable location, with the main databases that hold user mailboxes replicated between the two sites. Each AD site must include a separate CAS array. Each location has one or more MAS servers and one or more AD Global Catalog servers.

Survivable Modular Messaging is designed to work in conjunction with Avaya Communication Manager running on an Avaya Enterprise Survivable Server (ESS) or Avaya Local Survivable Processor (LSP).

**Note:**

This document, Implementing Survivable Modular Messaging Release 5.2 for Microsoft Exchange 2010, describes the procedures for the QSIG integration. For other integration types, contact your technical support representative.

The connection between Avaya Communication Manager and Avaya Messaging Application Server (MAS) is achieved over SIP, T1/E1 QSIG, or H.323 IP trunks. This integration passes call information and Message Waiting Indicator (MWI). You must establish a trunk between the primary system MAS and Avaya Communication Manager and a second trunk between the Survivable Modular Messaging MAS and Avaya ESS.

During normal operations, the primary Modular Messaging system provides all services, including voice mail. If the primary system fails, voice mail services can automatically or manually failover to the Survivable Modular Messaging MAS following a single call routing update on Avaya ESS. For details, see [Changing the Modular Messaging route pattern](#) on page 30.

You can configure Exchange 2010 to use the inbuilt resilience of the Exchange System with standby replicas of the mail databases available at both locations. Modular Messaging offline access is available until Microsoft Exchange becomes available at the Survivable Modular Messaging site. Ancillary services such as MWI, Call Me, Find Me, and Notify Me require

## System description

minimal manual intervention, preferably after-hours, at the Survivable Modular Messaging site to operate normally.

For a description of the requirements for Survivable Modular Messaging, see the following sections of this chapter:

- [Hardware requirements](#) on page 7
- [Software requirements](#) on page 7
- [Configuration requirements](#) on page 7
- [Additional requirements](#) on page 8

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## System requirements

This section explains the requirements that you must meet to implement a Survivable Modular Messaging system.

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### Hardware requirements

The Survivable Modular Messaging system must meet the following hardware requirements:

- The primary Modular Messaging system and the Survivable Modular Messaging system must run on the S3500, S8730, or S8800 1U family of servers or customer-provided equipment (CPE) servers. For details on the minimum requirements for the servers, see *Avaya Modular Messaging Concepts and Planning Guide*.

**Note:**

A CPE server requires that you install the appropriate port boards before you install the Modular Messaging software. For more information, see *Chapter 3: "Installing Dialogic port boards in a customer-provided MAS" in Avaya Modular Messaging for Microsoft Exchange Release 5.2 Installation and Upgrades*.

- The hardware configuration of the Survivable Modular Messaging system must be identical to that of the primary system and include the same number of MASs, supplementary servers, Web Subscriber Option servers, and Offline Access servers.
- The Survivable Modular Messaging system must work in conjunction with an Avaya Enterprise Survivable Server (ESS) or Avaya Local Survivable Processor (LSP) that is running Avaya Communication Manager. Survivable Modular Messaging supports T1/E1 and H. 323 integration types.

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### Software requirements

The Survivable Modular Messaging system must meet the following software requirements:

- The primary Modular Messaging system and the Survivable Modular Messaging system must run Avaya Modular Messaging Release 5.2 with Service Pack 11 or later software.
- The software configuration of the Survivable Modular Messaging system must be identical to that of the primary system and include all updates and patches to system software.

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### Configuration requirements

The Survivable Modular Messaging system must meet the following configuration requirements:

## System description

- Active Directory and Exchange must be installed, configured and must operate normally at the primary and Survivable Modular Messaging sites.

**Note:**

Active Directory servers at both sites are global catalog servers with the Active Directory/Domain Controller at the Survivable site replicating data to the primary site.

- Microsoft Exchange servers at the primary and the survivable sites must be installed with replicas of all mail databases that host either subscriber mailboxes or Modular Messaging system mailboxes available in both locations.
- The primary and the Survivable Modular Messaging systems must be in a single Active Directory Forest.

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## Additional requirements

To set up the Survivable Modular Messaging system, the following equipment must be available:

| Equipment                                                                                  | Release                                                            |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Avaya Messaging Application Server S3500, S8730, or S8800 1U                               | Modular Messaging R5.2 with SP11 or later                          |
| Avaya Communication Manager running on an Avaya S8700 Media Server with G650 Media Gateway | Avaya Communication Manager 5.1 or later                           |
| Avaya Communication Manager running on an Avaya S8500 Media Server with G650 Media Gateway | Avaya Communication Manager 5.1 or later                           |
| Avaya 4600 series IP phone                                                                 | Release 2.8 (H.323)                                                |
| Avaya Outlook Thick Client                                                                 | Release 5.2                                                        |
| Microsoft Active Directory/Domain Controller and DNS Server                                | Infrastructure capable of supporting an Exchange 2010 environment. |
| Microsoft Exchange Server                                                                  | Microsoft Exchange Server 2010 with SP1                            |

- A copy of the Data Collection Tool (DCT) data file stored on a USB storage device such as a flash drive, memory stick, or equivalent that you bring to the customer site. The DCT data file must have the extension *mmdct*, such as *sitefile.mmdct*. You need the DCT data file to configure each MAS. For more information, see [Selecting or creating a DCT data file](#) on page 32.

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## Licensing Modular Messaging

Modular Messaging uses Avaya Web License Manager (WebLM) as the standard licensing mechanism. WebLM is a Web-based licensing solution that facilitates license management.

Using WebLM, an administrator can track and manage licenses of multiple Avaya software products installed in an organization from a single location. The required license file resides on a WebLM Server and the license is tied to the MAC address of the WebLM Server.

A Survivable Modular Messaging system works with WebLM the same manner as a normal Modular Messaging system. The Survivable Modular Messaging system works differently when the system is failed over and the WebLM server is no longer available.

The licensing model of Modular Messaging operates in the following three modes:

- **License Normal mode:** In this mode, the system operates normally and denies any attempt to exceed the license parameters.
- **License Error mode:** The system enters the License Error mode when the system cannot contact the WebLM server or the license has a problem. In this mode, you can perform any licensed operation, for a grace period of 30 days.
- **License Restricted mode:** The system enters License Restricted mode if the problem is not fixed during the 30 day grace period in License Error mode. In this mode, you cannot add any new subscribers for voice mail nor make any changes to the subscribers profiles. However, you can delete subscribers if the licensed mailbox count exceeds the specified limit.

In a fail over situation, the WebLM server is not accessible to the survivable system, resulting in a change in the licensing mode from Normal to License Error mode. The survivable system continues to operate normally for the next 30 days, during which the primary site comes back online.

**Note:**

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



## Chapter 2: Installation and cutover checklists

This chapter contains procedural checklists for each stage of the setup and use of the Avaya Survivable Modular Messaging system. For details on the steps of the procedures included in the checklists and for the procedures required to maintain the Survivable Modular Messaging system, see [Chapter 3: Checklist procedures](#) on page 29.

This chapter includes the following checklists:

- [Setting up the primary Modular Messaging system](#) on page 12
- [Installing the Survivable Modular Messaging system](#) on page 16
- [Switching service to the Survivable Modular Messaging system](#) on page 21
- [Returning service to the primary Modular Messaging system](#) on page 25

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## Setting up the primary Modular Messaging system

To set up a primary Modular Messaging system, you must first install and configure at least one Avaya MAS. Complete the steps in this checklist to install and configure the MAS for the primary Modular Messaging system.

To differentiate the primary system and the survivable system in terms of MASs, Site1 and Site2 terminologies are introduced. Therefore, in a 4 MAS system with 2 MAS servers on the primary site and 2 MAS servers on the survivable site, the servers are referred to as Mas1Site1, Mas2Site1, Mas3Site2, and Mas4Site2.

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### Prerequisites

Before completing the procedures in this checklist, ensure that the following conditions are met:

- All the required configuration on the Enterprise Survivable Server (ESS) and the Avaya Communication Manager to enable communication with the primary system MAS and the Survivable Modular Messaging MAS must be complete.
- Installation of the hardware for the primary system including all physical LAN connections must be complete. For more information about installation procedures and requirements, see *Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades*.
- All Exchange servers must run Microsoft Exchange 2010 software.
- All the required configurations on the Enterprise Survivable Server must be complete.
- All hardware in the primary and Survivable Modular Messaging system must be from the S3500, S8730, or S8800 1U family of servers, running Modular Messaging 5.2.
- The primary Modular Messaging system must use DNS names for client access and networking, if applicable.

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### Additional requirements

To complete the procedures in this checklist, you must have the following:

- A copy of the configuration notes for PBX integration. Download the latest versions from [support.avaya.com](http://support.avaya.com).
- A copy of the DCT data file created using the Modular Messaging Data Collection Tool available on [support.avaya.com](http://support.avaya.com).

Usually, a person responsible for installation planning uses the Modular Messaging Data Collection Tool to create a DCT data file before the installation. This person might be the project manager, customer representative, or other responsible party. The DCT data file

must have the extension *mmdct*, such as *sitefile.mmdct*. You need the DCT data file to configure each MAS. See [Selecting or creating a DCT data file](#) on page 32.

- A copy of the [Survivable Modular Messaging planning form](#) on page 37 that is completely filled out with the exception of the following fields. You must enter information in the following fields during the installation procedure.
  - Survivable Modular Messaging Exchange and VMD product alarm IDs
  - Route pattern to Survivable Modular Messaging
  - Trunk Group to Survivable Modular Messaging
  - Trunk Group Trunk Access Code (TAC)
  - Netbios name of the CAS Array on the survivable AD site
  - Netbios name of the local global catalog server on the survivable AD site

## Checklist

**Table 1: Setting up the primary Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Configure Avaya Communication Manager to enable communication with the MAS systems at the primary and Survivable Modular Messaging sites. You must complete this procedure before installing the primary and Survivable Modular Messaging systems at the primary site.</p> <p>For more information about configuring the Avaya Communication Manager, see the configuration notes on the Avaya support Web site.</p> <p>For a sample configuration, see the application note <i>Configuring Survivable Modular Messaging for Microsoft Exchange Message Store using Avaya Enterprise Survivable Server</i>. Download the latest versions from <a href="http://support.avaya.com">support.avaya.com</a>.</p>                                                                                                                                                                                                                                                                                                                                      |
|   | <p>Administer Avaya Communication Manager with two trunks, one trunk each for the primary and Survivable Modular Messaging system. Do not route calls to the Survivable Modular Messaging trunk group at this time.</p> <p>Administer signaling groups and route patterns corresponding to the trunks for the primary and Survivable site.</p> <p>Ensure that the trunk for the primary site is configured on a media gateway located at the primary site and the trunk for the Survivable site is configured on a media gateway located at the Survivable site.</p> <p>Record the number of trunk groups and their respective trunk access codes (TAC) on the <a href="#">Survivable Modular Messaging planning form</a>.</p> <p>For more information about Avaya Enterprise Survivable Servers (ESS), see <i>Avaya Enterprise Survivable Servers User Guide</i>.</p> <p>For more information about creating the trunks and corresponding signaling groups and route patterns, see required configuration notes on the Avaya support Web site.</p> |
|   | <p>Administer the AAR analysis to route calls placed to the Modular Messaging pilot number to the primary site route pattern.</p> <p>For more information about creating the trunk group, see configuration notes on the Avaya support Web site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Table 1: Setting up the primary Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Disable hyper-threading for IP H.323 if you use S3500-family servers that use IP H.323 switch integration. Complete this task before running the Avaya Modular Messaging Configuration wizard.</p> <p>For instructions, see <a href="#">Disabling hyper-threading for IP H.323</a> on page 31.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|   | <p>Create a Data Collection Tool file that is used for automating MAS installation. Include all MAS servers in DCT for the primary site and the survivable site. However, configure the Peer Domain Controller and the Peer Exchange server for the primary site.</p> <p>You must configure the DCT file so that the primary system hosts all the additional services like Call Me, MWI, Fax Sender, Tracing and Auditing. You must configure the MAS servers located on the survivable site only as Message Application Servers.</p> <p>For detailed instructions, see <a href="#">Selecting or creating a DCT data file</a> on page 32.</p> <p>On the Corporate network details page, enter the details of the local primary system network environment.</p>                                                                                       |
|   | <p>Install the MAS servers including any supplementary and Web servers at the primary location. Complete all configuration and testing procedures to confirm that this part of the implementation is successful.</p> <p>For more information about installation procedures and requirements, see <i>Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades</i>.</p> <p>You must configure WebLM on the primary site and the system must be fully licensed.</p> <p><b>Note:</b></p> <p>For more information on WebLM and WebLM configuration models, see <i>Installing and Configuring Avaya WebLM Server Guide</i>.</p>                                                                                                                                                                                      |
|   | <p>The Modular Messaging Configuration wizard automatically configures many settings for certain switch integrations. If you use one of the automatically configured switch types, the appropriate entry is already listed under PBXs. Verify the PBX type for MAS1site1. Complete the following steps to configure the PBX type:</p> <ol style="list-style-type: none"> <li>1. In the <b>Voice Mail System Configuration</b> window, select <b>MAS1site1</b>.</li> <li>2. Double-click <b>PBX Type</b>.</li> <li>3. On the <b>PBX Type</b> dialog box, verify that the appropriate values are specified for in the <b>Telephony Type and PBXs</b> fields.</li> <li>4. Configure Messaging to set failover parameters for the entire Voice Mail Domain.</li> </ol> <p>For instructions, see <i>Administering failover parameters on the MAS</i>.</p> |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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## Installing the Survivable Modular Messaging system

Complete the steps in this checklist to configure the Survivable Modular Messaging system.

You must complete all procedures described in this checklist at the location of the Survivable Modular Messaging system.

---

### Prerequisites

Before completing the procedures in this checklist, ensure that the following conditions are met:

- Configuration of the trunk group, signalling group, and the route pattern for the media gateway at the Survivable Modular Messaging site must be completed.
- The steps described in [Setting up the primary Modular Messaging system](#) on page 12 must be completed.
- Installation of the Survivable Modular Messaging system hardware including all physical LAN connections must be completed. The installed hardware must exactly match the configured hardware of the primary Modular Messaging system. For more information about installation procedures and requirements, see *Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades Guide*.
- Installation and configuration of additional servers for system functions that will not reside on an MAS or the supplementary server must be completed. For example, installation may include servers for the Subscriber Options or Web Subscriber Options if these system functions do not reside on an MAS. You do not must replicate these servers.

---

### Additional requirements

To complete the procedures in this checklist, you must have the following:

- A copy of the [Survivable Modular Messaging planning form](#) that is completely filled out with the exception of the following fields. Information will be entered in these fields during the installation procedure.
  - Survivable Modular Messaging Exchange server and VMD product alarm IDs
  - Route pattern to Survivable Modular Messaging
  - Trunk Group to Survivable Modular Messaging
  - Trunk Group Trunk Access Code (TAC)
  - Netbios name of the CAS Array on the survivable AD site
  - Netbios name of the local global catalog server on the survivable AD site

- Survivable Modular Messaging MAS RAS IP addresses
- A copy of the DCT data file created at the time of the installation of the primary Modular Messaging system. The DCT data file must have the extension *mmdct*, such as *sitefile.mmdct*. See [Selecting or creating a DCT data file](#) on page 32

## Checklist

**Table 2: Installing the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Disable hyper-threading for IP H.323 if you use S3500-family servers that use IP H.323 switch integration. Complete this task before running the Avaya Modular Messaging Configuration wizard.</p> <p>For instructions, see <a href="#">Disabling hyper-threading for IP H.323</a> on page 31.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|   | <p>Verify that Avaya Communication Manager is administered with a trunk group for the exclusive use of Survivable Modular Messaging. Do not route calls to this trunk group at this time. Also, verify that the signalling group and route pattern for survivable systems are administered on Avaya Communication Manager.</p> <p>Record the number of the trunk group and the trunk access code (TAC) on the <a href="#">Survivable Modular Messaging planning form</a>.</p> <p>For more information about creating the trunk group, see the configuration notes. Download the latest versions from <a href="http://support.avaya.com">support.avaya.com</a>.</p> <p>For more information about Avaya Enterprise Survivable Servers (ESS), see <i>Avaya Enterprise Survivable Servers User Guide</i>.</p> |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 2: Installing the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Rename the DCT file that you created and used to install the primary site system to indicate the site for which you used the file, such as <i>primary.mmdct</i> or <i>Site1.mmdct</i>.</p> <p>Make a copy of the DCT file and rename the file to indicate the survivable site, such as <i>Survivable.mmdct</i> or <i>Site2.mmdct</i>.</p> <p>Open the Survivable site DCT with the DCT Wizard. On the Exchange message store page, change the following fields to indicate the environment at the survivable location:</p> <ul style="list-style-type: none"> <li>● Peer Exchange server to be the CAS Array Netbios name associated with the Survivable AD site.</li> <li>● Peer Directory Server to be the local Global catalog server located on the Survivable AD Site.</li> </ul> <p>On the Corporate network page, change the following fields to indicate the network environment at the survivable location:</p> <ul style="list-style-type: none"> <li>● DNS IP addresses</li> <li>● WINS IP address</li> <li>● MASs Subnet mask</li> <li>● Default Gateway</li> </ul> <p>On the Windows domain page, change the following fields to indicate the Windows environment at the survivable site:</p> <ul style="list-style-type: none"> <li>● Domain controller's host name (FQDN)</li> <li>● Save the changes to the file</li> </ul> |
|   | <p>Complete the installation for the MAS servers at the survivable location. When running the installation wizard, ensure that you select the correct server to install. Complete all configuration and testing procedures to confirm that this part of the implementation is successful.</p> <p>Use the same DCT file for all MAS servers located on the survivable site.</p> <p>For more information about installation procedures and requirements, see <i>Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|   | <p>If you want Avaya to maintain this system, preregister the Survivable Modular Messaging system in ART. The registration process generates product IDs for the servers and IP addresses for remote access.</p> <p>Record the product alarm IDs for the MAS and Voice Mail Domain (VMD) and the MAS RAS IP address for each MAS on the Survivable Modular Messaging planning form.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|   | Log on to the <i>MAS3site2</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 2: Installing the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Verify that you can view the Voice Mail System Configuration (VMSC) parameters configured on MAS1site1 in <a href="#">Table 1</a> on each MAS of the survivable system.</p> <p><b>Note:</b></p> <p>Ensure that the VMSC configurations are propagated to all the MASs in the Survivable Modular Messaging system.</p> <p>For more information about the VMSC configurations, see <i>Messaging Application Server (MAS) Administration Guide for Microsoft Exchange configuration</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|   | <p>Verify that you can view the appropriate PBX properties as configured in <a href="#">Table 1</a> on each MAS of the survivable system.</p> <p><b>Note:</b></p> <p>If the system prompts you, do not restart the MAS Voice Server service until directed to do so later in this document.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|   | <p>Verify that you can view the appropriate telephony interface as configured in <a href="#">Table 1</a> on MAS3site2.</p> <p>Complete the following steps to verify telephony interface:</p> <ol style="list-style-type: none"> <li>1. In the <b>Voice Mail System Configuration</b> window, select <b>MAS3site2</b>.</li> <li>2. Double-click <b>Telephony Interface</b>.</li> <li>3. On the <b>General</b> tab of the <b>Telephony Interface</b> dialog box, specify the <b>Maximum Concurrent Calls</b> based on the total number of trunk groups administered on the Avaya Communication Manager.</li> <li>4. Click <b>OK</b>.</li> </ol>                                                                                                                                                                                                                                                                                                       |
|   | <p>Configure the port groups for MAS3site2.</p> <p>Complete the following steps to configure the port groups:</p> <ol style="list-style-type: none"> <li>1. In the <b>Voice Mail System Configuration</b> window, select <b>MAS3site2</b>.</li> <li>2. Double-click <b>Port Groups</b>.</li> <li>3. On the <b>General</b> tab, configure the port group parameters. Use the configuration notes for your PBX integration to configure the port groups parameters for this MAS.</li> <li>4. On the <b>Usage</b> tab, select None for the <b>Call Me Port Group</b> field. This will prevent MAS1site1 from choosing MAS3site2 for providing Call Me service.</li> <li>5. Click <b>OK</b>.</li> </ol> <p><b>Note:</b></p> <p>Do not configure any other settings related to MWI, Call Me, or MWI Port Groups at this point. If the system prompts you, do not restart the MAS Voice Server service until directed to do so later in this document.</p> |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 2: Installing the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Change the product alarm ID of each MAS to the product alarm ID assigned by the ART tool to the Survivable Modular Messaging system.</p> <p>The product alarm IDs of the servers in the Voice Mail Domain are recorded on the <a href="#">Survivable Modular Messaging planning form</a>.</p> <p>Complete the following steps to change the product alarm ID:</p> <ol style="list-style-type: none"> <li>1. On the MAS desktop, double-click <b>Voice Mail System Configuration</b>.</li> <li>2. In the <b>Voice Mail System Configuration</b> window, open up the list of Messaging Application Servers and select the MAS you wish to update the alarm ID of, and then click <b>Serviceability</b>.</li> <li>3. In the <b>Serviceability - Voice Mail Domain</b> pop-up window, in the <b>Product identifier</b> field, enter the new product alarm ID.</li> <li>4. Click <b>OK</b>.</li> <li>5. Close the <b>Voice Mail System Configuration</b> window.</li> </ol> |
|   | <p>Verify the Survivable Modular Messaging system integration by placing a test call to the Trunk Access Code (TAC) of the trunk created for the Survivable Modular Messaging system.</p> <p>The Survivable Modular Messaging system TAC is recorded on the <a href="#">Survivable Modular Messaging planning form</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|   | <p>Give a copy of the Survivable Modular Messaging guide and completed <a href="#">Survivable Modular Messaging planning form</a> to the customer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|   | <p>With the customer, review the procedure for moving service to the Survivable Modular Messaging system if the primary system fails.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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## Switching service to the Survivable Modular Messaging system

If the primary Modular Messaging system does not function, the calls are automatically routed to the Survivable MAS, that is MAS3site2. For the procedure on routing of calls, see [Changing the Modular Messaging route pattern](#) on page 30.

If the primary system fails, you must complete the steps in this checklist to switch service to the Survivable Modular Messaging system.

You must complete all procedures described in this checklist at the location of the Survivable Modular Messaging system or from a remote connection to that system. Avaya recommends that you perform these procedures after hours.

---

### Prerequisites

Before completing the procedures in this checklist, ensure that the following conditions are met:

- The Survivable Modular Messaging system must be fully installed and configured. Steps described in [Setting up the primary Modular Messaging system](#) on page 12 and [Installing the Survivable Modular Messaging system](#) on page 16 must be completed.
- The Exchange database replicas located on the survivable site must become active, depending on the customers configuration. If the database replicas located on the survivable site are not made active automatically, you must manually activate the database replicas.
- On switching the Exchange databases to Survivable site Exchange Servers, the *RpcClientAccessServer* property on the customers Exchange environment needs to be changed to indicate Survivable Site CAS ARRAY. All the Exchange databases refer to the new *RpCClientAccessServer*.
- In order to indicate the new *RpcClientAccessServer* at the Survivable Site, a *FedbResync* is required on all MASs on the survivable site to update Distinguished Name (DN) of each user.

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### Additional requirements

To complete the procedures in this checklist, you must have the following:

- A copy of the Survivable Modular Messaging planning form with all information completed.
- A copy of the configuration notes for PBX Integration. Download the latest versions from the Avaya support Web site.

## Checklist

**Table 3: Switching service to the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>After the customer updates the <i>RpcClientAccessServer</i> with the details of the CAS Array configured on the survivable site, you must update Front End Database (FEDB) of all MAS servers on the survivable site. Using the <i>FEDBSync.exe</i> utility stored in <i>Avaya_Support/Tools</i> on each MAS resync the FEDB on every MAS on the survivable site.</p>                                                                                                           |
|   | <p>Immediately after Avaya Enterprise Survivable Server is online, modify the AAR analysis table to redirect calls to the Modular Messaging pilot number to the survivable site route pattern.</p> <p>The Modular Messaging route pattern number and Survivable Modular Messaging trunk group number are recorded on the Survivable Modular Messaging planning form.</p> <p>For more information, see <a href="#">Changing the Modular Messaging route pattern</a> on page 30.</p> |
|   | <p>MAS3site2 must now be actively taking calls and process requests of subscribers to retrieve messages.</p> <p><b>Note:</b></p> <p>Ancillary services such as MWI and Call Me are not available until configuration changes take effect. Configuration changes should take place after-hours.</p>                                                                                                                                                                                 |
|   | <p>To remove Call Me settings on MAS3site2, complete the following steps:</p> <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Call Me</b>.</li> <li>2. Delete the name of the MAS in the <b>MAS Call Me server</b> field.</li> <li>3. On the <b>General</b> tab, clear the <b>Enable Call Me</b> check box.</li> <li>4. Click <b>OK</b>.</li> </ol>                                                                                         |
|   | <p>Remove previous MWI settings on MAS3site2. Complete the following steps:</p> <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Message Waiting Indicator</b>.</li> <li>2. Delete all the servers listed in the Messaging Application Servers that support MWI box.</li> <li>3. On the <b>General</b> tab, clear the <b>Enable Message Waiting Indicator (MWI)</b> check box.</li> <li>4. Click <b>OK</b>.</li> </ol>                       |

**Table 3: Switching service to the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Configure the Call Me service.</p> <p>To enable the Call Me service on this server:</p> <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Call Me</b>.</li> <li>2. On the <b>General</b> tab, select the <b>Enable Call Me</b> check box.</li> <li>3. For MAS Call Me server, enter the name of the MAS at the Survivable Modular Messaging site. You can use the browse button (...) to locate the server.</li> <li>4. Click <b>OK</b>.</li> </ol> <p><b>Note:</b></p> <p>Because the Call Me server and Message Waiting Indicator (MWI) server both use the Mailbox Monitor Server, they must be installed on the same server.</p> |
|   | <p>Configure the MWI service.</p> <p>For instructions, see <a href="#">Configuring MWI service</a> on page 33.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|   | <p>Configure the port groups for MAS3site2.</p> <p>Complete the following steps to configure the port groups:</p> <ol style="list-style-type: none"> <li>1. In the <b>Voice Mail System Configuration</b> window, select <b>MAS3site2</b>.</li> <li>2. Double-click <b>Port Groups</b>.</li> <li>3. On the <b>Usage</b> tab, select the appropriate port group for the <b>Call Me Port Group</b> field.</li> <li>4. Click <b>OK</b>.</li> </ol>                                                                                                                                                                                                                              |
|   | <p>You must enable the following services on the MAS3Site2:</p> <ul style="list-style-type: none"> <li>● MM Call Me Server</li> <li>● MM Mailbox Monitor Server</li> <li>● MM Message Waiting Indicator Server</li> </ul> <p>For instructions, see <a href="#">Starting Modular Messaging services</a> on page 35.</p>                                                                                                                                                                                                                                                                                                                                                       |

**Table 3: Switching service to the Survivable Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Verify voice mail service.</p> <p>To verify voice mail service, complete the following steps:</p> <ol style="list-style-type: none"><li>1. Place a test call to the Survivable Modular Messaging system by calling your extension.</li><li>2. Leave a message.</li><li>3. Verify that Message Waiting Indicator is lit.</li><li>4. Retrieve the message.</li><li>5. Verify that the call is integrated.</li></ol> <p>For additional information, see <i>Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades</i>.</p> |
|   | <p>Test client access and subscriber options, if applicable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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## Returning service to the primary Modular Messaging system

Complete the steps in this checklist to return service to the primary Modular Messaging system.

Complete the procedures described in this checklist at the locations of the primary Modular Messaging system and the Survivable Modular Messaging system.

---

### Prerequisites

Before completing the procedures in this checklist, ensure that the following conditions are met:

- The Survivable Modular Messaging system must be fully operational.
- An announcement must be administered on the switch indicating that the voice mail service is not available temporarily. Configure the switch to route calls to this announcement while the Modular Messaging system is out of service.
- The Exchange database replicas located on the primary site must become active, depending on the customers configuration. If the database replicas located on the primary site are not made active automatically, you must manually activate the database replicas.
- On switching the Exchange databases to the primary site Exchange Servers, the *RpcClientAccessServer* property on the customers Exchange environment needs to be changed to indicate the Primary Site CAS ARRAY. All the Exchange databases refer to the new *RpCClientAccessServer*.
- In order to indicate the new *RpcClientAccessServer* at the Primary Site, a *FedbResync* is required on all MASs on the primary site to update Distinguished Name of each user.
- The network connectivity between the primary and survivable site exists.

## Checklist

**Table 4: Returning service to the primary Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | After the customer updates the <i>RpcClientAccessServer</i> with the details of the CAS Array configured on the primary site, you must update Front End Database (FEDB) of all MAS servers on the survivable site. Using the <i>FEDBSync.exe</i> utility stored in <i>Avaya_Support/Tools</i> on each MAS resync the FEDB on every MAS on the primary site.                                                                                            |
|   | To remove Call Me settings on MAS3site2, complete the following steps: <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Call Me</b>.</li> <li>2. On the <b>General</b> tab, clear the <b>Enable Call Me</b> check box.</li> <li>3. Delete the name of the MAS in the <b>MAS Call Me server</b> field.</li> <li>4. Click <b>OK</b>.</li> </ol>                                                                    |
|   | To remove MWI settings on MAS3site2, complete the following steps: <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Message Waiting Indicator</b>.</li> <li>2. On the <b>General</b> tab, clear the <b>Enable Message Waiting Indicator (MWI)</b> check box.</li> <li>3. Delete all the servers listed in the <b>Messaging Application Servers that support MWI</b> box.</li> <li>4. Click <b>OK</b>.</li> </ol> |
|   | Stop the Mailbox Monitor, Message Waiting Indicator (MWI) and Call Me services and set the startup type of these services to Manual.<br><br>For more information, see <a href="#">Stopping Modular Messaging services</a> on page 34.                                                                                                                                                                                                                  |
|   | Log in to MAS1site1.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|   | Stop MM Message Waiting Indicator Server, MM Call Me Server, MM Mailbox Monitor services.<br><br>For more information, see <a href="#">Stopping Modular Messaging services</a> on page 34                                                                                                                                                                                                                                                              |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Table 4: Returning service to the primary Modular Messaging system

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>To configure the Call Me service on <i>MAS1site1</i>:</p> <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Call Me</b>.</li> <li>2. On the <b>General</b> tab, select the <b>Enable Call Me</b> check box.</li> <li>3. For <b>MAS Call Me server</b>, enter the name of the primary system MAS. You can use the browse button (...) to locate the server.</li> <li>4. Specify the <b>System minimum interval between calls (mins)</b> and <b>System default interval between calls (mins)</b>.</li> <li>5. Click <b>OK</b>.</li> </ol> <p><b>Note:</b></p> <p>Because the Call Me server and Message Waiting Indicator (MWI) Server both use the Mailbox Monitor Server, they must be installed on the same server.</p> |
|   | <p>Configure the MWI service.</p> <p>For instructions, see <a href="#">Configuring MWI service</a> on page 33.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|   | <p>On the primary Modular Messaging system, enable Mailbox Monitor, Message Waiting Indicator (MWI) and Call ME services. After enabling services, verify that all required Modular Messaging services are running.</p> <p>For more information, see <a href="#">Starting Modular Messaging services</a> on page 35.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|   | <p>Log on to <i>MAS3site2</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|   | <p>To remove MWI Port Group setting on <i>MAS3site2</i>, complete the following steps:</p> <ol style="list-style-type: none"> <li>1. Under the voice mail domain, double-click <b>Port Groups</b>.</li> <li>2. On the <b>General</b> tab, remove the MWI Port Group settings created when switching service back to the primary system. For instructions, see <a href="#">Configuring MWI service</a> on page 33.</li> <li>3. On the <b>Usage</b> tab, ensure that the <b>Call Me Port Group</b> is set to <b>None</b>.</li> <li>4. Click <b>OK</b>.</li> </ol>                                                                                                                                                                                                  |
|   | <p>Verify that the PBX integration settings configured in <a href="#">Installing the Survivable Modular Messaging system</a> on page 16 are preserved.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|   | <p>Restart <i>MAS1site1</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|   | <p>Restart <i>MAS3site2</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 4: Returning service to the primary Modular Messaging system**

| ✓ | Steps                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Verify the primary Modular Messaging system integration by placing a test call to the Modular Messaging pilot number using the Trunk Access Code (TAC) of the primary Modular Messaging system.</p> <p>If you must perform additional acceptance testing and need more information, see <i>Modular Messaging for Microsoft Exchange Configuration, Release 5.2, Installation and Upgrades Guide</i>.</p>                 |
|   | <p>After Avaya Communication Manager is restored to the primary site, verify the AAR analysis table to ensure that the calls continue to route to the Modular Messaging Pilot number at the primary site.</p> <p>For more information, see <a href="#">Changing the Modular Messaging route pattern</a> on page 30.</p>                                                                                                     |
|   | <p>Run tests to verify whether features that are important for customers are functioning correctly. For example:</p> <ul style="list-style-type: none"> <li>● Automated Attendant</li> <li>● Call Me</li> <li>● Find Me</li> <li>● Octel Analog Networking</li> </ul> <p>To test these or other features, see the <i>Avaya Modular Messaging MAS Administration Guide</i> for feature setup and operation instructions.</p> |
|   | Test client access and subscriber options, if applicable.                                                                                                                                                                                                                                                                                                                                                                   |
|   | Test WSO, if applicable.                                                                                                                                                                                                                                                                                                                                                                                                    |
|   |                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Chapter 3: Checklist procedures

This chapter contains detailed procedures for completing steps listed in the procedural checklists in [Chapter 2: Installation and cutover checklists](#) on page 11. Only steps that require additional information are described in this chapter. Procedures are listed in the order in which the user performs the procedures during the installation and cutover process.

The following procedures are described in this chapter:

- [Changing the Modular Messaging route pattern](#) on page 30.
- [Disabling hyper-threading for IP H.323](#) on page 31
- [Selecting or creating a DCT data file](#) on page 32.
- [Configuring MWI service](#) on page 33.
- [Stopping Modular Messaging services](#) on page 34.
- [Starting Modular Messaging services](#) on page 35.
- [Restarting service](#) on page 36.

---

## Changing the Modular Messaging route pattern

Use this procedure to modify the AAR analysis table to route calls placed to the Modular Messaging pilot number to the appropriate route pattern.

Use this procedure in the following situations:

- When switching service from the primary Modular Message system to the Survivable Modular Messaging system after primary site failure.
- When returning service to the primary Modular Messaging system.

To change the call routing to the Modular Messaging pilot number, complete the following steps:

1. Log on to Avaya Communication Manager.
2. Enter the command **change aar analysis <number>**, where number is the pattern used to match the Modular Messaging pilot number.
3. On the **change aar analysis** screen, in the **Route Pattern** column, enter the number of the route pattern to use for calls placed to the Modular Messaging pilot number.
  - During initial configuration, enter the number of the route pattern that routes calls to the primary Modular Messaging system.
  - When switching service to the Survivable Modular Messaging system, change the **Route Pattern** to the number of the route pattern that routes calls to the Survivable Modular Messaging system.

**Note:**

If you use multiple trunk groups for Modular Messaging, change all relevant trunk group numbers.

4. Save the changes, and exit the screen.

---

## Disabling hyper-threading for IP H.323

**Important:**

If you use S3500-family servers that use IP H.323 switch integration, complete this task before running the Avaya Modular Messaging Configuration wizard.

The S3500 family of servers enabled with hyper-threading are shipped. Before you configure any MAS, disable hyper-threading on those MASs in the VMD that use IP H.323 switch integration. This helps to ensure a more stable environment. The S3400 family of servers do not support hyper-threading.

To disable hyper-threading for IP H.323, complete the following steps:

1. Using the MAS Console, either boot the MAS or, if the MAS is already running, reboot the MAS.
2. During the initial boot process and immediately after the Client MAC Address appears, press the **F2** key to start **BIOS Setup**.
3. If you pressed the **F2** key in time, the system starts the BIOS Setup following the memory test. If this does not happen, you must reboot and try again.
4. In the **Enter CURRENT Password** field, type **freedom**, and then press **Enter**.
5. Using the up, down, left, and right arrow keys, navigate to and highlight the **Advanced** tab, and then press **Enter**.
6. Highlight **CPU Configuration**, and then press **Enter**.
7. Highlight **Hyper-Threading Technology**, and then press **Enter**.
8. Highlight **Disabled**, and then press **Enter**.
9. Press the **F10** key.

---

## Selecting or creating a DCT data file

If you created a Data Collection Tool (DCT) data file in \*.*mmdct* format for installation at the primary site, ensure that the file is available to the MAS that you are installing. To ensure that the file is available, you can insert a USB storage device with the file into a USB port 1 on the S3500, S8730 or S8800 1U server before starting the system. If you have not created a data file, you can create a file during the installation after you complete step 4 of this procedure.

To configure the MAS from the DCT data file, complete the following steps:

1. Verify that the USB storage device with the DCT data file and most recent DCT executable file is inserted in the USB port.
2. When you launch the Modular Messaging Configuration Wizard (MMCW), the system displays the Modular Messaging Welcome screen. Click **Next**.
3. If you have a DCT data file already created for this installation, complete the following steps and proceed to step 5. If you have not created a DCT data file, go to step 4.
  - a. On the **Locate Configuration Data** screen, highlight the DCT data file for this installation. If the system does not display the file, click **Browse** and go to the directory where the file is stored. By default, the MMCW searches the hard drive for all \*.*mmdct* files.
  - b. After selecting the DCT data file, click **Next**. You are prompted to verify the file selection. Click **Yes** to select the file.
  - c. On the last screen, click **Complete**, and then save the file again if you have made any changes.
  - d. Proceed to Step 5.
4. If you must create a DCT data file from completed planning forms, complete the following steps.
  - a. On the **Locate Configuration Data** screen, select the **Create a new configuration file** check box, and then click **Next**.
  - b. When the system prompts you to create a new configuration file, click **Yes**. The system launches the DCT executable file.
  - c. Use the information in the planning forms to enter data for each screen. As you progress through the pages, a green check mark indicates screens with complete and valid information. A red x indicates screens with incomplete or invalid data.
  - d. On the **Voice Mail Domain** screen, enter the number of MASs in the VMD. The number of MASs in the VMD include the total MASs in the primary and Survivable Modular Messaging systems.
  - e. On the **Switch integration** screen, select the switch integration type.
5. On the last screen, click **Complete**, and then save the file.

## Configuring MWI service

To enable the Message Waiting Indicator (MWI) Server on the MAS system:

1. Under the voice mail domain, double-click **Message Waiting Indicator**.
2. On the **General** tab, select the **Enable Message Waiting Indicator (MWI)** check box.
3. For **MAS MWI server**, enter the name of MAS on which the MM Message Waiting Indicator Server service is running. You can use the browse button (...) to locate the server. Specify the name of:
  - the Survivable Modular Messaging MAS, for example *MAS3site2*, during failover; or
  - the primary system MAS, for example *MAS1site1*, during initial configuration or when switching service back to the primary system.
4. In the **Limit requests** and **Maximum requests** per minute fields, enter the values specified in the configuration notes for your PBX integration type.
5. In the **Messaging Application Servers that support MWI** box, add:
  - the name of the primary site MAS, *MAS1site1* for initial configuration or when switching service back to the primary system; or
  - the name of the MAS at the survivable site, *MAS3site2*, during failover.

To add a server name:

- a. Double-click the big list box, or click the **Add** button just above the list box. The **Add** button looks like a dashed box.
- b. The list box displays a data entry field and a ... button. Click the ... button.
- c. In the **Select Computer** window, double-click the name of the MAS that has ports allocated to support MWI.
- d. Repeat Steps b and c to add any other MASs that support MWI.
- e. Click **OK** to close this window.
6. Click **OK** to close the **Message Waiting Indicator - Voice Mail Domain** window.
7. Under the voice mail domain, double-click **Port Groups**.
8. Create a Port Group for MWI. Make sure that the Port Group members used for the MWI Port Group are removed from other port groups.
9. Click **OK** to close the **Port Groups - Voice Mail Domain** window.
10. Under the voice mail domain, double-click **PBX integration**.
11. On the appropriate tab based on your PBX integration, verify that the MWI port group is set.
12. Click **OK** to close the **PBX Integration - Voice Mail Domain** window.

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## Stopping Modular Messaging services

Use this procedure to stop specified Modular Messaging services or set the startup type of these services to **Manual** when the service is not in use. Use this procedure in the following situations:

- When setting up the Survivable Modular Messaging system.
- When returning service from the Survivable Modular Messaging system to the primary system.

To stop Modular Messaging services, complete the following steps:

1. On the MAS desktop, double-click the **Monitor** icon.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. In the right pane of the Monitor window, scroll down to the specified Modular Messaging service and stop the service.
4. Double-click the service to open the **Properties** window.
5. Set the **Startup type** to **Manual**.
6. Click **OK**.
7. Repeat steps 3 through 6 for each Modular Messaging service specified.
8. Refresh the screen, and verify that all services that you want to stop are stopped and set to **Manual**.
9. Close the **Monitor** window.

---

## Starting Modular Messaging services

Use this procedure to enable services on Modular Messaging MAS that hosts these services. You can use this procedure to verify the status of all Modular Messaging services. Use this procedure in the following situations:

- When switching service to the Survivable Modular Messaging system after the primary system fails.
- When returning service to the primary Modular Messaging system.

To enable Modular Messaging services, complete the following steps:

1. On the MAS desktop, double-click the **Monitor** icon.
2. Click **Services (Local)** in the left pane, if the item is not already selected.
3. In the right pane of the Monitor window, scroll down to specified Modular Messaging service.
4. Double-click the service to open the **Properties** window.
5. Set the **Startup type** to **Automatic**.
6. On **Service status**, click **Start**.
7. Click **OK**.
8. Repeat steps 4 through 7 for each Modular Messaging service specified.
9. Refresh the screen, and verify that all services that you want to start are started and set to **Automatic**.
10. Verify that all Modular Messaging services required for this MAS are started:
  - a. Scroll to the list of Modular Messaging services. These services start with the letters MM. Verify that the Status column shows the correct state for each messaging service.
    - Services that are required for this server must show **Started** and a startup types of **Automatic**.
    - Services that are not required for this server must show a blank status and a startup type of **Disabled**. For more information about disabling services, see [Stopping Modular Messaging services](#) on page 34.If necessary, check the System Planning form for the primary system to determine the services that reside on each server.
  - b. To start a service with a startup type of Automatic, right-click the service and select **Start**.
11. Close the **Monitor** window.

---

## Restarting service

To restart the **MM Messaging Application Server** service after making changes to the VMSC settings, complete the following procedures:

1. Double-click the **Monitor** icon, if present, on the desktop. In the left pane, click **Services**.
2. In the left pane, click **Service (Local)**.
3. Restart **MM Messaging Application Server** service to accept any changes you made in the VMSC:
  - a. In the right pane of the Monitor window, scroll down to **MM Messaging Application Server**. Right-click the MAS server, and select **Stop**.
  - b. When service stops, right-click **MM Messaging Application Server** again and select **Start**.

The system restarts the messaging service.

When you restart MM Messaging Application Server service, the Monitor window immediately shows a status of Started. However, service might actually take several minutes to start, depending on the number of port boards installed and the integration method.

- c. Track the startup progress as follows:
  1. Gain access to the event viewer using one of these methods:
    - - In the **Monitor** window in the left pane, expand **Event Viewer (Local)**.
    - - In the **Computer Management** window in the left pane, expand **System Tools**, and then **Event Viewer**.
  2. In the left pane, click **Application**.
  3. Refresh the window display periodically until you see Telephony User Interface event 1241, TUI service is enabled. You can then continue by performing other steps.
4. Restart MM Mailbox Monitor service to accept any changes you made in the VMSC:
  - a. In the right pane of the Monitor window, scroll down to MM Mailbox Monitor. Right-click MM Mailbox Monitor, and select **Stop**.
  - b. When service stops, right-click **MM Mailbox Monitor** again, and select **Start**.
  - c. Track the startup progress. Refresh the window display periodically until you see the following events: You can then continue by performing other steps.
    - Event 104, Using *<name of Survivable Exchange server>* as peer mail server. Mailbox Monitoring available.
    - Event 106, Determined the following mail servers as peers of active Voice Server *<name of Survivable Exchange server>*.

# Chapter 4: Survivable Modular Messaging planning form

**Table 5: Survivable Modular Messaging planning form**

| <b>Primary Modular Messaging system corporate network IP address and DNS Information</b>    |      |      |      |      |      |            |
|---------------------------------------------------------------------------------------------|------|------|------|------|------|------------|
|                                                                                             | MAS1 | MAS2 | MAS3 | MAS4 | MAS5 | WSO Server |
| Corporate Domain Name                                                                       |      |      |      |      |      |            |
| DNS Fully Qualified Domain Name (FQDN)                                                      |      |      |      |      |      |            |
| Corporate Network IP Address                                                                |      |      |      |      |      |            |
| Subnet MASK IP Address                                                                      |      |      |      |      |      |            |
| Gateway IP Address                                                                          |      |      |      |      |      |            |
| Microsoft Windows domain                                                                    |      |      |      |      |      |            |
| Peer Exchange Server                                                                        |      |      |      |      |      |            |
| Peer Directory server                                                                       |      |      |      |      |      |            |
| <b>Survivable Modular Messaging system corporate network IP address and DNS Information</b> |      |      |      |      |      |            |
|                                                                                             | MAS1 | MAS2 | MAS3 | MAS4 | MAS5 | WSO Server |
| Corporate Domain Name                                                                       |      |      |      |      |      |            |
| DNS Fully Qualified Domain Name (FQDN)                                                      |      |      |      |      |      |            |
| Corporate Network IP Address                                                                |      |      |      |      |      |            |
| Subnet MASK IP Address                                                                      |      |      |      |      |      |            |

**Table 5: Survivable Modular Messaging planning form**

|                                                                                     |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------|-------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--|--|--|--|--|--|--|
| Gateway IP Address                                                                  |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Microsoft Windows domain                                                            |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Peer Exchange Server                                                                |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Peer Directory server                                                               |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| <b>DNS IP addresses</b>                                                             |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Server                                                                              |       | IP address | Notes                                                                                                                                                                                          |       |  |  |  |  |  |  |  |
| DNS 1                                                                               |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| DNS 2                                                                               |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| <b>Survivable Modular Messaging offline access and Active Directory information</b> |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Item                                                                                | Value |            |                                                                                                                                                                                                | Notes |  |  |  |  |  |  |  |
| Folder for offline access to messages - specify the MAS and folder name             |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Active Directory users or groups who require system administration access           |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Active Directory users or groups who require subscriber administration access       |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| <b>Server details for Modular Messaging services during normal operations</b>       |       |            |                                                                                                                                                                                                |       |  |  |  |  |  |  |  |
| Service                                                                             |       | Location   | Notes                                                                                                                                                                                          |       |  |  |  |  |  |  |  |
| MWI, Mailbox Monitor, and Call Me Service                                           |       |            | Enter information of server where services are running. For more information, see the DCT file created at the time of the installation of the primary and Survivable Modular Messaging system. |       |  |  |  |  |  |  |  |

**Table 5: Survivable Modular Messaging planning form**

| Server details for Modular Messaging services during failover |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
|---------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|
| Service                                                       |        | Location                                                                                                     | Notes                                                                                                                                                                                          |      |      |      |
| MWI, Mailbox Monitor, and Call Me Service                     |        |                                                                                                              | Enter information of server where services are running. For more information, see the DCT file created at the time of the installation of the primary and Survivable Modular Messaging system. |      |      |      |
| Product alarm IDs                                             |        | MAS1                                                                                                         | MAS2                                                                                                                                                                                           | MAS3 | MAS4 | MAS5 |
| Primary system product alarm ID                               |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
| Survivable system product alarm ID                            |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
| Call routing information                                      |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
|                                                               | Number | Notes                                                                                                        |                                                                                                                                                                                                |      |      |      |
| Route pattern to be used for Survivable Modular Messaging     |        | The primary system route pattern, which will be modified at cutover to route calls to the survivable system. |                                                                                                                                                                                                |      |      |      |
| Survivable Modular Messaging trunk group number               |        | Created during setup of survivable system.                                                                   |                                                                                                                                                                                                |      |      |      |
| Survivable Modular Messaging trunk access code (TAC)          |        | Created during setup of survivable system.                                                                   |                                                                                                                                                                                                |      |      |      |
| RAS IP Addresses                                              |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
| Primary system RAS IP address 1                               | MAS1   | MAS2                                                                                                         | MAS3                                                                                                                                                                                           | MAS4 | MAS5 |      |
| Primary system RAS IP address 2                               |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
| Survivable Modular Messaging System RAS IP address 1          |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |
| Survivable Modular Messaging System RAS IP address 2          |        |                                                                                                              |                                                                                                                                                                                                |      |      |      |

