



Preside Multiservice Data Manager

# Installer

Guide

241-6001-100



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# Installer

## Guide

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## About this document

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This Preside Multiservice Data Manager (MDM) document describes

- how to install the MDM software on a new MDM host
- how to configure the basic functionality of the MDM software
- how to upgrade the MDM software on a network management workstation
- how to upgrade the MDM software on a data collection workstation
- how to perform MDM software maintenance tasks

The following topics are discussed in this section:

- “Who should read this document and why” (page 17)
- “What you need to know” (page 18)
- “How this document is organized” (page 18)
- “What’s new in this document” (page 21)
- “Text conventions” (page 21)
- “Related documents” (page 23)

### Who should read this document and why

This document is intended for system and network administrators responsible for the installation and administration of the Preside Multiservice Data Manager (MDM) software.

For information that describes how to use the MDM applications, refer to 241-6001-000 *Preside MDM Documentation Guide* which will direct you to the correct document.

## What you need to know

You need to have had some exposure to both computers and network concepts. Basic computer literacy is required to operate a Preside Multiservice Data Manager (MDM) host; you need to know how to use a keyboard and a mouse, what a menu is, and how to start applications from a menu using a mouse.

The MDM software resides on a UNIX workstation. You should be familiar with a UNIX editing facility (*vi*, for example) so that you are able to modify files. You should be familiar with SUN workstations, the UNIX operating system, and network communications (IP, FTP, ATM, or frame relay).

Knowledge of network management concepts for Passport or DPN-100 is required.

## How this document is organized

This document contains the following sections:

- “MDM software installation tasklist” (page 25) describes the tasks required to install the MDM software on a new workstation.
- “Network connectivity prerequisites” (page 29) describes the network connectivity requirements for the MDM.
- “Solaris” (page 35) provides installation information for the operating system required by the MDM software.
- “JRE patches” (page 39) describes how to install Java Runtime Environment (JRE) patches.
- “Installing HSI/P software” (page 41) describes how to install HSI/P software.
- “Loading X.25 software” (page 47) describes how to install X.25 software.

- “Configuring an X.25 link to DPN” (page 57) describes how to configure an X.25 link between the MDM host and a Data Packet Network (DPN) switch.
- “Configuring an IP over X.25 link to Passport” (page 65) describes how to configure an IP over X.25 connection between the MDM workstation and a Passport switch.
- “Installing Frame Relay software” (page 71) describes how to install and configure SunLink Frame Relay software.
- “UNIX accounts” (page 89) describes how to configure the UNIX groups and userIDs to use the MDM software.
- “Device integration cartridge software” (page 93) describes how to obtain device integration cartridge software.
- “Software installation” (page 95) describes how to install the MDM software.
- “MDM software patches” (page 103) describes how to install and how to remove MDM software patches.
- “Configuration” (page 107) describes how to configure a new MDM host.
- “Configuring the Data Viewer” (page 131) describes how to configure the Data Viewer application.
- “Configuring the VPN Monitor” (page 135) describes how to configure the MDM to support the VPN Monitor.
- “Installing the HP OpenView Desktop for MDM” (page 143) describes how to install and configure the HP OpenView Desktop application.
- “Configuring online help from a remote MDM” (page 157) describes how to configure the MDM software to use the online help facility on another MDM workstation.
- “Upgrading the MDM software” (page 159) describes how to upgrade the MDM software on a network management workstation.
- “Data collection software upgrades” (page 165) describes how to upgrade the MDM software on a data collection workstation.

- “Administration database migration” (page 177) describes how to migrate the MDM database schema to a newer version.
- “Uninstall MDM software” (page 181) describes how to uninstall MDM software.
- “Managing MDM software” (page 185) describes how to rollback to an older release of MDM software.
- “Old installation tasklist” (page 191) is an appendix that describes the old method of installing and configuring the MDM software.

*Note:* Nortel Networks recommends that you use the tasks described in section “MDM software installation tasklist” (page 25) to install and configure the Preside Multiservice Data Manager (MDM) software.

- “Installing workstation and communications hardware” (page 199) is an appendix that describes how to install Sun Microsystems workstations and network connection hardware.
- “Worksheets” (page 209) is an appendix that contains worksheets to assist you in configuring the MDM software for Passport and DPN-100.
- “Loading software with Sun’s Admintool” (page 225) is an appendix that describes how to install the MDM software using the Sun Admintool.

*Note:* Nortel Networks recommends that you use the tasks described in section “MDM software installation tasklist” (page 25) to install and configure the Preside Multiservice Data Manager (MDM) software.

- “Obtaining the service parameters required for MDM” (page 235) is an appendix that identifies the service parameters required to configure the MDM software using the MDM Software Configuration tool.
- “MDM Software Configuration tool” (page 275) is an appendix that describes how to configure the MDM software using the MDM Software Configuration tool.

*Note:* Nortel Networks recommends that you use the tasks described in section “MDM software installation tasklist” (page 25) to install and configure the Preside Multiservice Data Manager (MDM) software.

- “Post configuration tasks” (page 285) describes the configuration tasks to perform after configuring the basic MDM software using the MDM Software Configuration tool.

## What’s new in this document

This document has been restructured. Some tool and task descriptions that have been identified as being redundant or inefficient have been moved to appendices for this release, only. These appendices may be removed from the document in the next release.

Other sections of this document have been revised to clarify instructions and to provide consistency.

Sections from other MDM customer documents will be moved to this document to provide a consolidated resource for MDM software installation and basic application configuration.

A new MDM software installation tasklist was introduced. Use this tasklist to install the MDM software on new workstations. For more information, see “MDM software installation tasklist” (page 25).

Two new software upgrade procedures have been added. Use these procedures to replace the MDM software on existing MDM network management and data collection workstations. For more information, see “Upgrading the MDM software” (page 159) and “Data collection software upgrades” (page 165).

The following features were added to this document:

- “NM0448 - MDP Administration” (page 21)

### **NM0448 - MDP Administration**

Support for the MDP Administration feature has been added to this document. This includes removing the prompts for the MDP File Prober UNIX userID from the InstallAnywhere and QuickStart tools.

## Text conventions

This document uses the following text conventions:

- `nonproportional spaced plain type`  
Nonproportional spaced plain type represents system generated text or text that appears on your screen.

- **nonproportional spaced bold type**

Nonproportional spaced bold type represents words that you should type or that you should select on the screen.

- *italics*

Statements that appear in italics in a procedure explain the results of a particular step and appear immediately following the step.

Words that appear in italics in text are for naming.

- [optional\_parameter]

Words in square brackets represent optional parameters. The command can be entered with or without the words in the square brackets.

- <general\_term>

Words in angle brackets represent variables which are to be replaced with specific values.

- UPPERCASE, lowercase

In Preside Multiservice Data Manager (MDM), uppercase and lowercase letters that appear in UNIX commands and parameters must be matched exactly. The system matches upper and lowercase characters differently.

- |

This symbol separates items from which you may select one; for example, ON|OFF indicates that you may specify ON or OFF. If you do not make a choice, a default of ON is assumed.

- ...

Three dots in a command indicate that the parameter may be repeated more than once in succession.

The term absolute pathname refers to the full specification of a path starting from the root directory. Absolute pathnames always begin with the slash (/) symbol. A relative pathname takes the current directory as its starting point, and starts with any alphanumeric character (other than /).

## Related documents

This section identifies documents related to the Preside Multiservice Data Manager (MDM).

### **Preside Multiservice Data Manager (MDM)**

For a list of Preside MDM documents, see 241-6001-000 *Preside MDM Documentation Guide*.

### **Passport 6400**

For a list of Passport 6000 documents, see 241-6401-001 *Passport 6400 Documentation Guide*.

### **Passport 7400/15000/20000**

For a list of Passport 7000/15000/20000 documents, see 241-5701-001 *Passport 7400, 15000, 20000 Documentation Guide*.

### **Hewlett-Packard**

If you are installing the HP OpenView Desktop (HP-OV) for Preside Multiservice Data Manager (MDM) application, HP OpenView installation instructions can be obtained from the *HP OpenView Network Node Manager Products Installation Guide*.

### **Oracle**

If you are installing an MDM administration database, Oracle database installation instructions can be obtained from the *Oracle Administrators Reference for SUN SPARC Solaris*, part number A85349-01.



# Chapter 1

## MDM software installation tasklist

---

This section describes the tasks required to install the Preside Multiservice Data Manager (MDM) software on a new network management workstation.

To upgrade the MDM software to release R14.3 on an existing MDM network management workstation, see “Upgrading the MDM software” (page 159).

To upgrade the MDM software to release R14.3 on an existing MDM data collection workstation, see “Data collection software upgrades” (page 165).

### Procedure navigation

- “Procedure prerequisites” (page 25)
- “Procedure steps” (page 26)

### Procedure prerequisites

- Review 241-6001-102 *Preside MDM Planning Guide* and identify where this MDM network management workstation fits into your network management architecture.
- Review the MDM Release Supplement document and note:
  - the MDM Platform and Software Level Compatibility section
  - the MDM Software Installation Procedure for the supported migration restrictions
  - the General Release Considerations

## Procedure steps

- 1 Install the Solaris operating according to the instructions provided by Sun Microsystems Inc. For more information, see “Solaris” (page 35).
- 2 Install the Java Runtime Environment (JRE) software patches. For more information, see “JRE patches” (page 39).
- 3 Install the network connectivity software.
- 4 Create the UNIX groups and userIDs to administer the MDM software. For more information, see “UNIX accounts” (page 89).
- 5 Obtain the device integration software cartridges for those SNMP devices supported by this MDM network management workstation.

This task is optional and is only required if the MDM InstallAnywhere tool will be used to install device integration cartridges.

The installation of device integration cartridges on an MDM network management workstation can be performed at any time without using the InstallAnywhere tool. This method of installation is described in *241-6003-100 Preside, Device Integration Cartridge Installation and Administration Guide*

For more information, see “Device integration cartridge software” (page 93).

- 6 Install the MDM software. For more information, see “Software installation” (page 95).
- 7 Apply MDM software patches. For more information, see “MDM software patches” (page 103).
- 8 Optionally, if this workstation is to perform Passport circuit and service configuration, install and configure an administration database. For more information, see *241-6001-400 Preside MDM Administration Database User Guide*.
- 9 Configure the MDM software to
  - enable the MDM network management workstation to collect and display network fault conditions.
  - enable the MDM network management workstation to provision Passport components and services.
  - begin collecting Passport spooled data.
  - configure network access to an administration database.
  - enable an MDM-to-Passport connection.

- define a Passport network.

For more information, see “Configuration” (page 107).

- 10 Optionally, configure the MDM software to use the Data Viewer application. For more information, see “Configuring the Data Viewer” (page 131).
- 11 Optionally, configure the MDM software to use the Virtual Private Network (VPN) Monitor application. For more information, see “Configuring the VPN Monitor” (page 135).
- 12 Optionally, configure the MDM software to use the Nodal Provisioning application. For more information, see “Configuring nodal provisioning” (page 137).
- 13 Optionally, install and configure the HP OpenView Desktop software. For more information, see “Installing the HP OpenView Desktop for MDM” (page 143).
- 14 Optionally, configure access to online help from another MDM network management workstation. For more information, see “Configuring online help from a remote MDM” (page 157).
- 15 Optionally, configure the MDM Network Configuration Database (NCD) to facilitate DPN-100 configuration. For more information, see 241-6001-308 *Preside MDM Network Configuration Database Administrator Guide*.
- 16 Optionally, customize the MDM Network Model. For more information, see 241-6001-015 *Preside MDM Network Model Administrator Guide*.
- 17 Optionally, configure the DPN SNMP Proxy Agent. For more information, see 241-6001-210 *Preside MDM DPN SNMP Agent User Guide*.
- 18 Optionally, configure the MDM software to backup Passport or Passport 4400 service data. For more information, see 241-6001-807 *Preside MDM Passport/SNMP Devices Backup and Restore User Guide*.
- 19 Optionally, customize the collection and conversion of Passport, DPN-100, or Vector spooled data. For more information, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.



## Chapter 2

# Network connectivity prerequisites

---

This section lists the tasks to set up network access on the switches to be managed by Preside Multiservice Data Manager (MDM) and provides references to the switch documents that contain the procedures required to complete the tasks. In this section, you can find the following information:

- “About communications links” (page 29)
- “X.25 link for managing DPN” (page 31)
- “IP over X.25 link for managing Passport through DPN” (page 31)
- “IP over Ethernet for managing Passports configured as an ILS” (page 32)
- “IP over Frame Relay for managing Passports” (page 32)
- “IP connectivity for managing other devices” (page 33)

### About communications links

To communicate with a workstation that is running the Preside Multiservice Data Manager (MDM) software, you require the following:

- the hardware needed to establish a communications link to the workstation must be installed on the switches
- service data for the link must be entered into switch software. Because some of the service data entered into the switch software is also required to configure software on the workstation, we recommend that you enter service data into the switch software before beginning an MDM installation.

See “Worksheets” (page 209) for a set of work sheets that you can use to capture the service data needed for the workstation while setting up the switch software.

The type of communications link an MDM workstation uses for network access depends on the composition of the network, as summarized in the table “Types of communications link for network access” (page 30). For descriptions of each type of network access, see 241-6001-101 *Preside MDM Engineering Guide*.

**Table 1**  
**Types of communications link for network access**

Network Composition	Switch type	Link
DPN only	DPN	X.25 link
mix of DPN and Passport	DPN	X.25 link
	Passport	IP over X.25 link through DPN
Passport only	Passports configured as an inter LAN switching network	IP over Ethernet or IP over Frame Relay
	Passports not configured as an ILS	IP over Frame Relay

See the following sections for the tasks that need to be performed at the switch end of the link:

- “X.25 link for managing DPN” (page 31)
- “IP over X.25 link for managing Passport through DPN” (page 31)
- “IP over Ethernet for managing Passports configured as an ILS” (page 32)

- “IP over Frame Relay for managing Passports” (page 32)
- “IP connectivity for managing other devices” (page 33)

## X.25 link for managing DPN

If you are using an X.25 connection for network access to DPN, complete the following tasks:

- provision the Network Control System (NCS) on the DPN switches in the network
- provision a Workstation Management Data Interface (WS-MDI) on an OA in the NCS to provide the workstation with access for performing network management functions
- provision X.25 service on the Processing Element (PE), Peripheral Interface (PI), and Port (PO) to which the workstation is connected

For the instructions to provision the NCS, see 241-2001-102 *DPN-100 Network Control System User Guide*.

For the instructions to provision LAPB X.25 service on a PE and PI, see 241-1001-184 *DPN-100 LAPB/X.25 Specification*.

## IP over X.25 link for managing Passport through DPN

If you are using an IP over X.25 connection for network access to Passport, complete the following tasks:

- configure the Passport nodes to be managed as a Routing Identifier (RID) subnet that is managed through a Call Server Resource Module (CSRM) on a DPN switch
- configure an IP Interface over Virtual Circuit (IPIVC) on each Passport that the Preside Multiservice Data Manager (MDM) workstation is to manage

For the instructions to select a topology and provision the DPN, see 241-7401-110 *Passport 7400, DPN-100 Interworking Guide*. For instructions to provision the IPIVC, see 241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide*.

## IP over Ethernet for managing Passports configured as an ILS

If you are using an Ethernet connection for network access to Passports, complete the following tasks:

- configure the Passports to be managed as an inter-LAN switching (ILS) network
- provision a virtual router with an IP port on the Passport that provides network access for the Preside Multiservice Data Manager (MDM) workstation

For the instructions to set up an ILS and provision a virtual router see *241-5701-270 Passport 7400, 15000, 20000 Software Installation Guide*.

## IP over Frame Relay for managing Passports

If you are using Frame Relay for network access, complete the following tasks:

- configure a Frame Relay User-to\_Network Interface (FRUNI) on the Passport switch for each Frame Relay link from the Preside Multiservice Data Manager (MDM) workstation
- provision an IP Interface over Frame Relay (IPIFR) on each Passport node to be managed by MDM

For the instructions to set up a FRUNI, see *241-5701-900 Passport 7400, 15000, 20000 Frame Relay UNI Guide*. For the instructions to set up IPIFRs, see *241-5701-270 Passport 7400, 15000, 20000 Software Installation Guide*.

## Solaris 8 and 64 bit

Solaris 8 supports 32 and 64 bit capability, except for a Frame Relay connection. To run 64 bit, use one of these methods:

- run IP over Ethernet between Preside Multiservice Data Manager (MDM) and Passport
- use a router between MDM and Passport, where the router is running IP/Ethernet between MDM and the router, and Frame Relay between the router & Passport

## IP over ATM for managing Passports

If you are using ATM for network access, complete the following tasks:

- configure an ATM Interface (ATMIF) on the Passport switch for each ATM link from the Preside Multiservice Data Manager (MDM) workstation
- provision an ATM Multi-Protocol Encapsulation (MPE) component on each Passport node to be managed by MDM
- provision the static Internet Protocol (IP) address of the ATM Network Interface Card (NIC) under the Virtual Router (VR) on the Passport switch
- provision the logical IP address of the ATM port on the Passport switch under the VR on the Passport; the IP address of the Passport must be in the same subnet as the static IP of the ATM NIC

See the following information for

- instructions to set up IP over ATM (ATM MPE), see 241-5701-810 *Passport 7400, 15000, 20000 Configuring IP*
- the commands for setting up IP over ATM, refer to 241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide*

## IP connectivity for managing other devices

If you are going to use Preside Multiservice Data Manager (MDM) software to manage a Passport 4400, IP LAN or WAN access must be provided between the MDM workstation and the Passport 4400.



## Chapter 3

# Solaris

---

This section describes the installation of the operating system on the Preside Multiservice Data Manager (MDM) network management workstation.

### Procedure navigation

- “Procedure prerequisites” (page 35)
- “Procedure steps” (page 35)
- “Job aids” (page 37)

### Procedure prerequisites

- If the Solaris operating system is not installed on the MDM host, ensure that you have obtained the necessary CDRoms from Sun Microsystems Inc.

### Procedure steps

- 1 Install the Solaris operating according to the instructions provided by Sun Microsystems Inc.

Sun workstations can be delivered with the Solaris operating system software installed. If the operating system software is not installed, use the documentation provided by Sun Microsystems Inc. to install the software. If the documentation is not available or to ensure that the latest documentation was provided, go to the Sun Microsystems Documentation Center at [www.sun.com/documentation](http://www.sun.com/documentation).

**CAUTION**

Solaris 8 can operate in 32 bit or 64 bit mode. On most Sun workstations the firmware for frame relay is not compatible with the 64-bit mode of operation. If you plan to operate Solaris 8 in 64-bit mode, Nortel Networks recommends that you use an external router as a frame relay access device (FRAD) to connect the MDM host to Passports in your network.

- 2 Ensure that the MDM host disk space is partitioned according to the information in "Recommended disk partition sizes" (page 37) as a minimum specification.
- 3 Install all Solaris operating system patches as recommended by Sun Microsystems Inc.
- 4 Configure the workstation to allow the MDM software to locate Netscape. As the userID root, type

```
ln -s /usr/dt/appconfig/netscape /opt/netscape
```

**Note:** If this step is not performed, the MDM online help cannot be launched.

- 5 Change a Solaris Common Desktop Environment (CDE) window manager setting to prevent dialog boxes from being hidden.
  - a. Click on the **Style Manager** icon on the CDE tool bar.
  - b. Click on **Window**.
  - c. Disable **Allow Primary Windows On Top**.
- 6 Optionally, enable the 'logging' mount option in the Solaris file system for UFS type file partitions. Logging reduces the time required to reboot the workstation by eliminating the need to run fsck on startup. As the userID root, edit the file /etc/vfstab and add **logging** to the mount options.

The default is no logging (i.e. a dash "-" in the mount options column).

See "Example of file /etc/vfstab with the logging option enabled" (page 37) for an example of the file /etc/vfstab with logging enabled.

## Job aids

**Table 2**  
Recommended disk partition sizes

Partition	Size
swap	3 * RAM
/var	1 Gbyte
/ (root)	All disk space remaining after allocations for swap and /var.

**Table 3**  
Example of file /etc/vfstab with the logging option enabled

device to mount	device to fsck	mount point	FS type	fsck pass	mount at boot	mount options
dev/dsk/c1d0s2	/dev/rdisk/c1d0s2	/usr	ufs	1	yes	-
/dev/dsk/c0t0d0s1	-	-	swap	-	no	-
/dev/dsk/c0t0d0s0	/dev/rdisk/c0t0d0s0	/	ufs	1	no	logging
/dev/dsk/c0t0d0s6	/dev/rdisk/c0t0d0s6	/usr	ufs	1	no	logging
dev/dsk/c0t0d0s3	/dev/rdisk/c0t0d0s3	/var	ufs	1	no	logging
/dev/dsk/c0t0d0s7	/dev/rdisk/c0t0d0s7	/local disk	ufs	2	yes	logging
/dev/dsk/c0t0d0s5	/dev/rdisk/c0t0d0s5	/opt	ufs	2	yes	logging
swap	-	/tmp	tmpfs	-	yes	-



---

## Chapter 4

# JRE patches

---

This section describes how to install the software patches to the Java Runtime Environment (JRE) software on the Preside Multiservice Data Manager (MDM) network management workstation.

The JRE patches are obtained from Sun Microsystems Inc. and are supplied to you on the Preside MDM software CDROMs for your convenience and ease of installation.

### Procedure navigation

- “Procedure prerequisites” (page 39)
- “Procedure steps” (page 39)
- “Job aids” (page 40)

### Procedure prerequisites

- “Solaris” (page 35)
- Insert the Preside MDM CDROM #1.

### Procedure steps

- 1 Using the userID root, create a new directory on the MDM host.  

```
mkdir /opt/AuxInstall
```
- 2 Change directories to the new directory.  

```
cd /opt/AuxInstall
```
- 3 Untar the UNIX tar file containing the JRE updates.

- ```
tar xvf /cdrom/cdrom0/Aux.tar
```
- 4 Change directories according to the installed Solaris version.  

```
cd Aux/<version>
```
  - 5 Decompress and untar the patches.  

```
zcat J2SE_Solaris_<ver>_Recommended.tar.Z | tar xvf -
```
  - 6 Change directories to the new directory containing the patches.  

```
cd J2SE_Solaris_<ver>_Recommended
```
  - 7 Install the JRE patches.  

```
./install_cluster
```
  - 8 Remove the patch information files.  

```
rm -r /opt/AuxInstall
```

## Job aids

**Table 4**  
**Variable definitions**

| Variable  | Definition |
|-----------|------------|
| <version> | 5.8 or 5.7 |
| <ver>     | 8 or 7     |

## Chapter 5

# Installing HSI/P software

---

This section contains the instructions for installing the HSI/P software, and contains the following information:

- “Installation overview” (page 41)
- “Loading the HSI/P software” (page 42)
- “Loading and installing required HSI/P software patches” (page 44)
- “Performing a local loopback test” (page 44)

### Installation overview

Perform the following procedures to install the HSI/P software and to verify that the HSI/P hardware is operating correctly.

You only need to perform the procedure if you have installed an HSI/P card in the workstation.

- 1 “Loading the HSI/P software” (page 42)

**Note:** Once the HSI/P software is loaded, it is installed. No other configuration work is required.

- 2 “Performing a local loopback test” (page 44).
- 3 “Loading and installing required HSI/P software patches” (page 44).

## Loading the HSI/P software

The following information applies to this procedure:

- this procedure loads the software from a CD-ROM drive connected directly to the workstation

For the instructions to load software from a remote CD-ROM drive or from a server, see the Sun document *Solaris Advanced Installation Guide*.

- this procedure loads the software using Sun's admintool

There are two ways to load the software: from command using the `pkgadd` command or using Sun's admintool. For information about loading the software from command, refer to the On-line Manual Pages for the `pkgadd` command.

### 1 Ensure that

- a CD-ROM drive is connected to your workstation and is powered up
- the Solaris operating system is installed and configured
- the workstation is displaying the login prompt
- you have the compact disk containing the HSI/P release x.x software
- an HSI/P card is installed in the workstation. The HSI/P software is a driver for this card
- you have sufficient disk space to install the HSI software. See the table "Approximate disk space requirements for HSI/P" (page 44) for the approximate disk space requirements.

### 2 Log in as root.

### 3 Start c-shell

```
csh
```

### 4 Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.

### 5 Open a UNIX window or a Shell Tool window.

- 6 Start up Sun's admintool as a background process:  

```
/usr/bin/admintool &
```

The Admintool window opens.
- 7 From the Browse menu, select Software.  

The Admintool window now lists all software installed on the workstation.
- 8 From the Edit menu, select Add.  

The Set Source Media dialog opens.
- 9 From Software Locations, select CD with Volume Management.
- 10 Type in the correct path name of the source media:  

```
/cdrom/cdrom0/sparc
```
- 11 Click OK.  

The Admintool: Add Software dialog opens and displays a list of the software on the CD.
- 12 Select the name of the name of the software to load.
- 13 Click Customize.  

The Admintool: Customize Installation Dialog opens and displays a list of the software subsets to load.
- 14 Select all of the software subsets except Answerbook subsets.  

The subsets are selected when their buttons turn from grey to black.

**Note:** Answerbook subsets contain Sun's online documentation. The minimum recommended workstation configuration (SparcStation 5, 96 Mbyte of RAM, one 2-Gbyte disk with the minimum partition sizes) does not include sufficient space for the HSI/P Answerbook. If you load other Answerbooks, increase partition sizes and/or disk space accordingly.
- 15 When you have finished selecting all of the software subsets to load, click OK.  

The Admintool: Customize Installation Dialog closes.
- 16 In the Admintool: Add Software Dialog, click Add.  

The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.

- 17 Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: Y

When loading is complete, the Input/Output dialog displays a message to indicate that loading is successful and complete.

- 18 Eject the compact disk by typing in the following command in the UNIX window or the shell tool window.

```
eject cdrom
```

Install any required HSI/P software patches, as described in “Loading and installing required HSI/P software patches” (page 44).

**Table 5**  
**Approximate disk space requirements for HSI/P**

| HSI software subsets                      | Approximate size |
|-------------------------------------------|------------------|
| HSI/P Driver/Utilities x.x (SUNWhsip x.x) | 2 MBytes         |

## Loading and installing required HSI/P software patches

Obtain, load, and install any required HSI/P patches listed in the MDM Release Supplement. This document is provided in hardcopy along with your Preside Multiservice Data Manager (MDM) software. A soft copy is also available in a PostScript file on the MDM CD-ROM. The instructions for installing a patch are provided in a ReadMe file along with the patch.

Perform a local loopback test, as described in “Performing a local loopback test” (page 44).

## Performing a local loopback test

The SunLink HSI/P x.x software is a software driver for the HSI/P communications card. Once the HSI/P software has been loaded, no further configuration is required. However, we recommend that you perform this procedure to run an internal loopback test to ensure that the HSI/P hardware is operating properly.

For information about other types of loopback tests such as external, and remote loopback tests, and for fault-diagnosis information, see the Sun document *SunLink HSI/P x.x User's Guide*.

- 1 Choose one of the four ports on the HSI/S card to test.
- 2 Enter the following command to perform the loopback test:

```
/opt/SUNWconn/HSIP/bin/hsi_loop -t 1 <port>
```

where:

<port> is the name of the high-speed port on the workstation: hihp0 (the port labelled 1) hihp1 (the port labelled 2, and so on...), hihp2, or hihp3.

The response displayed should indicate that the test has passed.

- 3 Repeat this procedure for each of the high-speed ports on the workstation.



## Chapter 6

# Loading X.25 software

---

This section contains the instructions for loading the X.25 software, and contains the following information:

- “Installation overview” (page 47)
- “Determining the release of X.25 software and the software subsets to load” (page 48)
- “Loading X.25 software” (page 49)
- “Installing a license password” (page 54)
- “Loading and installing required X.25 patches” (page 55)

### Installation overview

Perform this procedure to complete the following tasks:

- load the X.25 software
  - install the licence to run the software
  - install any required patches
- 1 Determine the release of X.25 software you want to install.  
See “Determining the release of X.25 software and the software subsets to load” (page 48).
  - 2 Load the X.25 software from compact disk.  
See “Loading X.25 software” (page 49).
  - 3 Install the licence required to run the X.25 software.

See “Installing a license password” (page 54).

**4** Install any required patches.

See “Loading and installing required X.25 patches” (page 55)

## Determining the release of X.25 software and the software subsets to load

The recommended release of SunLink X.25 software is SunLink 9.2.

Software packages on compact disk from SunSoft are made up of a number of software subsets that you can load individually. For SunLink X.25 release 9.2, load the following subsets as a minimum:

- SunWx25a 9.2(X.25 kernel and include files for Solaris/SPARC)
- SUNWx25b 9.2 (X.25 user programs and libraries for Solaris/SPARC)
- SUNWx25h 1.1 (Solstice X.25 9.2 doc in HTML). The documentation in HTML is useful for configuring and troubleshooting X.25 and IP over X.25 connections. To view this documentation, Netscape version 3.0 or higher must also be installed on the workstation. When you click Help in Sun’s X.25 Administration Tool for the first time, you are prompted for the full path name to the Netscape executable. When you enter the full path name to Netscape, the help information appears.
- The licensing software subsets (SUNWlicsw, FlexLM Licence System and SUNWlit License Installation Tool) are needed to run SunLink X.25.

The approximate disk space requirements for X.25 are shown in the table “Approximate disk space requirements for X.25” (page 48).

**Table 6**  
**Approximate disk space requirements for X.25**

| <b>X.25 software subsets</b>                                           | <b>Approximate size</b> |
|------------------------------------------------------------------------|-------------------------|
| STE License Installation Tool (SUNWlit2.0)                             | 1 MByte                 |
| FlexLM License System (SUNWlicsw 4.1)                                  | 2 Mbyte                 |
| X.25 kernel modules and include files for Solaris/SPARC (SunWx25a 9.2) | 1 MByte                 |
| (Sheet 1 of 2)                                                         |                         |

**Table 6 (continued)**  
**Approximate disk space requirements for X.25**

| <b>X.25 software subsets</b>                                      | <b>Approximate size</b> |
|-------------------------------------------------------------------|-------------------------|
| X.25 user programs and libraries for Solaris/SPARC (SUNWx25b 9.2) | 1 Mbyte                 |
| Solstice X.25 9.2 documentation in HTML (SUNWx25h 1.1)            | 2 Mbyte                 |
| Total                                                             | 7 Mbyte                 |
| (Sheet 2 of 2)                                                    |                         |

## Loading X.25 software

This section contains two procedures for loading the SunLink X.25 release 9.2 software and the licence tool software from compact disk.

Sunsoft provides X.25 release 9.2 software in the following forms

- by itself on compact disk (unbundled)
- bundled with other communications software on compact disk in a product called Solstice Server Connect

Refer to one of the following procedures to load the software:

- “Loading X.25 software (unbundled)” (page 49)
- “Loading X.25 software (Solstice Server Connect)” (page 51)

### Loading X.25 software (unbundled)

1 Ensure that

- a CD-ROM drive is connected to the workstation and is powered up
- the Solaris operating system is installed and configured
- the workstation is displaying the login prompt
- you have the Sunlink X.25 9.2 software on compact disk.  
SunLink X.25 9.2 software is available on a compact disk by itself or

bundled with other communications software referred to as Solstice Server Connect.

If you have Server Connect software, do not continue. Refer to the procedure "Loading X.25 software (Solstice Server Connect)" (page 51).

2 Log in as root.

3 Start c-shell

```
csh
```

4 Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.

5 Open a UNIX window or a Shell Tool window.

6 Start up Sun's admintool as a background process:

```
/usr/bin/admintool &
```

The admintool window opens.

7 From the Browse menu, select Software.

The Admintool window now lists all software installed on the workstation.

8 From the Edit menu, select Add.

The Set Source Media dialog opens.

9 From Software Locations, select CD with Volume Management.

10 Type in the path name of the source media:

```
/cdrom/cdrom0
```

11 Click *OK*.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

12 Select the name of the name of the software to load.

13 Click *Customize*.

The Admintool: Customize Installation Dialog opens and displays a list of the software subsets to load.

14 Select the software subsets you wish to load. For SunLink X.25 9.2, the minimum subsets are:

- STE License Installation Tool (SUNWlit2.0)
  - FlexLM License System (SUNWlicsw 4.1)
  - X.25 kernel modules and include files for Solaris/SPARC (SunWx25a 9.2)
  - X.25 user programs and libraries for Solaris/SPARC (SUNWx25b 9.2)
  - Solstice X.26 9.2 documentation in HTML (SUNWx25h 1.1)
- 15** When you have finished selecting the software subsets, click OK.  
The Admintool: Customize Installation Dialog closes.
- 16** In the Admintool: Add Software Dialog, click Add.  
The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.
- 17** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**  
  
When loading is complete, the Command Input/Output dialog displays a message to indicate that loading is successful and complete.
- 18** Eject the compact disk by typing in the following command in the UNIX window or the shell tool window.
- ```
eject cdrom
```

When you have finished loading the SunLink X.25 software you can run the software, but you must also install a license password to make use of it. For the instructions to install a license password, see “Installing a license password” (page 54).

## Loading X.25 software (Solstice Server Connect)

- 1 Ensure that
  - a CD-ROM drive is connected to your workstation and is powered up
  - the Solaris operating system is installed and configured
  - the workstation is displaying the login prompt
  - you have the unbundled Sunlink X.25 9.2 software on compact disk. SunLink X.25 9.2 software is available on a compact disk by itself or

bundled with other communications software referred to as the Solstice Server Connect.

If you have the unbundled software, do not continue. Refer to the procedure "Loading X.25 software (unbundled)" (page 49).

**2** Log in as root.

**3** Start c-shell

```
csh
```

**4** Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.

**5** Open a UNIX window or a Shell Tool window.

**6** Start up Sun's admintool as a background process:

```
/usr/bin/admintool &
```

The admintool window opens.

**7** From the Browse menu, select Software.

The Admintool window now lists all software installed on the workstation.

**8** From the Edit menu, select Add.

The Set Source Media dialog opens.

**9** From Software Locations, select CD with Volume Management.

**10** Type in the path to the X.25 software:

```
/cdrom/server_connect_397/products/x25/Image/sparc
```

**11** Click OK.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

**12** Select the software subsets you wish to load. For SunLink X.25 9.2, the minimum subsets are:

- X.25 kernel modules and include files for Solaris/SPARC 9.2
- X.25 user programs and libraries for Solaris/SPARC 9.2

**13** When you have finished selecting the software subsets, click Add.

The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.

- 14** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Command Input/Output dialog displays a message to indicate that loading is successful and complete.

- 15** From the Edit menu, select Add.

The Admintool: Set Source Media dialog opens.

- 16** From Software Locations, select CD with Volume Management.

- 17** Type in the path to the X.25 licensing software:

```
/cdrom/server_connect_397/products/licenses/Image/  
sparc
```

- 18** Click OK.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

- 19** Select the following licensing tool software:

- Solstice Connect Center license information 4.1 License Installation Tool
- FlexLM License System

- 20** When you have finished selecting the software subsets, click Add.

The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.

- 21** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Command Input/Output dialog displays a message to indicate that loading is successful and complete.

- 22** In the Admintool: Add Software Dialog, click the Set Source Media... button.

The Set Source Media dialog opens.

- 23** From Software Locations, select CD with Volume Management.

- 24** Type in the path to the X.25 documentation in HTML:

```
/cdrom/server_connect_397/products/licences/Docs/  
sparc/
```

**25** Select the following software subset:

- Solstice X.25 9.2 documentation in HTML (SUNWx25h 1.1)

**26** Click *OK*.

The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.

**27** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Command Input/Output dialog displays a message to indicate that loading is successful and complete.

**28** Eject the compact disk by typing in the following command in the UNIX window or the shell tool window.

```
eject cdrom
```

When you have finished loading the SunLink X.25 software you can run the software, but you must also install a license password to make use of it. For the instructions to install a license password, see “Installing a license password” (page 54).

## Installing a license password

Use the following procedure to install a license password to run SunLink X.25 communications software. Perform this procedure on every workstation on which SunLink X.25 software is loaded.

**1** From SunSoft, obtain a licence, to run SunLink X.25. The licence information must include the number of Rights to Use (RTUs), and the passwords to run SunLink X.25.

The number of RTUs defines the number of instances of the software that the license allows to run concurrently. For RTUs and passwords, contact Sun’s local license distribution center at the telephone number listed in the Sun documentation provided with the SunLink X.25 compact disk.

**2** Ensure that you have already loaded the SunLink X.25 application and software subsets: SUNWlicsw, FlexLM Licence System and SUNWlit License Installation Tool.

**3** Log in as root on the workstation on which SunLink X.25 software is installed.

- 4 If you have not already done so, access c-shell:  
`csH`
- 5 Start the licensing tool:  
`/etc/opt/licenses/lit &`  
The License Installation Tool window opens.
- 6 From Select Product, choose the name of the communications application for which you wish to install a password.
- 7 From Server Options, choose the number of servers on which the licensing server software is to run. For a standalone workstation, select 1.
- 8 In the Rights to Use field, type in the number of rights to use that are to be enabled with this password. The number of Rights to Use you enter must match that provided along with the password.
- 9 In the Password field, type in the password you obtained from Sun's local license distribution center.
- 10 Click Done With License.
- 11 Click Continue.
- 12 Click Exit - Install Licenses.  
A script runs and when completed, a pop-up window appears containing a message which indicates that the license password has been installed.
- 13 Click Quit.

You are now ready to load and install any X.25 patches.

## Loading and installing required X.25 patches

Obtain, load, and install any required X.25 software patches listed in the MDM Release Supplement. This document is provided in hardcopy along with your Preside Multiservice Data Manager (MDM) software. A soft copy is also available in a PostScript file on the MDM CD-ROM. The instructions for installing a patch are provided in a ReadMe file along with the patch.



## Chapter 7

# Configuring an X.25 link to DPN

---

This section contains instructions for setting up an X.25 link between the Preside Multiservice Data Manager (MDM) workstation and a DPN switch. In this section, you can find the following information:

- “Configuration overview” (page 57)
- “Provisioning the X.25 link on DPN” (page 58)
- “Obtaining X.25 service parameters for the workstation” (page 58)
- “Configuring an X.25 link” (page 60)

### Configuration overview

Perform the following procedure to set up an X.25 link between the Preside Multiservice Data Manager (MDM) workstation and a DPN switch by means of the SunLink 9.2 configuration tool.

- 1 Provision the DPN end of the X.25 link.  
See “Provisioning the X.25 link on DPN” (page 58).
- 2 Obtain the service parameters required for X.25 on the workstation.  
See “Obtaining X.25 service parameters for the workstation” (page 58).
- 3 Configure and start the X.25 link.  
See “Configuring an X.25 link” (page 60).

## Provisioning the X.25 link on DPN

Before you configure the X.25 link on the workstation, ensure that the following provisioning operations have been performed on the DPN switch to which the workstation is connected:

- The Network Control System (NCS) is provisioned on the DPN switches in the network, including the DPN switch to which the workstation is connected. For instructions to provision the NCS, see 241-2001-102 *DPN-100 Network Control System User Guide*.
- LAPB X.25 service is provisioned on the Processing Element (PE), Peripheral Interface (PI), and Port (PO) to which the workstation is connected. For the instructions to provision LAPB X.25 service on a PE and PI, see 241-1001-184 *DPN-100 LAPB/X.25 Specification*.

The X.25 service must be provisioned with packet size and window size negotiation enabled and the maximum packet size must be at least 512 bytes.

## Obtaining X.25 service parameters for the workstation

Information about the LAPB X.25 service provisioned on the DPN port to which the Preside Multiservice Data Manager (MDM) workstation is connected can be obtained by entering the following commands at a maintenance terminal connected to the DPN switch. We recommend that you obtain a printout of the responses to these commands before configuring X.25 on the workstation.

```
[PI] <n> [PO] <m> Query SERVICE
```

```
[PI] <n> [PO] <m> Query DNA
```

```
[PI] <n> [PO] <m> Query LINK
```

```
[PI] <n> [PO] <m> Query LCN
```

where:

<n> is the number of the Peripheral Interface (PI) card

<m> is the number of the port (PO) on the PI card to which the MDM workstation is connected

The following service parameters are required to configure an X.25 link to DPN for managing DPN switches in your network.

- Link Number

This is the link number for the interface you are defining. If this is the first link you are defining, it must be link 0.

- Link Type

This is the type of link. It must be WAN.

- Device

This is the type of device to which the X.25 link is connected on the workstation. The device type is ZSH for a low-speed port or HSI for a high-speed port on an HSI/P card.

- Port Number

This is the number of the workstation port to which the X25 link is connected. The port number must correspond to the physical workstation port. Most SPARCstations are equipped with two low-speed serial ports labelled A and B. The port labelled A is port 0 (ZSH-0) and the port labelled B is Port 1 (ZSH-1). When an HSI card is installed in the workstation, the workstation has four additional high-speed ports labelled 0 through 3.

- Local X.121 Address

This is the X.121 address of the port on the DPN peripheral interface card to which the workstation is connected. This address includes the Data Network Identification Code (DNIC), the Network Terminal Number (NTN), and any sub-addressing digits.

You only need to include the DNIC if the information displayed with the [PI] n [PO] m Q DNA command shows that DNIC is set to international format OFF/NO.

- Version

This is the version of X.25 software running on the link. The version must match the version of X.25 software provisioned on the DPN port to which the workstation connects.

- SVC Two-Way Logical Channel Range

This is the lowest and the highest number logical channel number on which an SVC is set up for X.25 communication. The range must match the minimum and maximum values configured in NCS. You can obtain these values by entering the following command at a maintenance terminal connected to the DPN switch:

```
[PI] <n> [PO] <m> Query LCN
```

## Configuring an X.25 link

Use the following procedure to configure an X.25 link to a DPN switch by means of Sun's X.25 Administration tool. Some of the X.25 service parameters are critical, but for others the default values provided with the tool are adequate. The following procedure sets the critical values and leaves the others at their defaults. This is adequate for most installations. All settings are network dependent and may require fine tuning for efficient and stable operation of the X.25 link.

- 1 Log in as root.

- 2 Access c-shell:

```
csH
```

- 3 Start the X.25 Administration tool:

```
/opt/SUNWconn/bin/x25tool &
```

The x25tool 9.2 main window opens and displays a set of default links.

- 4 From the Options menu, select Dynamic Mode.
- 5 From the Options menu, select Start X.25 automatically when booted.
- 6 Remove all default links displayed in the main window.

To remove a link, click on the name of the link to select it, then click the Delete button.

- 7 In the main window, click the Add... button.

A dialog opens that displays a list of link types.

- 8 Click Default.

The Link Editor window opens. This window contains fields you must fill in to define an X.25 link.

- 9 Enter the link number in the Link Number field. For the very first link, enter 0. For the subsequent link enter 1, and so on.

- 10 Enter a descriptive name for the link in the Link Description field. For example: Internal Serial Port.

- 11 Select WAN from the Link Type menu button.

- 12 Select a device type from the Device menu button.

The device type must match the type of interface on the workstation to which the X.25 link is connected. The device type is ZSH for a link that connects to a low-speed port on the workstation or HSI for a link that connects to a high-speed port on an HSI/S card.

- 13 Enter the port number in the Port Number field.

The port number must correspond to the physical workstation port to which the X.25 link is connected. Most SPARCstations are equipped with two low-speed serial ports labelled A and B. The port labelled A is port 0 (ZSH-0) and the port labelled B is Port 1 (ZSH-1). When an HSI card is installed in the workstation, the workstation has four additional high-speed ports labelled 0 through 3.

- 14 Enter the workstation local address into the Local X.121 Address field.

This is the X.121 address of the port on the DPN peripheral interface card to which the workstation is connected. This address includes the Data Network Identification Code (DNIC), the Network Terminal Number (NTN), and any sub-addressing digits.

You only need to include the DNIC if the information displayed with [PI] n [PO] m Q DNA command shows that DNIC is set to international format OFF/NO.

- 15 Select the version of X.25 software using the Version menu button.

This version must match the version of X.25 software provisioned on the DPN port to which the workstation connects.

- 16 Set the Packet Size menu buttons as follows:

```
Local: default: 512 maximum: 512
Remote: default:512 maximum: 512
```

- 17 Set the SVC Two-Way Logical Channel Range menu buttons to match the minimum and maximum values configured in NCS. Obtain these values by entering the following command at command at a maintenance terminal connected to the DPN switch:

```
[PI] <n> [PO] <m> Query LCN
```

- 18 Set the PVC, SVC Incoming, and SVC Outgoing Logical Channel Range menu buttons as follows:

```
PVC minimum: 0 maximum: 0
```

```
SVC Incoming minimum: 0 maximum: 0
```

```
SVC Outgoing minimum: 0 maximum: 0
```

- 19 Click Apply to activate the Advanced Configuration buttons in the main window that provide access to dialogs for configuring WAN links.

Lettering on the appropriate buttons turns from gray to black to indicate that they are active.

**Note:** You are about to click on the Advanced Configuration buttons, one at a time. Clicking a button opens a dialog into which you enter service information, apply the information, then close the dialog. However, you are only going to click CUG and Facilities, Link Modes, and Throughput. It is not necessary to click the remaining buttons to open the accompanying dialogs and set values in them because the default values in these dialogs are satisfactory for most installations.

- 20 From the Advanced Configuration list, select CUG and Facilities.

The Closed User Groups and Facilities Parameters dialog opens.

- 21 Click on the following check boxes to select them:

Closed User Group: CUG, no other access

Facilities: Incoming reverse charging

Size Negotiation: Request Size Negotiation

Fast Select: With no restriction on response

- 22 Leave all other check boxes deselected (empty) and the CUG Format menu button set to Basic.

- 23** Click Apply, then OK.  
The Closed User Groups and Facilities Parameters dialog closes.
- 24** In the Link Editor window, click Link Modes.  
The Link Mode Parameters dialog opens.
- 25** If outgoing X25 calls are international, set the Outgoing International Calls menu button to Check National DNIC, and enter your Data Network International Code (DNIC) in the DNIC field.
- 26** Leave all other menu buttons set to their default values and all other check boxes deselected.
- 27** Click Apply, then OK.  
The Link Mode Parameters dialog closes.
- 28** In the Link Editor window, click Throughput.  
The Throughput Classes and Window Sizes Parameters dialog opens.
- 29** Enter the following values into the Throughput Class fields:
- |                 |   |          |    |          |    |
|-----------------|---|----------|----|----------|----|
| Local minimum:  | 3 | default: | 12 | maximum: | 12 |
| Remote minimum: | 3 | default: | 12 | maximum: | 12 |
- 30** For Negotiate Toward Default, click the Yes toggle button.
- 31** For Packet Size, enter 517 in the Max NSDU Length field.
- 32** For Network Profile, leave Modulo set to 8.
- 33** Enter the following values in the Window Size fields:
- |        |          |   |          |   |
|--------|----------|---|----------|---|
| Local  | default: | 2 | maximum: | 7 |
| Remote | default: | 2 | maximum: | 7 |
- 34** Click Apply then OK.  
The Throughput Classes and Window Sizes Parameters dialog closes.
- 35** In the Link Editor window, click Apply, then OK.  
The Link Editor window closes.
- 36** In the x25tool 9.2 window, select Save from the File menu.  
The Save Information in Default Configuration dialog opens.
- 37** Click OK.  
The information about the new link is saved as part of the default configuration, and the dialog closes.

- 38 In the x25tool 9.2 window, choose Start X25 from the Network menu.
- 39 Ensure that the link you created is still highlighted, then select Start Link from the Network menu.

Progress messages are displayed in the x25tool 9.2 window as the link is started.

## Chapter 8

# Configuring an IP over X.25 link to Passport

---

This section contains the instructions for setting up an IP connection over an X.25 link between the Preside Multiservice Data Manager (MDM) workstation and a Passport switch. In this section, you can find the following information:

- “Configuration overview” (page 65)
- “Obtaining IP over X.25 service parameters for the workstation” (page 66)
- “Configuring an IP over X.25 connection” (page 66)

### Configuration overview

Perform the following procedure to set up an IP connection over an X.25 link between the Preside Multiservice Data Manager (MDM) workstation and a Passport switch. The IP connection is used for managing the Passport switches in your network and it passes over an X.25 link to a DPN gateway switch to the Passport switch.

- 1 Ensure that you have loaded the X.25 software, installed a licence, and patches, as described in “Loading X.25 software” (page 47).
- 2 Ensure that you have set up an X,25 link between the MDM workstation and the DPN switch over which the IP connection to the Passport switch is to run.  
See “Configuring an X.25 link to DPN” (page 57).
- 3 Obtain the service parameters required to configure IP over X.25 on the workstation.

See "Obtaining IP over X.25 service parameters for the workstation" (page 66).

- 4 Configure the IP over X.25 connection with Suns X.25 Admintool.  
See "Configuring an IP over X.25 connection" (page 66).

## Obtaining IP over X.25 service parameters for the workstation

The following service parameters are required to configure an IP over X.25 link for managing the Passport switches in your network.

- the IP address of the workstation

This is the address labelled localhost in file /etc/hosts.

- the Data Network Address (DNA) of the workstation

The DNA must match the one you entered in the Link Editor dialog when you set up the X.25 link to DPN on which the IP connection to the Passport switches runs.

- the Link Number of the X.25 link on which you wish to set up the IP connection.

The Link Number must match the one you entered in the Link Editor dialog when you set up the X.25 link to DPN on which the IP connection runs.

- the DNA of the remote Passport switch and its corresponding IP address

Obtain this information from your Passport network administrator.

## Configuring an IP over X.25 connection

This procedure uses Sun's X.25 Administration Tool to configure an IP connection on an X.25 link to allow the Preside Multiservice Data Manager (MDM) to communicate with a Passport switch through a DPN gateway. This tool configures the IP connection as an application on the X.25 link.

Configure each IP over X.25 connection to a Passport switch as a point-to-point connection. Configuring a point-to-point connection involves entering service parameters in two dialogs that can be opened from the Services menu of the x25tool9.2 window.

To configure a point-to-point connection, the first dialog you open is the IP Interface Configuration Dialog. In this dialog, add the local IP address of the workstation, the remote IP address of the Passport switch, and specify the connection as a point-to-point connection. From this dialog, you must also open a sub-dialog to specify advanced IP over X.25 configuration parameters.

The second dialog you open is the Remote Host to X.25 Map dialog. In this dialog, you specify information that maps the Remote X.25 address you entered in the IP Interface Configuration Dialog to the DNA of the Passport switch.

For each point-to-point connection, add IP interface information into the IP Interface Configuration dialog, then add mapping information into the Remote Host to X.25 Map dialog.

- 1 Ensure that you have configured the X.25 connection on the workstation, as described in "Configuring an X.25 link to DPN" (page 57).
- 2 Log in as root.
- 3 If you have not already done so, access C-shell:  

```
    csh
```
- 4 Start the X.25 Administration tool:  

```
    /opt/SUNWconn/bin/x25tool &
```

The x25tool 9.2 window opens.
- 5 Choose Dynamic Mode from the Options menu.
- 6 Choose IP->IP Interface from the Services menu.  

The IP Interface Configuration dialog opens.
- 7 If there are any default IP interfaces defined, select them one at time and click Delete.
- 8 Click Add.

The fields and buttons in the lower half of the dialog turn from gray to black to indicate that they are active.

- 9 Enter the following values in the fields dialog:

Local IP address:

This is the IP address of the workstation.

Remote IP address:

This is the IP address of the Passport switch.

- 10 Set the Point to: menu button to Point.

- 11 Leave the MTU field set to the default of 576.

- 12 Click Apply.

The local and remote IP address information you just entered is added to list of mappings in the upper half of the dialog.

- 13 Ensure that the mapping is still selected (highlighted).

- 14 Click Modify.

The X.25 Parameters Advanced Configuration Parameters button turns from gray to black to indicate that it is active.

- 15 Click X.25 Parameters.

The X25 Configuration IP Address dialog opens.

- 16 Enter the pre-emption timeout in the Pre-emption Timer field.

This is the number of seconds that a connection must be idle before it can be closed (preempted) for another purpose. When all X.25 circuits available to the IP application are in use and an IP packet arrives for transmission to a new destination, SunLink closes the connection that has been idle the longest. The preemption timer determines the minimum time a connection must be idle before it can be preempted in this way.

If the workstation is being used for surveillance or data collection, you must set this timer to at least 6000 to avoid undesired teardown of Passport VC connections and to keep the communications path to the Passport stable. However, if the workstation is not being used for purposes that require the connection to remain up, say for entering commands, you can set the preemption timer to a lower value.

- 17 Enter the disconnection timeout in the Disconnection Timer field.

This is the time in seconds that a connection to a given network can remain idle before being closed. For a value of 6000, this represents 100 minutes.

If the workstation is being used for surveillance or data collection, you must set this timer to at least 6000 to avoid undesired teardown of Passport VC connections and to keep the communications path to the Passport stable. However, if the workstation is not being used for purposes that require the connection to remain up, say for entering commands, you can set the disconnection timer to a value of less than 300. Why less than 300? This is because when a connection is set up, the Passport sends a reset packet after 5 minutes (value of 300), then every 3 minutes (value of 180) thereafter.

**18** Leave all other items in this dialog set at their default values.

**19** Click Apply, then OK.

The X25 Configuration for IP Interface dialog closes.

**20** In the x25tool 9.2 window, choose IP->IP Mapping from the Services menu.

The Remote IP Host to X.25 Address Map dialog opens.

**21** In the dialog, click Add.

The fields and buttons in the lower half of the dialog turn from gray to black to indicate that they are active.

**22** Enter the following values into the dialog:

Remote IP address

This is the IP address of the Passport switch. This address must match the IP address of the Passport switch you entered in the IP Interface Configuration Dialog.

Link number

This is the number of the X.25 link on which the IP application is running. It must match the link number you entered in the Link Editor window when you configured X.25 on the link.

Remote X.25 address

This is the DNA that corresponds to the IP address of the Passport switch.

**23** Leave the other parameters in this dialog at their default values.

**Note:** It is not necessary to click the Advanced Configuration X.25 Parameters button to specify X.25 parameters in the X25 Configuration for IP dialog because the default values in the dialog are adequate for most installations.

- 24** Click Apply, then OK.

The Remote IP Host to X.25 Address Map dialog closes.

- 25** In the x.25tool 9.2 window, choose Save from the File menu.

- 26** Enter the following command to verify that the connection to the Passport switch is up:

```
ping <ip address>
```

where:

<ip address> is the IP address of the Passport switch. If the connection is up, the following response appears:

```
<ip address> is alive
```

## Chapter 9

# Installing Frame Relay software

---

This section contains the installation instructions for SunLink Frame Relay software. In this section, you can find the following information:

- “Installation overview” (page 71)
- “Prerequisites for installing Frame Relay software” (page 72)
- “Determining the release of Frame Relay software and the software subsets to load” (page 73)
- “Loading the Frame Relay software” (page 73)
- “Installing a license password” (page 78)
- “Installing required Frame Relay patches” (page 79)
- “Obtaining service parameters for Frame Relay” (page 80)
- “Configuring Frame Relay software” (page 80)

### Installation overview

Perform the following procedure to load and configure SunLink Frame Relay software. The software allows a workstation to communicate with the Passport switches in the network over a Frame Relay link.

- 1 Read the prerequisites for installing the Frame Relay software.  
See “Prerequisites for installing Frame Relay software” (page 72).
- 2 Determine the release of Frame Relay and the software subsets to load.  
See “Determining the release of Frame Relay software and the software subsets to load” (page 73)

- 3 Load the Frame Relay software.  
See “Loading the Frame Relay software” (page 73).
- 4 Obtain the service parameters for configuring Frame Relay.  
See “Obtaining service parameters for Frame Relay” (page 80).
- 5 Install any required Frame Relay patches.  
See “Installing required Frame Relay patches” (page 79).
- 6 Configure the Frame Relay software.  
See “Configuring Frame Relay software” (page 80).

## Prerequisites for installing Frame Relay software

Before installing and configuring SunLink Frame Relay software, ensure that the following is complete:

- An IP over Frame Relay (IPIFR) interface has been provisioned on the Passport switch as described in *241-5701-270 Passport 7400, 15000, 20000 Software Installation Guide*. The interface must be provisioned with the following characteristics:
  - The interface must be provisioned as a static IP connection to run as a Permanent Virtual Circuit.
  - The clock speed must be set by the Passport switch.
  - Set the <proc> option of Lmi to none. Set maximumFrameSize to 1600. You need to set these two components to these values for a SunLink Frame Relay software installation. The procedure in *241-5701-270 Passport 7400, 15000, 20000 Software Installation Guide* is for a generic Frame Relay software installation.
  - Set all other components to the values in the procedure in *241-5701-270 Passport 7400, 15000, 20000 Software Installation Guide*.
- Ensure you have installed an HSI card in the workstation and that the workstation has been connected to the network, as described in “This section contains the instructions for installing the workstation and communications hardware. In this section, you can find the following information:” (page 199).

- Ensure that you have installed the HSI/S software as described in “Installing HSI/P software” (page 41).

## Determining the release of Frame Relay software and the software subsets to load

The minimum release of Frame Relay software to load is SunLink Frame Relay 2.0.1.

Software packages on compact disk from SunSoft consist of several software subsets which you can select to load individually. For SunLink Frame Relay, load the software subsets in the Frame Relay package, except for any Answerbook software subsets that contain Sun’s online documentation. The minimum recommended workstation configuration does not include allowances for Answerbook subsets. If you choose to load the Answerbooks, increase the allowances for partition sizes and/or disk space capacity accordingly.

For the approximate disk space requirements to contain Frame Relay software, see the table “Approximate disk space requirements for Frame Relay” (page 73).

**Table 7**  
**Approximate disk space requirements for Frame Relay**

Frame Relay software subsets	Approximate size
Solstice Frame Relay 2.0.1 driver and configuration (SUNWfra 2.0.1)	1 Mbyte
Solstice Frame Relay 2.0.1 application programs (SUNWfrab 2.0)	1 Mbyte
Total	2 Mbyte

## Loading the Frame Relay software

This section contains two procedures for loading the Frame Relay software from compact disk. Sunsoft provides Frame Relay software in two forms: by itself on compact disk (unbundled), or bundled with other communications software on compact disk in a product called Solstice Server Connect. Refer to one of the following procedures to load the software:

- “Loading Frame Relay software (unbundled)” (page 74)

- “Loading Frame Relay Software (Solstice Server Connect)” (page 76)

Both procedures load the software from a CD-ROM drive connected directly to the workstation by means of Sun’s admintool. For instructions to load the software:

- from a remote CD-ROM drive or from a server, see the Sun document: *Solaris Advanced Installation Guide*
- from command, refer to the On-line Manual Pages for the pkgadd command

## Loading Frame Relay software (unbundled)

### 1 Ensure that

- a CD-ROM drive is connected to your workstation and is powered up
- the Solaris operating system is installed and configured
- the workstation is displaying the login prompt
- you have the compact disk for the unbundled Frame Relay 2.0 software. SunLink Frame Relay software is available on a compact disk all by itself or bundled with other communications software referred to as Solstice Server Connect.

If you have the Solstice Server Connect compact disk, do not continue. Refer instead to procedure “Loading Frame Relay Software (Solstice Server Connect)” (page 76).

### 2 Log in as root.

### 3 Start c-shell

```
csh
```

### 4 Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.

### 5 Open a UNIX window or a Shell Tool window.

### 6 Start up Sun’s admintool as a background process:

```
/usr/bin/admintool &
```

The Admintool window opens.

### 7 From the Browse menu, select Software.

The Admintool window now lists all software installed on the workstation.

- 8** From the Edit menu, select Add.

The Admintool: Set Source Media dialog opens.

- 9** From Software Locations, select CD with Volume Management.

- 10** Type in the correct path name of the source media:

`/cdrom/cdrom0/sparc`

- 11** Click OK.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

- 12** Select the name of the name of the software to load.

- 13** Click Customize.

The Admintool: Customize Installation Dialog opens and displays a list of the software subsets to load.

- 14** Select the following software subsets:.

- Solstice Frame Relay driver and configuration files 2.0.1
- Solstice Frame Relay 2.0.1 application programs 2.0.1

The subsets are selected when their buttons turn from grey to black.

**Note:** For Frame Relay software, do not select any Answerbook subsets. These subsets contain Sun's online documentation. The minimum recommended workstation configuration does not include sufficient space for the Frame Relay Answerbook. If you choose to load it, you must increase partition sizes and/or disk space accordingly.

- 15** When you have finished selecting all of the software subsets to load, click Add.

The Admintool: Customize Installation Dialog closes.

- 16** In the Admintool: Add Software Dialog, click Add.

A Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads

- 17** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Input/Output dialog displays a message to indicate that loading is successful and complete.

- 18 Eject the compact disk by typing in the following command in the UNIX window or the shell tool window.

```
eject cdrom
```

You are now ready to install any required patches.

## Loading Frame Relay Software (Solstice Server Connect)

- 1 Ensure that

- a CD-ROM drive is connected to your workstation and is powered up.
- the Solaris operating system is installed and configured
- the workstation is displaying the login prompt
- You have the Solstice Server Connect compact disk. SunLink Frame Relay software is available on a compact disk all by itself or bundled with other communications software referred to as the Server Connect software.

If you have the unbundled Frame Relay software, do not continue. Refer instead to procedure "Loading the Frame Relay software" (page 73).

- 2 Log in as root.

- 3 Start c-shell

```
csH
```

- 4 Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.

- 5 Open a UNIX window or a Shell Tool window.

- 6 Start up Sun's admintool as a background process:

```
/usr/bin/admintool &
```

The Admintool window opens.

- 7 From the Browse menu, select Software.

The Admintool window now lists all software installed on the workstation.

- 8 From the Edit menu, select Add.

The Set Source Media dialog opens.

- 9 From Software Locations, select CD with Volume Management.

- 10** Type in the path to the Frame Relay software:

```
/cdrom/server_connect_397/products/frelay/Image/sparc
```

- 11** Click OK.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

- 12** Select the following software subsets to load.

- Solstice Frame Relay 2.0.1 driver and configuration (SUNWfra 2.0.1)
- Solstice Frame Relay 2.0.1 application programs (SUNWfrab 2.0)

- 13** When you have finished selecting all of the software subsets to load, click OK.

A Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads

- 14** Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Input/Output dialog displays a message to indicate that loading is successful and complete.

- 15** If you have installed the Solstice license during the X.25 software installation, go to step step 23. Otherwise, continue with the procedure.

- 16** From the Edit menu, select Add.

The Admintool: Set Source Media dialog opens.

- 17** From Software Locations, select CD with Volume Management.

- 18** Type in the path to the Solstice licensing software:

```
/cdrom/server_connect_397/products/licenses/Image/sparc
```

- 19** Click OK.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

- 20** Select the following licensing tool software:

- Solstice Connect Center license information 4.1 License Installation Tool
- FlexLM License System

- 21 When you have finished selecting the software subsets, click Add.

The Command Input/Output dialog opens, and the software begins to load. This dialog displays prompts for confirmation (Y/N) at various stages as the software loads.

- 22 Answer all prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Command Input/Output dialog displays a message to indicate that loading is successful and complete.

- 23 Eject the compact disk by typing in the following command in the UNIX window or the shell tool window.

```
eject cdrom
```

When you have finished loading the Frame Relay software you can run the software, but you need a license password. If you have not already installed a license password, see “Installing a license password” (page 78). If you have installed a license password, see “Installing required Frame Relay patches” (page 79).

## Installing a license password

Use the following procedure to install a license password to run SunLink Frame Relay communications software. If you have already installed a SunLink Frame Relay license password at the same time you installed an X.25 license, omit this procedure and continue with “Installing required Frame Relay patches” (page 79).

You must perform this procedure on every workstation on which SunLink Frame Relay software is loaded.

- 1 From SunSoft, obtain a licence, to run SunLink Frame Relay. The licence information must include the number of Rights to Use (RTUs), and the passwords to run SunLink X.25.

The number of RTUs defines the number of instances of the software that the license allows to run concurrently. For RTUs and passwords, contact Sun’s local license distribution center at the phone number listed in the Sun documentation provided with the compact disk.

- 2 Ensure that you have already loaded the Frame Relay application and corresponding software subsets.

- 3 Log in as root on the workstation on which the Frame Relay software is installed.
- 4 If you have not already, done so, access c-shell:  

```
cs h
```
- 5 Start the licensing tool:  

```
/etc/opt/licenses/lit &
```

The License Installation Tool window opens.
- 6 From Select Product, choose the name of the communications application for which you wish to install a password.
- 7 From Server Options, choose the number of servers on which the licensing server software is to run. For a standalone workstation, select 1.
- 8 In the Rights to Use field, type in the number of rights to use that are to be enabled with this password. The number of Rights to Use you enter must match that provided along with the password.
- 9 In the Password field, type in the password you obtained from Sun's local license distribution center.
- 10 Click Done With License.
- 11 Click Continue.
- 12 Click Exit - Install Licenses.  

A script runs and when completed, a pop-up window appears containing a message which indicates that the license password has been installed.
- 13 Click Quit.

You are now ready to load and install any Frame Relay patches.

## Installing required Frame Relay patches

Obtain, load, and install any required Frame Relay patches listed in the MDM Release Supplement. This document is provided in hardcopy along with your Preside Multiservice Data Manager (MDM) software. A soft copy is also available in a PostScript file on the MDM CD-ROM. The instructions for installing a patch are provided in a file called ReadMe along with the patch.

## Obtaining service parameters for Frame Relay

Frame Relay connections to Passport switches are to be configured as static Permanent Virtual Circuit connections. The service parameters you require for configuring each Frame Relay connection are as follows:

- the IP address of the Preside Multiservice Data Manager (MDM) workstation
- the IP address of the Passport switch
- the name of the Frame Relay interface (link name) on the workstation (hih0, hih1, hih2, or hih3)
- the Data Link Connection identifier of the Frame Relay connection. Obtain the DLCI from your Passport Network Administrator.
- clocking for the link, which should always be external
- the Maximum Transmission Unit (MTU) size. The default value of 1500 should suffice for most installations.

Write down the values for these parameters; you will need them to configure the Frame Relay software.

## Configuring Frame Relay software

Although the SunLink Frame Relay software comes with utilities for configuring Frame Relay connections, these utilities have the following disadvantages:

- They cannot be used to set up or add Passport Groups and servers for the Passport switches in your network. To communicate with Passport switches in your network, you must set up the Passport Groups and servers in addition to entering information about Frame Relay connections.
- To add new any Frame Relay connections using the SunLink utilities, you must enter information about all Frame Relay connections, not just information for the new ones. In networks that contain Passport switches, this has the potential to be information for a very large number of connections.

The Preside Multiservice Data Manager (MDM) software provides its own utility called `passport.frconfig` that counteracts these disadvantages. This utility also configures the Frame Relay connections, starts them, and causes the MDM servers to reload Passport group information, if necessary.

We recommend that

- You do not use the SunLink Frame Relay utilities to configure and start Frame Relay connections.
- You wait until you have installed the MDM software as described in “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275) before attempting to configure Frame Relay. Once the MDM software is installed you will have access to the `passport.frconfig` utility which we recommend you use instead.

If you still wish to use the interface provided with the SunLink Frame Relay, see the instructions provided with the SunLink Frame Relay documentation.



---

## Chapter 10

# Installing SunATM software

---

This section contains the installation instructions for SunATM software. This section contains the following information:

- “Installation overview” (page 83)
- “Prerequisites for installing SunATM software” (page 84)
- “Determining the release of SunATM software and the software subsets to load” (page 85)
- “Installing required SunATM patches” (page 85)
- “Loading the SunATM software” (page 85)
- “Configuring the SunATM interface” (page 87)

### Installation overview

SunATM software lets a workstation communicate with the Passport switches in the network over an ATM link. Perform the following procedure to load and configure the SunATM software:

- 1 Read the prerequisites for installing the SunATM software. See “Prerequisites for installing SunATM software” (page 84).
- 2 Determine the release of SunATM software and the software subsets to load. See “Determining the release of SunATM software and the software subsets to load” (page 85).
- 3 Load the SunATM software. See “Loading the SunATM software” (page 85).
- 4 Obtain the service parameters for configuring ATM.  
See “Obtaining service parameters for SunATM” (page 87).

- 5 Install any required ATM patches.  
See “Installing required SunATM patches” (page 85).
- 6 Configure the SunATM interface. See “Configuring the SunATM interface” (page 87).

## Prerequisites for installing SunATM software

Before installing and configuring the SunATM software and interface, ensure that the following procedures have been performed:

- ATM interface (ATMIF) and ATM multi-protocol encapsulation (MPE) components have been provisioned on the Passport switch as described in 241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide*. The interface must be provisioned with the following characteristics.
  - The interface must be provisioned as a Nailed Up Relay (NEP) to run as a Permanent Virtual Circuit (PVC).
  - The virtual connection identifier (VCI) number on the Passport switch is the same as the PVC number on the workstation under the ATM network interface card (NIC) configuration.
  - Ensure the maximum transmission unit (MTU) size on the Passport is set to 9180.
  - The Static IP provisioned as the instance of the host under the Virtual Router (VR) on the Passport switch is the same IP assigned to the SunATM NIC card on the workstation.
  - Set all other components to the values in the procedure in 241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide*.
- Ensure that you have installed an ATM NIC card in the workstation and that the workstation has been connected to the network. For more information see *SunATM <release> Installation and User's Guide*.
- Ensure that you have installed the ATM NIC software. See “Loading the SunATM software” (page 85).

## Determining the release of SunATM software and the software subsets to load

The minimum release of SunATM software to load is SunATM 4.0.

Software packages on compact disk from Sun Microsystems are comprised of several software subsets which you can select to load individually. For SunATM, load all of the software subsets in the SunATM package.

For the approximate disk space requirements to contain SunATM software, see the table “Approximate disk space requirements for SunATM” (page 85).

**Table 8**  
**Approximate disk space requirements for SunATM**

SunATM software subsets	Approximate size
SunATM device drivers and utilities	< 1 Mbyte
SunATM interim API support software (optional)	< 1 Mbyte
SunATM runtime support software (optional)	< 1 Mbyte
Total	< 3 Mbyte

## Installing required SunATM patches

Any required patches must be installed prior to drive installation.

Obtain, load and install any required SunATM patches listed in the MDM Release Supplement. This document is provided in hardcopy along with the Preside Multiservice Data Manager (MDM) software. A soft copy is also available in a postscript file on the MDM CD-ROM. The instructions for installing a patch are provided in a file called ReadMe along with the patch.

## Loading the SunATM software

This section outlines the procedure for loading the SunATM software from the CD-ROM.

- 1 Ensure that
  - A CD-ROM drive is connected to your workstation and is powered up.

- The Solaris operating system is installed and configured.
  - The workstation is displaying the login prompt.
  - You have the CD-ROM for SunATM 4.0 software.
  - You have correctly installed the SunATM adapter card in the workstation.
- 2 Log in as root.
  - 3 Insert the compact disk into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.
  - 4 Add the SunATM software package:  

```
/usr/sbin/pkgadd -d/cdrom/sunatm_4_0/Product SUNWatm [
SUNWatmu SUNWatma ]
```
  - 5 The SunATM package(s) will be installed in the following directories:
    - SunATM Device Drivers and Utilities (SunWatm) go into /kernel/mod, /kernel/mod/sparcv9, /kernel/drv, /etc/init.d, /platform/SUN, Ultra-4FT/kernel/drv, /kernel/drv/sparcv9, /etc/opt/SUNWconn/atm, /etc/rc2.d and /etc/opt/SUNWconn/bin.
    - SunATM Runtime Support software (SUNWatmu) goes into /opt/SUNWconn/atm and /opt/SUNWconn/man.
    - SunATM Interim API (SunWatma) goes into /opt/SUNWconn/atm/include, /opt/SUNWconn/atm/lib, /opt/SUNWconn/include and /opt/SUNWconn/lib.
  - 6 Eject the SunATM CD-ROM.
  - 7 Configure your SunATM interface. See “Configuring the SunATM interface” (page 87).
  - 8 Reboot the workstation and examine the network interface.
  - 9 Use the boot -rv command from the ok prompt.
  - 10 Execute ifconfig -a and netstat -i commands to examine the state of all network interfaces. You can also use the /usr/sbin/ping command to see if a network interface is active.

## Obtaining service parameters for SunATM

Configure SunATM connections to Passport switches as static Permanent Virtual Circuit connections. The service parameters you require for configuring each SunATM connection are as follows:

- the IP address or the name in the /etc/hosts file of the SunATM port on the Preside Multiservice Data Manager (MDM) workstation
- the IP address or the name in the /etc/hosts file of the ATM port on the Passport switch
- the PVC number input during the SunATM configuration of the MDM workstation must match the VCI number used on the Passport switch. An example of a VPI.VCI number on the switch is 0.32, where 0 is the VPI and 32 is the VCI number.

**Note:** The PVC number on the switch under the Virtual Router Static Host configuration does not correspond to the PVC number in the SunATM configuration. Instead, the Virtual Router Static Host PVC number on switch must correspond to the instance number of the atmConnection under the ATMMPE component on switch.

- set the signaling level to 4.0 in the SunATM configuration

Write down the values for these parameters; you will need them to configure the SunATM software.

## Configuring the SunATM interface

You must complete the network configuration of your SunATM interface before you can use the interface. The Preside Multiservice Data Manager (MDM) software provides its own utility called `passport.atmconfig` that will allow for the configuration of the SunATM interface, and any network routing required. For the instructions to run the `passport.atmconfig` script, see 241-6001-303 *Preside MDM Administrator Guide*.

If you wish to use the SunATM configuration program supplied by Sun Microsystems, refer to the instructions provided with the SunATM documentation.



---

# Chapter 11

## UNIX accounts

---

Using the Solaris Admintool provided with the Sun workstation, create the UNIX groups and userIDs to use and administer the Preside Multiservice Data Manager (MDM) software.

### Procedure navigation

- “Procedure prerequisites” (page 89)
- “Procedure steps” (page 89)
- “Job aids” (page 90)

### Procedure prerequisites

- “Solaris” (page 35)

### Procedure steps

- 1 Create the UNIX groups and userIDs to administer the MDM software. Use the Solaris Admintool provided with the Sun workstation.

For example, userIDs can be created for viewing faults, provisioning network services, or administering applications.

- 2 Optionally, create a UNIX group and an MDP administrator userID to install and administer the MDP software. Use the Solaris Admintool provided with the Sun workstation.
- 3 Set a password for each new UNIX userID. As userID root, from the UNIX command line, type

```
passwd <userID>
```

where:

<userID> is the new UNIX userID

- a. Type a new password when prompted.
- 4 Set the UNIX environment variable \$HOME for the new UNIX userIDs. Using each new UNIX userID, from the UNIX command line, type
- ```
setenv HOME <userID>
```
- 5 For each MDM user, change a Solaris Common Desktop Environment (CDE) window manager setting to prevent dialog boxes from being hidden.
- a. Click on the **Style Manager** icon on the CDE tool bar.
  - b. Click on **Window**.
  - c. Disable **Allow Primary Windows On Top**.

## Job aids

**Table 9**  
**Variable definitions**

| Variable | Definition                              |
|----------|-----------------------------------------|
| <userID> | new UNIX userID (for example, mdpadmin) |





# Chapter 12

## Device integration cartridge software

---

Obtain the device integration software cartridges for those SNMP devices supported by this Preside Multiservice Data Manager (MDM) network management workstation.

*Note:* This task is optional and is only required if the MDM InstallAnywhere tool will be used to install device integration cartridges. The installation of device integration cartridges on an MDM network management workstation can be performed at any time without using the InstallAnywhere tool. This method of installation is described in 241-6003-100 *Preside, Device Integration Cartridge Installation and Administration Guide*.

### Procedure navigation

- “Procedure prerequisites” (page 93)
- “Procedure steps” (page 94)

### Procedure prerequisites

- “Solaris” (page 35)
- purchase a Nortel Networks support plan and register for software download access
- although the task of obtaining device integration cartridges can be performed before the Preside MDM software is installed, device integration cartridge software cannot be installed until the Preside MDM software is installed and configured.

## Procedure steps

- 1 As the userID root, from the UNIX command line, create a temporary directory.

For example, only:

```
mkdir /tmp/newcartridge
```

- 2 Record the new directory name. This directory name is required by the InstallAnywhere tool.

- 3 Download the cartridge from the Nortel Networks distribution site to the new directory. The URL is

```
http://www130.nortelnetworks.com/cgi-bin/eserv/cs/  
main.jsp
```

- 4 Change directories to the new directory.

For example, only:

```
cd /tmp/newcartridge
```

- 5 Uncompress the file.

For example, only:

```
tar xvf  
MDM_Baystack_450_Cartridge_V1.0.0_Sun_b100.tar
```

A new subdirectory is created that contains the device integration cartridge software.

## Chapter 13

# Software installation

---

This section describes how to install the Preside Multiservice Data Manager (MDM) software using the InstallAnywhere tool.

### Procedure navigation

- “Procedure prerequisites” (page 95)
- “Procedure steps” (page 95)
- “Job aids” (page 101)

### Procedure prerequisites

- “Solaris” (page 35).  
Ensure that the Netscape softlink has been created. This softlink is required by the MDM online help facility.
- “JRE patches” (page 39)
- for new MDM network management workstations, “UNIX accounts” (page 89)
- to support SNMP device integration, “Device integration cartridge software” (page 93)

### Procedure steps

- 1 On the MDM network management workstation, as userID root, open a UNIX xterm.
- 2 If you are installing from a CD-ROM

**Note:** Do **not** change directories (`cd /cdrom/cdrom0`) before executing the command `install_mdm.bin`. Changing directories will cause problems when attempting to eject and load the CD-ROMs.

- a. Insert the MDM compact disk 1 of 2 into the CDROM driver, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.
- b. Launch the MDM software installation tool **InstallAnywhere**.  
Type the following:

```
/cdrom/cdrom0/install_mdm.bin
```

**3** If you are installing from a disk

- a. Change directories to the directory that contains the MDM software.

```
cd <MDM software_load_directory>
```

- b. Launch the MDP software installation tool **InstallAnywhere**.  
Type the following:

```
./Install_MDM<load>bin
```

where <load> is the name of the MDM software load  
(for example, MDM142Pbm).

**4** The **Initial MDM software installation** window opens, a countdown occurs, then the window closes.

**5** The **InstallAnywhere Introduction** window opens.

The left panel of the window indicates the current phase of the installation. As selections are made, the indicator for each phase changes color. The contents of the right panel changes as installation progresses.

**Note:** The InstallAnywhere tool can be stopped at anytime. To stop MDM software installation, click **Cancel**.

**6** Click **Next**.

**7** The **Preside MDM License agreement** window opens.

Review the license information. Click **I accept the terms of the License Agreement**, then click **Next**.

**8** The **System information** window opens.

This window indicates

- the Solaris operating system (OS) currently installed on this workstation.

- the sizes of the disk partitions on this workstation and the disk partition sizes recommended for MDM software.
- Preside MDM software (by release) currently installed on this workstation.
- Device integration software cartridges currently installed on this workstation.
- Preside MDM licenses currently installed on this workstation.

If the actual sizes of the partitions are equal to, or larger than, the partition sizes recommended in 241-6001-101 *Preside MDM Engineering Guide*, click **Next**.

If the suggested size for a partition is larger than the available partition size, re-partition the disk. Depending on the size of the disk drive on the workstation, you may also need to add another disk drive or replace the existing drive with a larger drive. Click **Cancel** to exit the InstallAnywhere tool and use the Sun documentation to re-partition the disk drive.

**9** The **MDM R14.3 install options** window opens.

Select the software packages for this Preside MDM network management workstation. For more information, see “MDM software packages” (page 101).

Click **Next**.

**10** The **MDM R14.3 installation source path** window opens.

If you are installing software from CD-ROM, click **Next**.

If you are installing software from a directory on the workstation (for example, /tmp), click **Choose**, select the appropriate folder, click **Select**; then click **Next**.

If software packages are located in different directories, you are provided with prompts to select the appropriate directory for each package selected in step 9.

The default is the InstallAnywhere tool uses the CD-ROM as the installation source.

**11** If you selected the Management Data Provider (MDP) option in step 9 and this installation is not an MDP software upgrade, the **MDP user information** window opens.

The MDP user information window prompts for the MDP administrator userID created in section “UNIX accounts” (page 89).

**Note:** If the MDP administrator userID was not created previously, create the userID in a separate UNIX window and then complete this step.

12 Click **Next**.

13 The **Network Viewer background pixmaps** window opens.

This window lists the optional bitmap images that can be installed and used as the background for the Network Viewer. For example, you can use a map of the world as the background.

If you have decided to use the optional bitmap images, click **Yes** and proceed to step 14.

If you have decided not to use optional bitmap images, click **No** and proceed to step 15.

14 The **Network Viewer background pixmap selection** window opens.

Select the countries for which images should be installed.

15 If you selected Device Integration cartridges in step 9, the **Device Integration cartridge selection** window opens.

Select the Device Integration cartridges to install.

- a. If the Preside Network Services Platform (NSP) is also installed on this MDM network management workstation, click **NSP is co-resident with MDM**.
- b. Enable the InstallAnywhere tool to update the MDM Server Administration tool (SVMADM) with configuration information for the new device integration software.

In the data entry box **Enter Server Administration password**, type the current password for the SVMADM.

c. Click **Next**.

16 The **Pre-installation summary** window opens. This summary indicates the software packages that will be installed and the space requirements for these packages.

If the software packages to be installed is incorrect, click **Previous** to return to the **MDM R14.3 install options** window and select the correct software packages.

If the amount of disk space required to install the indicated software exceeds the amount of available disk space, click **Cancel** to halt the installation.

17 Click **Install**.

- 18** The **Installing MDM R14.3** window opens.

The InstallAnywhere tool begins loading software and displays the name of each package as it loads. The InstallAnywhere tool prompts for additional CD-ROMs until all of the selected software is loaded.

- 19** After the installation of the MDM software packages is complete, if a valid MDM R14.3 license key has not previously been created, the **Enter new license** window opens.

Type the new MDM software license in the provided data entry box.

**Note:** If you do not enter an MDM software license key, a temporary software license is generated that is valid for all MDM and MDP software for a maximum of 30 days. When you have a permanent MDM software license, manually apply it using the procedure in 241-6001-303 *Preside MDM Administrator Guide*.

- 20** Click **Next**.

- 21** If this is a new MDM software installation, the **Launch QuickStart option** window opens.

If you are going to use an administration database, you are informed that you must install and configure the database before launching the QuickStart tool.

You are prompted as follows:

```
Would you like to invoke the MDM QuickStart  
configuration wizard after leaving the installer?
```

The MDM QuickStart configuration wizard assists you in configuring the MDM to provide basic Passport support.

**Note:** Use the MDM QuickStart configuration wizard for new MDM installations, only.

If you select **Yes**, the MDM QuickStart configuration wizard is launched after the InstallAnywhere tool is finished.

If you select **No**, the MDM QuickStart configuration wizard is not launched after the InstallAnywhere tool closes.

- 22** Click **Next**.

The **Install complete** window opens. The InstallAnywhere tool has now completed installation.

- 23** Click **Done**.

The InstallAnywhere window closes.

If you elected to invoke the MDM QuickStart configuration wizard, follow the instructions in section “Configuration” (page 107).

## Job aids

The following table describes the MDM software packages.

**Table 10**  
**MDM software packages**

| Package                         | Description                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------------|
| Multiservice Data Manager (MDM) | applications including fault, provisioning, and administration toolsets                             |
| MDM NTPs                        | the online help sets used to provide context sensitive help and procedural information for MDM      |
| Management Data Provider (MDP)  | a data collection application.                                                                      |
|                                 | If MDM is not currently installed on this network management workstation, you must also select MDM. |
| MDP NTPs                        | the online help sets used to provide context sensitive help and procedural information for MDP      |
| HP OpenView Desktop client      | a client for displaying fault information.                                                          |
|                                 | If MDM is not currently installed on this network management workstation, you must also select MDM. |

(Sheet 1 of 2)

**Table 10**  
**MDM software packages**

| Package                       | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MDMWeb client                 | <p data-bbox="646 279 1088 305">MDM Web client on a Solaris workstation.</p> <p data-bbox="646 337 1150 422">If MDM is not currently installed on this network management workstation, you must also select MDM.</p>                                                                                                                                                                                          |
| Device Integration cartridges | <p data-bbox="646 446 1130 495">fault management software for specific SNMP devices.</p> <p data-bbox="646 516 1152 597">You cannot select <b>MDM</b> and <b>Device Integration cartridges</b> during the same InstallAnywhere session.</p> <p data-bbox="646 634 1147 716">Device integration cartridge software cannot be installed unless the MDM software is currently installed on this workstation.</p> |
| (Sheet 2 of 2)                |                                                                                                                                                                                                                                                                                                                                                                                                               |

## Chapter 14

# MDM software patches

---

This section describes how to apply and remove softwares patches for the Preside Multiservice Data Manager (MDM) software.

- “Installing an MDM software patch” (page 103)
- “Removing an MDM software patch” (page 106)

### Installing an MDM software patch

This section describes how to apply a software patch or software supplement (SSUP) for the Preside Multiservice Data Manager (MDM) software.

Normally, you are notified by your Nortel Networks customer representative when the latest MDM software patch for your MDM software release is available.

An MDM software patch includes all of the previous MDM software patches applicable to your MDM software release.

#### Procedure navigation

- “Procedure prerequisites” (page 103)
- “Procedure steps” (page 104)
- “Job aids” (page 105)

#### Procedure prerequisites

Perform this procedure when instructed by one of the following procedures:

- “MDM software installation tasklist” (page 25)

- “Upgrading the MDM software” (page 159)
- “Data collection software upgrades” (page 165)

## Procedure steps

- 1 Log in to the MDM network management workstation as userID root.
- 2 Transfer the MDM software patch tar file from the Nortel Networks Customer Support web site <http://www130.nortelnetworks.com/cgi-bin/eserv/cs/main.jsp> to the directory /tmp.
- 3 If this an MDM workstation has MDM servers deployed on it or if this is a data collection workstation, identify the MDM servers currently running. From the MDM main menu, select **System -> Administration -> Server Administration**.  
  
A list of the running MDM servers is displayed. Record this information.
- 4 Exit from all MDM applications.
- 5 If this is a data collection workstation that does not use MDM Server Administration tool (SVMADM) to control the Management Data Provider (MDP) servers, type  
  
`/opt/MagellanMDP/bin/mdpadm stop all`
- 6 If this is a data collection workstation that does not use the MDP File Prober Manager (mdpfpmgr) to control Passport File Probers, edit the local UNIX crontab and comment-out any File Prober entries.
- 7 If this an MDM server workstation or a data collection workstation, shutdown all of the MDM servers; type  
  
`/etc/init.d/nmssvm.server stop`
- 8 Change directories to the directory /tmp.  
  
`cd /tmp`
- 9 Uncompress the MDM software patch tar file.  
  
`uncompress <release>-<patch>.tar.Z`
- 10 Unlink the individual MDM software patch files.  
  
`tar -xvpf <release>-<patch>.tar`  
  
The files are unlinked and placed in a new MDM software patch directory under directory /tmp. For example, /tmp/MDM142-03.
- 11 Change directories to the MDM software patch directory.

```
cd <release>--<patch>
```

- 12 Run the *Sun Microsystems Inc. patch installation utility*.

```
patchadd .
```

The MDM software files being replaced by the patches are backed-up to directory `/var/sadm/pkg/<release>--<patch>`.

The MDM software patch installs.

You are informed of a successful installation.

- 13 Perform the instructions in the file README. This file contains detailed instructions for activating the MDM software patches after installation.

## Job aids

**Table 11**  
**Variable definitions**

| Variable  | Definition                                               |
|-----------|----------------------------------------------------------|
| <release> | the MDM software release number<br>(for example, MDM142) |
| <patch>   | the patch version<br>(for example, 03)                   |

## Removing an MDM software patch

This section describes how to remove a software patch or software supplement (SSUP) from the Preside Multiservice Data Manager (MDM) software.

- 1 Log in to the MDM network management workstation as userID root.
- 2 Run the *Sun Microsystems Inc. patch removal utility*. Type

```
patchrm <release>--<patch>
```

The MDM software patch is removed.

You are informed of a successful patch removal.

- 3 Review the MDM Release Supplement for the current release or the README file included with the last installed MDM software patch. Determine the actions required to restore the MDM software to its previous state.

---

## Chapter 15

# Configuration

---

This section describes how to configure the Preside Multiservice Data Manager (MDM) software on a new MDM network management workstation to

- enable the MDM network management workstation to collect and display network fault conditions.
- enable the MDM network management workstation to provision Passport components and services.
- begin collecting Passport spooled data.
- configure network access to an administration database.
- enable an MDM-to-Passport connection.
- define a Passport network.

*Note:* Nortel Networks does not recommend the use of the QuickStart wizard to reconfigure existing MDM network management workstations.

To upgrade the MDM software to release R14.3 on an existing MDM network management workstation, see “Upgrading the MDM software” (page 159).

### Procedure navigation

- “Procedure prerequisites” (page 108)
- “Procedure steps” (page 109)
- “Job Aids” (page 121)

## Procedure prerequisites

- “Software installation” (page 95).
- Review 241-6001-102 *Preside MDM Planning Guide* and identify how this MDM network management workstation fits into your network management architecture.
- Determine
  - the MDM software components to be configured (fault, configuration, or data collection).
  - Does this MDM network management workstation (local) require all of the Passport configuration software components or are the Passport configuration servers located on another MDM network management workstation (remote)?
  - Does this MDM network management workstation (local) require all of the fault surveillance software components or are the fault surveillance servers located on another MDM network management workstation (remote)?
- Identify the UTC offset used by the Passport network.
- Identify the connectivity protocol used to connect to the Passport network (ethernet or frame relay).
- Identify the Passport nodenames and IP addresses that this MDM network management workstation will access. For frame relay connections, identify the DLCIs used to access these Passports.
- Identify the userID and password on the Passports that this MDM network management workstation will access.
- If data collection is to be performed by this MDM network management workstation, identify the Management Data Provider (MDP) administrator userID and password.
- Obtain a license key that permits the use of the selected Preside MDM software components.

- If a database is required, the database must be installed and ready for use. For more information about databases, see 241-6001-400 *Preside MDM Administration Database User Guide*.

Identify the following: the database vendor, the database name, the IP address of the database host, the host access port number, the database access userID and password.

- For Passport configuration clients, identify the MDM network management workstation (remote) on which the configuration servers are deployed.
- For fault surveillance clients, identify the MDM network management workstation (remote) on which the fault surveillance servers are deployed.
- For MDM network management workstations performing fault alarm aggregation, identify the MDM network management workstations (remote) that will send alarms to this MDM network management workstation (local).
- For MDM network management workstations performing fault surveillance with redundancy, identify the name of the remote MDM network management workstation from which alarms will be received and to which alarms will be sent.

## Procedure steps

- 1 If the InstallAnywhere tool was not used to launch QuickStart, using the userID root, type:

```
/opt/MagellanNMS/system/config/nms_QuickStart
```

- 2 If this workstation is already configured as an MDM network management workstation, you are prompted to continue with this configuration.

**Note:** Nortel Networks does not recommend the use of the QuickStart wizard to reconfigure existing MDM network management workstations.

If you continue, QuickStart will copy the indicated MDM configuration files to the directory indicated on this window. QuickStart then over-writes the MDM configuration files.

- 3 If this workstation was not previously configured as an MDM network management workstation or if you replied **Yes** to the **Warning - MDM**

**previously configured** window prompt, the **QuickStart Introduction** window opens.

Configuration of the MDM software can be cancelled at any time during the configuration process by clicking the **Cancel** button.

If you are unsure of information requested or provided in a previous window, use the **Previous** button to return to that window.

4 Click **Next**.

5 If a valid MDM software license exists on this MDM network management workstation, the **License** window opens. This window displays the existing license information including the enabled options.

If a license does not exist or is invalid, the License window opens without information about existing MDM software options. Type the new software license in the data entry box **New license** and click **update**.

**Note:** If you do not enter a software license key, a temporary software license is generated for you. This temporary license is valid for all of the MDM software components for a maximum of 30 days. When you have a permanent software license, manually apply it to this software as described in 241-6001-303 *Preside MDM Administrator Guide*.

6 Click **Next**.

7 The **MDM Component Selection** window opens.

Use this window to select the MDM applications to be configured on this MDM network management workstation. The default is that all of the MDM applications are selected for configuration if a license exists to support the selections. For example, if a software license for Data Collection (MDP) does not exist, the menu item for that software component is greyed-out and cannot be selected for configuration.

8 Click **Next**.

**If you selected**

|                                                      | <b>Go to</b> |
|------------------------------------------------------|--------------|
| Fault (with an MDM Comprehensive license)            | step 9       |
| Fault (without an MDM Comprehensive license)         | step 18      |
| Configuration (with an MDM Comprehensive license)    | step 9       |
| Configuration (without an MDM Comprehensive license) | step 14      |
| Data Collection, only                                | step 31      |

9 The **Database** window opens.

**Note:** If an MDM Comprehensive license has not been registered for use on this MDM network management workstation, the Database window does not open and you cannot configure this MDM network management workstation to use an administration database.

Click **No database** to indicate that a database is not required. This is the default.

Click **Administration Database** to configure access to an administration database. The database must be installed and ready to use before configuring the MDM software.

**10** Click **Next**.

| <b>If you selected</b>  | <b>And you selected</b>           | <b>Go to</b> |
|-------------------------|-----------------------------------|--------------|
| Fault in step 7         | No database in step 9             | step 18      |
| Fault in step 7         | Administration Database in step 9 | step 11      |
| Configuration in step 7 | No database in step 9             | step 14      |
| Configuration in step 7 | Administration Database in step 9 | step 11      |

**11** The **Database Information** window opens.

Use this window to configure access to an administration database.

**12** Add the database access information in the **Database Access Information** panel.

- a. Type the database name, recognized by the database server, in the data entry box **Database name**.
- b. Type the database host IP address in the data entry box **IP address**.
- c. Type the database host access port number in the data entry box **Port number**.  
The default port number is 1521.
- d. Type the the database access userID in the data entry box **UserName**.
- e. Type the password for UserName in the data entry box **Password**.
- f. Re-type the password for UserName in the data entry box **Confirm Password**.

**13** Click **Next**.

| <b>If you selected</b>  | <b>Go to</b> |
|-------------------------|--------------|
| Fault in step 7         | step 18      |
| Configuration in step 7 | step 14      |

**14** The **Configuration Type** window opens.

Click **Basic Configuration** to configure all of the Passport configuration applications on this MDM network management workstation.

Click **Configuration Client, only** to configure the Passport configuration client on this MDM network management workstation to use servers on another MDM network management workstation.

**15** Click **Next**.

| <b>If you selected</b>                | <b>And you selected</b>         | <b>Go to</b> |
|---------------------------------------|---------------------------------|--------------|
| Basic Configuration in step 14        |                                 | step 35      |
| Basic Configuration in step 14        | Data Collection (MDP) in step 7 | step 31      |
| Configuration Client, only in step 14 |                                 | step 16      |

**16** The **Configuration Client** window opens.

Type the name of the MDM network management workstation that is configured with the configuration servers in the data entry box **Workstation name**.

**17** Click **Next**.

| <b>If you selected</b>                | <b>And you selected</b>         | <b>Go to</b> |
|---------------------------------------|---------------------------------|--------------|
| Configuration Client, only in step 14 | Data Collection (MDP) in step 7 | step 31      |
| Configuration Client, only in step 14 |                                 | step 45      |

**18** The **Fault Type Selection** window opens.

Click **Standalone Fault** to configure all of the Passport fault surveillance applications on this MDM network management workstation.

Click **Standalone Fault with redundancy** to configure this MDM network management workstation to receive the alarms of another MDM network management workstation and to send alarms from this MDM network management workstation to the other MDM network management workstation.

**Note:** The other MDM network management workstation in this redundant MDM configuration must also be configured using QuickStart with the option **Standalone Fault with redundancy**.

Click **Fault Client, only** to configure the Passport fault surveillance clients on this MDM network management workstation using servers on another MDM network management workstation.

Click **Fault alarm aggregation** to configure this MDM network management workstation to perform fault surveillance using alarms sent from other MDM network management workstations.

**19** Click **Next**.

| <b>If you selected</b>                      | <b>Go to</b> |
|---------------------------------------------|--------------|
| Standalone Fault in step 18                 | step 20      |
| Standalone Fault with redundancy in step 18 | step 20      |
| Fault Client only in step 18                | step 24      |
| Fault alarm aggregation in step 18          | step 26      |

**20** The **UTC Offset** window opens.

Use this window to configure the Universal Time (UTC) offset. For more information about setting the UTC offset, see 241-6001-303 *Preside MDM Administrator Guide*.

To the prompt

```
Is the calculated value of Passport's UTC offset
correct?
```

If the UTC offset is correct, click **Yes**. This is the default.

To enter a different UTC offset, click **No** and type the new UTC offset using the data entry box to specify the offset hours and the pull-down box to specify east or west.

**21** Click **Next**.

| <b>If you selected</b>                      | <b>And you selected</b> | <b>Go to</b> |
|---------------------------------------------|-------------------------|--------------|
| Standalone Fault in step 18                 |                         | step 35      |
| Standalone Fault with redundancy in step 18 |                         | step 22      |

| <b>If you selected</b>      | <b>And you selected</b>         | <b>Go to</b> |
|-----------------------------|---------------------------------|--------------|
| Standalone Fault in step 18 | Configuration in step 7         | step 14      |
| Standalone Fault in step 18 | Data Collection (MDP) in step 7 | step 31      |

**22** The **Fault Redundant** window opens.

Type the name of the remote MDM network management workstation from which alarms will be received and to which alarms will be sent in the data entry box **Workstation name**.

**23** Click **Next**.

| <b>If you selected</b>                      | <b>And you selected</b>         | <b>Go to</b> |
|---------------------------------------------|---------------------------------|--------------|
| Standalone Fault with redundancy in step 18 |                                 | step 35      |
| Standalone Fault with redundancy in step 18 | Configuration in step 7         | step 14      |
| Standalone Fault with redundancy in step 18 | Data Collection (MDP) in step 7 | step 31      |

**24** The **Fault Client** window opens.

Type the name of the remote MDM network management workstation that is configured with the fault surveillance servers in the data entry box **Workstation name**.

**25** Click **Next**.

| <b>If you selected</b>        | <b>And you selected</b>         | <b>Go to</b> |
|-------------------------------|---------------------------------|--------------|
| Fault Client, only in step 18 |                                 | step 45      |
| Fault Client, only in step 18 | Configuration in step 7         | step 14      |
| Fault Client, only in step 18 | Data Collection (MDP) in step 7 | step 31      |

**26** The **Fault Alarm Aggregation** window opens.

Use this window to identify the remote MDM network management workstations that will send alarms to this MDM network management workstation for fault surveillance.

**27** To add workstations to the list of remote MDM network management workstations

- a. Type the name of the remote MDM network management workstation in the data entry box **Workstation Name**.

**b. Click Add.**

The remote MDM network management workstation's name appears in the Workstation Name table.

**28** To change a remote MDM network management workstation entry**a.** Click the remote MDM network management workstation entry in the **Workstation Name** table.**b.** Change the remote MDM network management workstation name in the data entry box **Workstation Name**.**c.** Click **Modify**.

The changed remote MDM network management workstation name appears in the Workstation Name table.

**29** To remove a remote MDM network management workstation entry**a.** Click the remote MDM network management workstation entry in the **Workstation Name** table.**b.** Click **Delete**.

The remote MDM network management workstation entry is removed from the Workstation Name table.

**30** Click **Next**.

| <b>If you selected</b>             | <b>And you selected</b>         | <b>Go to</b> |
|------------------------------------|---------------------------------|--------------|
| Fault alarm aggregation in step 18 |                                 | step 45      |
| Fault alarm aggregation in step 18 | Configuration in step 7         | step 14      |
| Fault alarm aggregation in step 18 | Data Collection (MDP) in step 7 | step 31      |

**31** The **Spooled Data Collection (MDP)** window opens.

Use this window to configure Passport spooled data collection.

**32** In the panel **Passport group for MDP****a.** Type a name for the Passport group in the data entry box **Group Name**. The default Passport group name is MDP.

The Passports added in step 41 are included in this group.

- b. Type a Passport access userID in the data entry box **User ID**.  
This userID must be configured on all of the Passports in the Passport group.
- c. Type the password for the Passport access userID in the data entry box **Password**.  
The password is stored in an encrypted format.
- d. Re-type the password for the Passport access userID in the data entry box **Confirm password**.

**33** In the panel **MDP Administrator Unix account**

- a. Select a name for the MDP administrator userID from the pull-down box **MDP Administrator user ID**.  
The available name(s) were determined during MDM software installation. For more information, see “Software installation” (page 95).
- b. Type the password for the MDP administrator userID in the data entry box **Password**.  
This password was previously set using the instructions in section “UNIX accounts” (page 89).  
The password is stored in an encrypted format.
- c. Re-type the password for the MDP administrator userID in the data entry box **Confirm password**.
- d. If the password for the MDP administrator userID was not previously set using the instructions in section “UNIX accounts” (page 89), press **Launch xterm to set unix passwords**.  
A UNIX xterm window opens. Use this window to type the UNIX command **passwd <userID>** where <userID> is the MDP administrator userID. Respond to the prompt for a password.

**34** The MDP File Prober Manager is scheduled to collect all Passport datatypes from the Passports in the configured Passport Group. This data collection begins at 00:00 hours. For more information about scheduling the MDP File Prober Manager, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.

The Passport performance metrics will be converted to bulk data format (BDF) using the default data schemas and record description files (RDF) supplied with this software. Nortel Networks recommends that customers customize their RDFs to optimize data conversion. For more information

about data conversion, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.

Click **Next**.

**35** The **Workstation to Passport connection** window opens.

Use this window to configure MDM access to Passports. The QuickStart tool examines the local network management workstation hardware and software to determine the types of workstation-to-Passport connections that are possible. For example, if this MDM network management workstation does not have the Sun frame relay software installed, you cannot select the Frame relay option and configure a frame relay port.

To the prompt

```
Select the connection method.
```

Click **Ethernet** to access Passports using IP over ethernet. This is the default.

Click **Frame relay** to use frame relay to access Passports. If you select Frame relay, you must type a valid port name (for example, hih0) in the **Port** data entry box.

**Note:** To use IP over ATM to access Passports, select **Ethernet**.

**36** Click **Next**.

**37** The **Passport access data** window opens.

This Passport network data is added to the Host Group Directory Server (HGDS) configuration file on the local MDM network management workstation.

For more information about the HGDS, see 241-6001-310 *Preside MDM Server Reference Guide*.

The HGDS can be updated after initial configuration using the Host Group Administration tool (hgadmin). For more information about this tool, see 241-6001-303 *Preside MDM Administrator Guide*.

**38** To import Passport access data from another MDM network management workstation, click **Import from HGDS.cfg file**.

The **Import Passports** window opens. Type

- the name of the remote MDM network management workstation to retrieve Passport access data from in the data entry box **Workstation Name**.
- **root** in the data entry box **Username**.

- the password for the userID **root** in the data entry box **Password**.
- a. Click **Ok**.

The **Import Passports** window closes.

The table below the Passport access information panel is populated with the imported Passport entries.

**39** In the panel **Passport group names**

- If this MDM network management workstation is being configured for Passport configuration and Passport fault surveillance, default Passport group names for Command access (PPALL) and Surveillance (SURV) are displayed.
- If this MDM network management workstation is being configured for Passport fault surveillance, only, default Passport group names for Command access (PPALL) and Surveillance (SURV) are displayed.
- If this MDM network management workstation is being configured for Passport configuration, only, the default Passport group name for Command access (PPALL) is displayed.
- If this MDM network management workstation is being configured for Passport spooled data collection (MDP), only, this panel is not displayed. The Passport group name defaults to the name configured in step 32.

If necessary, replace the Passport group name by double-clicking the Passport group name and typing a new name.

All of the Passport access information added or changed using this window is applied to all of the Passport groups in the Passport group names panel.

**40** In the panel **Passport group access**

- If this MDM network management workstation is being configured for Passport spooled data collection (MDP), only, this panel is not displayed.

**Note:** The information in this panel is mandatory.

- a. Type the Passport access userID in the data entry box **User ID**.

This userID must be configured on all of the Passports within the Passport group.

- b. Type the password for the User ID in the data entry box **Password**.

The password is stored in an encrypted format.

- c. Re-type the password for the User ID in the data entry box **Confirm password**.
- 41 To add Passports to the Passport group(s), in the panel **Passport access information**
  - a. Type the Passport nodename in the data entry box **Node name**.
  - b. Type the IP address for the Node name in the data entry box **IP address**.
  - c. If frame relay was selected as the Passport connection method in step 35, type the DLCI of the frame relay link in the data entry box **DLCI number**.
  - d. Click **Add**.

The Node name and IP address (and DLCI, if applicable) appear in the table below the Passport access information panel.

- 42 To change a Passport entry
  - a. Click the Passport entry in the table below the Passport access information panel.

The Node name and IP address (and DLCI, if applicable) appear in the data entry boxes.
  - b. To change the Passport nodename, re-type the Passport nodename in the data entry box **Node name**.
  - c. To change the IP address, re-type the IP address for the Node name in the data entry box **IP address**.
  - d. To change the DLCI, re-type the DLCI for the Node name in the data entry box **DLCI number**.
  - e. Click **Modify**.

The changed Node name and IP address (and DLCI, if applicable) appear in the table below the Passport access information panel.

- 43 To remove a Passport entry from the Passport group(s)
  - a. Click the Passport entry in the table below the Passport access information panel.

The Node name and IP address (and DLCI, if applicable) appear in the data entry boxes.

**b.** Click **Delete**.

The Passport entry is removed from the table below the Passport access information panel.

**44** Click **Next**.

**45** The **Summary** window opens.

This window displays the MDM software information configured during this QuickStart session. Also displayed are reminders related to MDM configuration, such as:

- for client MDM network management workstations, configure the associated MDM server network management workstation.
- for redundant MDM network management workstations, configure the remote MDM network management workstation.
- the shared memory is set to 256 Mbytes. If this is not sufficient, use the instructions in 241-6001-303 *Preside MDM Administrator Guide* to change the setting.

Confirm that the information in the Summary window is correct.

If the information is correct, click **Configure**.

If the information is not correct, click **Previous** until the appropriate QuickStart window is displayed. Make the necessary configuration changes.

**46** The **Configuration Complete** window opens. This window indicates:

- successful configuration of this MDM network management workstation
- updated configuration files

**47** To the prompt

```
Reboot the workstation immediately after exiting MDM QuickStart?
```

If you are ready to begin using this MDM network management workstation, click **Yes**.

If you need to delay starting the MDM servers, click **No**.

**48** Click **Done**.

The QuickStart wizard window closes.

The local MDM servers are launched after this MDM network management workstation is restarted. For more information about the MDM servers, see 241-6001-303 *Preside MDM Administrator Guide*.

A log of the QuickStart session is written to the file  
/opt/MagellanNMS/data/quickstart/Quickstart.log.

## Job Aids

This section describes the Preside Multiservice Data Manager (MDM) servers that are launched and the configuration files that are updated for each MDM network management workstation configured by the QuickStart tool.

- “MDM applications” (page 121)
- “Preside MDM servers” (page 122)
- “Preside MDM configuration files” (page 126)

**Note:** A redundant fault management workstation includes all of the servers of a standalone fault management workstation.

**Table 12**  
**MDM applications**

| MDM application | Description                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------------------|
| Fault           | applications to display alarms, provide network status, provide a status of Passports on a network, and Circuit Viewer |
| Configuration   | the Passport Nodal and Passport Service configuration applications                                                     |
| Data Collection | the Management Data Provider (MDP) application                                                                         |

**Table 13**  
**Preside MDM servers**

| Server Name                     | Server Command                                   | Network Management Workstation                                                             |
|---------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------|
| Log Collector                   | /opt/MagellanNMS/bin/oamc                        | Standalone Fault<br>Fault Alarm Aggregation<br>Standalone Configuration<br>Data Collection |
| Context Server                  | /opt/MagellanNMS/bin/ctxsvr                      | Standalone Fault<br>Fault Alarm Aggregation<br>Standalone Configuration<br>Data Collection |
| HGDS                            | /opt/MagellanNMS/bin/hgds                        | Standalone Fault<br>Fault Alarm Aggregation<br>Standalone Configuration<br>Data Collection |
| Passport Communications Manager | /opt/MagellanNMS/bin/fdtm<br>-offset <gmtOffset> | Standalone Fault<br>Standalone Configuration                                               |
| (Sheet 1 of 5)                  |                                                  |                                                                                            |

**Table 13 (continued)**  
**Preside MDM servers**

| Server Name             | Server Command                                                                                                                        | Network Management Workstation                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| IMDR                    | /opt/MagellanNMS/bin/imdr                                                                                                             | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| DMA                     | /opt/MagellanNMS/bin/dma                                                                                                              | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| NM Coordinator          | /opt/MagellanNMS/bin/dnmnmc                                                                                                           | Standalone Fault                                                                                       |
| NM Surveillance Updater | /opt/MagellanNMS/bin/surnup                                                                                                           | Standalone Fault                                                                                       |
| NM Server               | /opt/MagellanNMS/bin/nmserver -c 5000                                                                                                 | Standalone Fault                                                                                       |
| NM Edit Server          | /opt/MagellanNMS/bin/edserver                                                                                                         | Standalone Fault                                                                                       |
| FMDR_<surv_grpname>     | /opt/MagellanNMS/bin/fmdr -g <surv_grpname> -u <Passport_userID> -p <password> -l AL                                                  | Standalone Fault                                                                                       |
| GMDR                    | /opt/MagellanNMS/bin/gmdr<br><br><b>Note:</b> A second GMDR <b>GMDR_LOWER</b> is launched on redundant fault management workstations. | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |

(Sheet 2 of 5)

**Table 13 (continued)**  
**Preside MDM servers**

| Server Name                       | Server Command                                                                                                                           | Network Management Workstation                                 |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Real Time Alarm Collection        | /opt/MagellanNMS/bin/rtacol                                                                                                              | Standalone Fault                                               |
| Passport Shelf View Agent         | /opt/MagellanNMS/bin/psvagent                                                                                                            | Standalone Fault                                               |
| Workstation Surveillance          | /opt/MagellanNMS/bin/sfm                                                                                                                 | Standalone Fault<br>Fault Alarm Aggregation<br>Data Collection |
| XNTP Network Time Synchronization | /opt/MagellanNMS/bin/xntpd                                                                                                               | Standalone Fault<br>Fault Alarm Aggregation<br>Data Collection |
| MNSD Agent                        | /opt/MagellanNMS/bin/mnsdagent                                                                                                           | Standalone Fault<br>Data Collection                            |
| Data Viewer Agent                 | /opt/MagellanNMS/bin/pmagent                                                                                                             | Standalone Fault<br>Data Collection                            |
| Network Data Access Manager       | /opt/MagellanNMS/bin/ndam<br><b>Note:</b> This server is not configured with an Entry package license.                                   | Standalone Fault                                               |
| Passport Command Access           | /opt/MagellanNMS/bin/eteserver<br>-n PPAccessServer -p 6601<br><b>Note:</b> This server is not configured with an Entry package license. | Standalone Fault                                               |
| NP Configuration Manager          | /opt/MagellanNMS/bin/configman                                                                                                           | Standalone Configuration                                       |
| (Sheet 3 of 5)                    |                                                                                                                                          |                                                                |

**Table 13 (continued)**  
**Preside MDM servers**

| Server Name                                | Server Command                                                                                                                                                                                                          | Network Management Workstation |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| NP Passport Configuration Server           | /opt/MagellanNMS/bin/pcserver                                                                                                                                                                                           | Standalone Configuration       |
| Passport Configuration Model Server (PCMS) | /opt/MagellanNMS/bin/pcms                                                                                                                                                                                               | Standalone Configuration       |
| Backup Controller                          | /opt/MagellanNMS/bin/nsctlbck                                                                                                                                                                                           | Standalone Configuration       |
| Restore Controller                         | /opt/MagellanNMS/bin/nsctlrst                                                                                                                                                                                           | Standalone Configuration       |
| Passport Backup Controller                 | /opt/MagellanNMS/bin/pbckpp                                                                                                                                                                                             | Standalone Configuration       |
| Passport Restore Controller                | /opt/MagellanNMS/bin/prstpp                                                                                                                                                                                             | Standalone Configuration       |
| End-to-end Server                          | /opt/MagellanNMS/bin/eteserver                                                                                                                                                                                          | Standalone Configuration       |
| Secure FTPD                                | /opt/MagellanNMS/bin/launchSecureFTPD                                                                                                                                                                                   | Standalone Configuration       |
| Database Synchronization Controller        | /opt/MagellanNMS/bin/dbsyncontr<br><br><b>Note:</b> This server is only configured if the database option was selected.<br><br><b>Note:</b> The option -notification is not configured on the Backup Server (NDCTLBCK). | Standalone Configuration       |
| MDMWeb NM Agent                            | /opt/MagellanNMS/bin/nmagent<br><br><b>Note:</b> This server is only configured if the MDMWeb Client is installed.                                                                                                      | Standalone Fault               |
| MDMWeb GMDR Agent                          | /opt/MagellanNMS/bin/gmdragent<br><br><b>Note:</b> This server is only configured if the MDMWeb Client is installed.                                                                                                    | Standalone Fault               |
| (Sheet 4 of 5)                             |                                                                                                                                                                                                                         |                                |

**Table 13 (continued)**  
**Preside MDM servers**

| Server Name           | Server Command                                                                                                       | Network Management Workstation |
|-----------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------|
| MDMWeb RTAC Agent     | /opt/MagellanNMS/bin/rtacagent<br><br><b>Note:</b> This server is only configured if the MDMWeb Client is installed. | Standalone Fault               |
| VPN Monitor Extractor | /opt/MagellanNMS/bin/VPNMonitorExtractor                                                                             | Standalone Fault               |
| VPN Monitor Server    | /opt/MagellanNMS/bin/vpmonServer                                                                                     | Standalone Fault               |
| (Sheet 5 of 5)        |                                                                                                                      |                                |

**Table 14**  
**Preside MDM configuration files**

| Configuration File                                                                                                                                   | Deployment                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| /etc/opt/Magellan/LIClicenses.cfg<br><br><b>Note:</b> This file is only updated if a software license is new to this network management workstation. | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| /etc/opt/Magellan/LICcustName.cfg<br><br><b>Note:</b> This file is only updated if a software license is new to this network management workstation. | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| (Sheet 1 of 4)                                                                                                                                       |                                                                                                        |

**Table 14 (continued)**  
**Preside MDM configuration files**

| Configuration File                                                                                                                                                                                                                                                                                            | Deployment                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| /opt/MagellanNMS/cfg/SVMList.cfg                                                                                                                                                                                                                                                                              | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| /opt/MagellanNMS/cfg/HGDS.cfg                                                                                                                                                                                                                                                                                 | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration<br><br>Data Collection |
| /opt/MagellanNMS/cfg/GMDR.cfg<br><br><b>Note:</b> For Fault Alarm Aggregation, a surveillance group is not created and the GMDRs on sub-ordinate MDM network management workstations are expected to be named "GMDR". For redundant fault management workstations, another GMDR <b>GMDR_LOWER</b> is created. | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration                        |
| /opt/MagellanNMS/cfg/NTS.cfg                                                                                                                                                                                                                                                                                  | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration                        |
| (Sheet 2 of 4)                                                                                                                                                                                                                                                                                                |                                                                                                        |

**Table 14 (continued)**  
**Preside MDM configuration files**

| Configuration File                                                                                                                                       | Deployment                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| /opt/MagellanNMS/cfg/SFM.cfg                                                                                                                             | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration |
| /etc/opt/SUN/fr/cf/fr.cf<br><br><b>Note:</b> This file is only updated if frame relay connections are configured on this network management workstation. | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration |
| /etc/system<br><br><b>Note:</b> This file is only updated if the shared memory segment is increased on this network management workstation.              | Standalone Fault<br><br>Fault Alarm Aggregation<br><br>Standalone Configuration |
| /opt/MagellanNMS/cfg/private/CTXSvr.cfg                                                                                                                  | Fault Client<br><br>Configuration Client                                        |
| /opt/MagellanNMS/cfg/dba/dbaccess.cfg                                                                                                                    | Fault Client<br><br>Configuration Client                                        |
| /opt/MagellanNMS/cfg/eteATMRes.cfg                                                                                                                       | Configuration Client                                                            |
| /opt/MagellanNMS/cfg/eteCesRes.cfg                                                                                                                       | Configuration Client                                                            |
| /opt/MagellanNMS/cfg/eteFrameRelayRes.cfg                                                                                                                | Configuration Client                                                            |
| (Sheet 3 of 4)                                                                                                                                           |                                                                                 |

**Table 14 (continued)**  
**Preside MDM configuration files**

| Configuration File                                                                                                          | Deployment                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| /opt/MagellanNMS/cfg/DBSyncController.cfg<br><b>Note:</b> This file is only configured if the database option was selected. | Standalone Configuration                                                                                                           |
| /opt/MagellanNMS/cfg/BackupNodes.cfg<br><b>Note:</b> This file is only configured if the database option was selected.      | Standalone Fault<br>Fault Redundant<br>Fault Client<br>Fault Alarm Aggregation<br>Standalone Configuration<br>Configuration Client |
| /opt/MagellanMDP/cfg/mdp/MDPSchd.cfg                                                                                        | Data Collection                                                                                                                    |
| /opt/MagellanNMS/cfg/DataViewerResource.cfg                                                                                 | Standalone Fault<br>Data Collection                                                                                                |
| (Sheet 4 of 4)                                                                                                              |                                                                                                                                    |



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## Chapter 16

# Configuring the Data Viewer

---

This section describes how to configure the Preside Multiserver Data Manager Data Viewer application.

For information about using the Data Viewer, see 241-6001-031 *Preside MDM Performance Management User Guide*.

### Procedure navigation

- “Procedure prerequisites” (page 131)
- “Procedure steps” (page 132)
- “Job Aids” (page 132)

### Procedure prerequisites

- For new MDM network management workstations, “Configuration” (page 107).
- For upgraded MDM network management workstations, “Software installation” (page 95).
- If the Data Viewer is used to monitor SNMP devices, ensure that the Data Viewer data collection daemon `pmdd` is running.  
This server is described in 241-6001-310 *Preside MDM Server Reference Guide*.
- Ensure that the Data Viewer agent `pmagent` is running.  
This server is started by the QuickStart tool on new MDM network management workstations.  
Starting this server is described in the Data Viewer data collection daemon section in 241-6001-310 *Preside MDM Server Reference Guide*.

## Procedure steps

- 1 Using the userID root, edit the file /opt/MagellanNMS/cfg/DataViewerResource.cfg according to the parameter descriptions in “Data Viewer configuration parameters” (page 132).

**Note:** If you are reconfiguring the Data Viewer after an upgrade from a pre-14.3 version to a post-14.2 version of the MDM software, the previous Data Viewer configuration file /opt/Nortel/DVR/cfg/dvrRes.txt has been merged with a new default Data Viewer configuration file and renamed to /opt/MagellanNMS/cfg/DataViewerResource.cfg.

## Job Aids

The following table describes the Data Viewer configuration parameters.

**Table 15**  
**Data Viewer configuration parameters**

| <b>Parameter</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                         |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SERVERHOST       | If the PMDCD and/or the pmagent are on the local MDM network management workstation, use <b>localhost</b> . If the PMDCD and/or the pmagent are on a remote MDM network management workstation, specify the IP address of the remote network management workstation. If you specify the IP address, enclose the address in quotation marks. For example, "47.255.255.255". |
| MIB              | The file that contains the default MIB entries. Specify the SNMP device type and the list of MIB files.                                                                                                                                                                                                                                                                    |
| MAXFILESIZE      | The maximum file size allowed for files replayed in replay mode. The default value is 10. This value is measured in megabytes. Increases in this value increases the memory and the CPU consumption in replay mode.                                                                                                                                                        |
| MAXDATASIZE      | The maximum number of data set to be collected in real-time mode. The default value is 200. When this maximum number is reached, the oldest data set is discarded. Increases in this value increases the memory and the CPU consumption in real-time mode.                                                                                                                 |

(Sheet 1 of 2)

**Table 15 (continued)**  
**Data Viewer configuration parameters**

| <b>Parameter</b>        | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MAXGRAPH                | The maximum number of lines/graphs displayed in a graph window.<br>The default value is 20. Increases in this value increases the CPU consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| MAXGRAPHWINDOW          | The maximum number of graph windows displayed.<br>The default value is 3. Increases in this value increases the memory and the CPU consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| AUTOLABELONGRAPH        | The options are "ON" and "OFF". If this option is set to "ON", auto labels on Multi graph are visible. If this option is set to "OFF", auto labels on Multi graph are invisible. The default value is "OFF".<br>CPU consumption increases significantly in real-time mode if this option is set to "ON".                                                                                                                                                                                                                                                                                                                                                                                                     |
| IGNORENEGATIVE<br>DELTA | This is an optional parameter. If this parameter exists and is set to "YES", the Data Viewer is instructed to ignore negative deltas and not to perform roll-over calculations. Without this parameter the maximum attribute value is added to the raw attribute value to calculate delta values when the attribute value reaches maximum threshold and rolls-over between two polls.<br>The default value is NO.<br>If this parameter set to NO, the Data Viewer calculates a negative value and that value is displayed.<br>If this parameter set to YES, a question mark "?" is displayed for the negative value in the table and nothing is displayed in the real time graph view if a rollover happens. |

(Sheet 2 of 2)



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## Chapter 17

# Configuring the VPN Monitor

---

This section describes how to configure the Preside Multiserver Data Manager (MDM) to use the Virtual Private Network (VPN) Monitor application.

### Procedure navigation

- “Procedure prerequisites” (page 135)
- “Procedure steps” (page 136)

### Procedure prerequisites

- For upgraded MDM network management workstations, “Software installation” (page 95).
- The MDM administration database access userID and password.

If the administration database access password is encrypted, you will require the name of the file that contains the encrypted password. For more information about encrypting database access passwords, see 241-6001-400 *Preside MDM Administration Database User Guide*.

- Ensure that the MDM Backup Server (nsctlbck -notification) is running. This server is started by the QuickStart tool on new MDM network management workstations, without the **-notification** option enabled. Starting the Backup Server is described in 241-6001-400 *Preside MDM Administration Database User Guide*.
- Ensure that the MDM Database Synchronization Controller (dbsyncontr) is running. This server is started by the QuickStart tool on new MDM network

management workstations.

Starting this server is described in 241-6001-310 *Preside MDM Server Reference Guide*.

## Procedure steps

- 1 Start the VPN Monitor Extractor server (VPNMonitorExtractor).  
For details about this starting this server, see 241-6001-310 *Preside MDM Server Reference Guide*.
- 2 Start the VPN Monitor server (vpmonServer).  
For details about this starting this server, see 241-6001-310 *Preside MDM Server Reference Guide*.
- 3 Start the VPN Monitor. From the MDM main window, select **Fault -> VPN Monitor**.  
For details about this starting this server, see 241-6001-011 *Preside MDM Fault Management User Guide*.

---

## Chapter 18

# Configuring nodal provisioning

---

This section describes how to configure the Preside Multiservice Data Manager (MDM) software to perform Passport nodal provisioning.

This section includes

- “Passport model files” (page 137)
- “Retrieving model files from a Passport” (page 138)
- “Converting Passport model files to XML” (page 140)

For information about Nodal Provisioning, see 241-6001-610 *Preside MDM Nodal Provisioning User Guide*.

### Passport model files

Passport model files define the component models, service models and service templates for Passport devices. The model files are converted by the XML Generator to the XML format used by the nodal provisioning application. The XML Generator creates the following file types:

- component model (CM) files. These XML files correspond to a particular Passport component.
- component hierarchy (CH) file. This single XML file contains component hierarchy information. It describes how the components and subcomponents are related.
- link information (LI) file. This file is in ASCII format and includes link attribute information.

The CM and CH files are used by the nodal provisioning application. The LI file is used by the fps system.

## Retrieving model files from a Passport

Download the model files to the MDM workstation and convert the model files to XML.

*Note:* The MDM command `fmsgetmod` can be used to download and convert Passport model files, including those model files required for nodal provisioning. For more information about `fmsgetmod`, see 241-6001-303 *Preside MDM Administrator Guide*.

The Passport model files are located on the Passport switch under the on-switch directory `/software/base`.

### Procedure navigation

- “Procedure prerequisites” (page 138)
- “Procedure steps” (page 138)
- “Job Aids” (page 139)

### Procedure prerequisites

- For new MDM hosts, “Configuration” (page 107).
- For upgraded MDM hosts, “Software installation” (page 95)

### Procedure steps

- 1 As the userID root, type

```
/opt/MagellanNMS/bin/anpgetmod \  
-v <version> \  
-u <host id passwd> \  
[-l <log file>] \  
[-q] \  
[-f] \  
[-h]
```

## Job Aids

The following table describes the `anpgetmod` command parameters.

**Table 16**  
**`anpgetmod` command parameters**

| <b>Parameter</b>                       | <b>Description</b>                                                                                                 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <code>-f</code>                        | is an optional switch to force generation of the model files even if they already exist.                           |
| <code>-h</code>                        | displays the usage information.                                                                                    |
| <code>-l &lt;log file&gt;</code>       | is an optional switch to specify a different log file in which to store log messages.                              |
| <code>-q</code>                        | is an optional switch to run the script quietly, that is, without generating the log file.                         |
| <code>-u &lt;host id passwd&gt;</code> | is the Passport host name, login user ID, and password to use to download the model file from the Passport device. |
| <code>-v &lt;version&gt;</code>        | specifies the model version to use, e.g. CB00A.                                                                    |

## Converting Passport model files to XML

Convert Passport model files to XML format.

*Note:* It is not necessary to perform this procedure if the command `angetmod` was used to retrieve the Passport model files.

### Procedure navigation

- “Procedure prerequisites” (page 140)
- “Procedure steps” (page 140)
- “Job Aids” (page 141)

### Procedure prerequisites

- For new MDM hosts, “Configuration” (page 107).
- For upgraded MDM hosts, “Software installation” (page 95)
- Install the Passport model files.

In support of previous MDM releases, Passport model files for MDM releases prior to 12.4 are available on the MDM software CD-ROMs. Refer to the Preside MDM Release Supplement document included with the software for the location of the model files.

If you require a specific model file that is not available on the Passport switch or on the CD-ROM, contact your Nortel Networks representative.

### Procedure steps

- 2 As the userID root, type

```
/opt/MagellanNMS/bin/anpxmlgen -v <Passport SW  
Version> [-h] | [-c <ANP companion directory path>]  
[-x <XML directory path>]
```

- 3 Repeat step 2 for each Passport software version on your network.

## Job Aids

The following table describes the `anpxmlgen` command parameters.

**Table 17**  
**anpxmlgen command parameters**

| <b>Parameter</b>                  | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -c <ANP companion directory path> | is an option to specify the full path of the directory under which the Nodal Provisioning companion file exists. The default directory is <code>/opt/MagellanNMS/cfg/ANP/comp</code> if the source model file was downloaded from the switch or received from your Nortel Networks representative. Otherwise, the default directory is <code>/opt/MagellanNMS/lib/cfg/ANP/comp</code> |
| -h                                | is an option to display the help information.                                                                                                                                                                                                                                                                                                                                         |
| -v <Passport SW Version>          | is the Passport software version running on the Passport device for which you need to generate the XML model files                                                                                                                                                                                                                                                                    |
| -x <XML directory path>           | is an option to specify the full path of the directory under which the XML model files will be generated. The default is <code>/opt/MagellanNMS/cfg/ANP/EM</code> .                                                                                                                                                                                                                   |



## Chapter 19

# Installing the HP OpenView Desktop for MDM

---

This section contains instructions to install Hewlett-Packard (HP) OpenView Desktop for MDM. HP OpenView Desktop for MDM lets you collect fault information from devices and switches in the network with the Preside Multiservice Data Manager (MDM) and display on the desktop of the HP OpenView Network Node Manager software. The HP OpenView Desktop for MDM is an optional feature.

This section contains information about the following topics:

- “About HP OpenView Desktop for MDM” (page 143)
- “Installing the Collector/Server and Client on the same workstation” (page 145)
- “Installing the Collector/Server and Client on separate workstations” (page 146)

## About HP OpenView Desktop for MDM

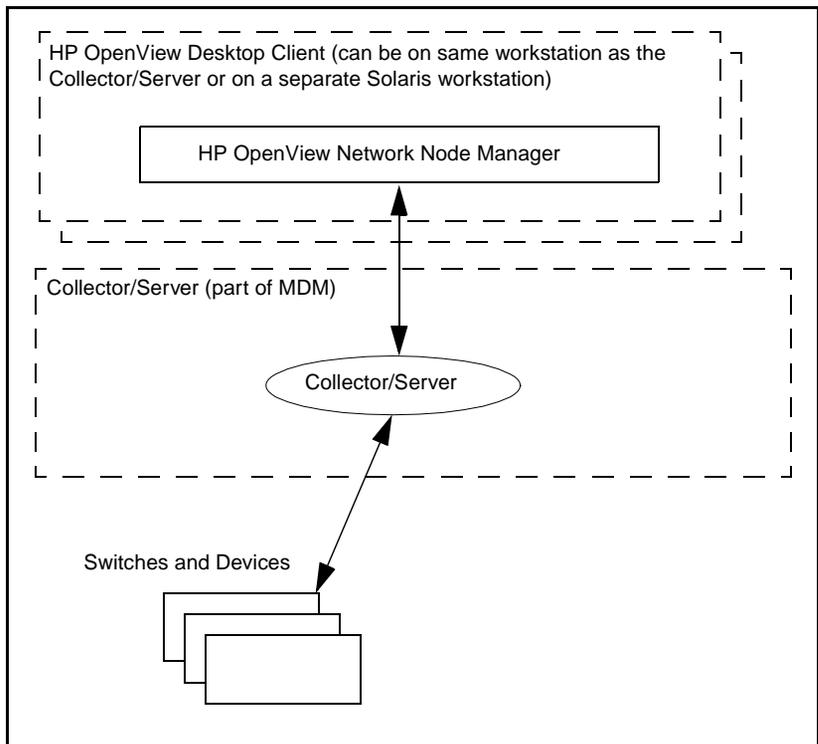
The HP OpenView Desktop for MDM lets you use MDM software to collect fault information from devices in the network and display it on the desktop of Hewlett Packard’s HP OpenView Network Node Manager.

The software consists of a Collector/Server and a Client. See the figure, “HP OpenView Desktop for MDM architecture” (page 144).

The Collector/Server obtains the fault information from devices in the network and makes it available to one or more HP OpenView Desktop clients. The Collector/Server is part of the MDM software.

The Client provides the actual HP OpenView Network Node Manager desktop. The Client can be installed on the same workstation as the Collector/Server or on another Solaris workstation on the same LAN as the Collector/Server.

**Figure 1**  
**HP OpenView Desktop for MDM architecture**



## Installation of HP OpenView desktop with DCD on the same workstation

The device collection daemon (DCD) is part of all device integration cartridges that are used for collecting fault information from SNMP devices and the SNMP Surveillance Adapter described in 241-6001-118 *Preside MDM SNMP Surveillance Adapter Guide*.

Installing the DCD on the same workstation as HP OpenView is not supported. Therefore do not install HP OpenView on a workstation that has a device integration cartridge or the SNMP Surveillance Adapter installed on it.

## Installing the Collector/Server and Client on the same workstation

### Purpose

Perform the following steps to install the Collector/Server and Client on the same workstation.

### Procedure

- 1 Ensure that you are not installing the Collector/Server on the same workstation as a device integration cartridge or the SNMP Surveillance Adapter. See also “Installation of HP OpenView desktop with DCD on the same workstation” (page 145).
- 2 Calculate the sizes of the disk partitions to run Preside MDM, the OpenView Desktop Client, and the HP OpenView software. See procedure “Determining minimum disk partition sizes” (page 148).
- 3 Install HP OpenView if it is not already installed. See HP OpenView document *HP OpenView Network Node Manager Products Installation Guide*.
- 4 Install and configure MDM using one of the following task lists.
  - “Installing stand-alone MDM on a workstation from scratch” (page 191)
  - “Installing stand-alone MDM on an existing workstation” (page 195)

### Important

When installing Solaris, use the information in step 2 and make the disk partition sizes large enough to accommodate MDM, the HP OpenView Desktop MDM client, and HP OpenView.

- 5 Modify the system kernel to run the HP OpenView Desktop client. See “Setting up the system kernel” (page 149).
- 6 If you have not already done so, load the HP OpenView Desktop client software from the Preside MDM CD-ROM. See “Loading HP OpenView Desktop client” (page 150).
- 7 This step is optional. If you wish to filter surveillance information according to geographic regions, create a device set file for each region. For information about device set files, see the section on the Network Access Mediator (NDAM) server in 241-6001-310 *Preside MDM Server Reference Guide*.

By default, a client obtains fault information from all devices accessed by the Collector/Server.

- 8 Optionally, edit the `ovdam.cfg` file to do the following:
  - specify the location of a backup NDAM server for redundancy
  - specify the name of the device set file on the Collector/Server to use for filtering surveillance information to the Client according to geographic region. If you do not specify a device set file in the configuration file, by default the Client receives data from all devices managed by the Collector/Server.

See “Setting up the OpenView mediator to obtain surveillance information” (page 152).

- 9 If you performed any modifications to the `ovdam.cfg` file, restart the OpenView mediators to make use of the modifications to the `ovdam.cfg` file. See “Restarting the OpenView mediator processes and verifying their status” (page 154).

## Installing the Collector/Server and Client on separate workstations

### Purpose

Perform the following steps to install and configure the software required for HP OpenView Desktop for Preside Multiservice Data Manager (MDM) when the Collector/Server and Client are running on separate workstations.

### On the workstation that runs the Collector/Server

- 1 Ensure that you are not installing the Collector/Server on the same workstation as a device integration cartridge or the SNMP Surveillance Adapter. See also “Installation of HP OpenView desktop with DCD on the same workstation” (page 145).

- 2 Install MDM using one of the following task lists.
  - “Installing stand-alone MDM on a workstation from scratch” (page 191)
  - “Installing stand-alone MDM on an existing workstation” (page 195)
- 3 This step is optional. To filter surveillance information according to geographic regions, create a device set file for each region (optional). For information about device set files, see the section on the Network Data Access Mediator (NDAM) server in 241-6001-310 *Preside MDM Server Reference Guide*.

By default, a Client obtains surveillance information from all devices accessed by the Collector/Server.

### **On the workstation that runs the Client**

- 1 Log in as root.
- 2 Install HP OpenView if it is not already installed. See HP OpenView document *HP OpenView Network Node Manager Products Installation Guide*.
- 3 Set up the system kernel to run the HP OpenView Desktop for MDM application. See “Setting up the system kernel” (page 149).
- 4 Load the HP OpenView Desktop client software from the Preside MDM CD-ROM. See “Loading HP OpenView Desktop client” (page 150).
- 5 Optionally, edit the `ovdam.cfg` file to do the following:
  - specify the location of a backup NDAM server for redundancy
  - specify the name of the device set file on the Collector/Server to use for filtering surveillance information to the Client according to geographic region. If you do not specify a device set file in the configuration file, by default the Client receives data from all devices managed by the Collector/Server.

See “Setting up the OpenView mediator to obtain surveillance information” (page 152).
- 6 If you performed any modifications to the `ovdam.cfg` file, restart the OpenView mediators to make use of the modifications to the `ovdam.cfg` file. See “Restarting the OpenView mediator processes and verifying their status” (page 154).

## Procedures

This section contains procedures to install and configure HP OpenView desktop for MDM. The procedures you need to perform depend on whether you are installing the Collector/Server and Client on the same workstation or on separate workstations. To determine which procedures to perform and when to perform them, refer to:

- “Installing the Collector/Server and Client on the same workstation” (page 145)
- “Installing the Collector/Server and Client on separate workstations” (page 146)

## Determining minimum disk partition sizes

### Purpose

Use this procedure to determine the minimum sizes of the disk partitions for running the Collector/Server on the same workstation as the Client. You need disk partitions that are large enough to accommodate Preside MDM with the HP OpenView client and the HP OpenView Network Node Manager software.

### Attention!

The disk partition sizes recommended here are the bare minimum sizes. To allow for expansion, we recommend that you use a disk with larger partitions whenever possible.

### Procedure

- 1 Consult the HP OpenView documentation for the partition size requirements to run the HP OpenView Network Node Manager software.
- 2 Add the amounts listed in the following table to the partition sizes listed in the HP OpenView documentation. The results represent the bare minimum disk partition sizes required to run all of the following items on the same workstation: MDM, HP OpenView Desktop client, and HP Openview

| No | Partition | Size in Mbytes                                              |
|----|-----------|-------------------------------------------------------------|
| 0  | / (root)  | 512                                                         |
| 1  | Swap      | approximately 3 to 4 times the amount of RAM                |
| 2  | Overlap   | This partition represents the entire disk, do not touch it. |

| No | Partition    | Size in Mbytes                                                                                                                                   |
|----|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | /var         | 1024                                                                                                                                             |
| 4  | no partition | This field should be blank.                                                                                                                      |
| 5  | /opt         | 4096                                                                                                                                             |
| 6  | /usr         | 2048                                                                                                                                             |
| 7  | /localdisk   | For the size of this partition, use the free disk space left after installing the other partitions. This partition is to hold the user accounts. |

## Setting up the system kernel

You need to set up the system kernel to run the HP OpenView Desktop for Preside Multiservice Data Manager (MDM) application on every workstation that runs the HP OpenView for MDM client.

- 1 Log in as root.
- 2 Using an editor such as vi, open the /etc/system file and modify the following records as shown:

```
set maxusers=64
set max_nprocs=1000
set semsys:seminfo_semmap=10
```

**Note:** The values for all other system kernel parameters should be adequate for most installations.

- 3 Save the file and close it.
- 4 Halt the workstation:

```
sync
sync
sync
init 0
```

The workstation shuts down, and after a delay, the OK prompt appears.

- 5 Reboot the workstation:

```
boot -r
```

The workstation reboots using the new values in the kernel.

## Loading HP OpenView Desktop client

### Purpose

Perform this procedure to load the HP OpenView Desktop client software from the Preside MDM CD-ROM onto the workstation that is going to run the HP OpenView client.

If you are loading the HP OpenView Desktop client on the same workstation as the Collector/Server and you selected the **HP OpenView Desktop client** button when loading the Preside MDM software from compact disk with the InstallAnywhere program, you do not have to perform this procedure.

This procedure loads Preside MDM software packages on a Solaris workstation from CD-ROM with the InstallAnywhere program.

### Prerequisites

Ensure that you have the Preside MDM 13.4 CD 1 of 2 Mandatory CD-ROM.

### Procedure

- 1 If you are loading software on an existing installation, have all users close all MDM tools they have open and log out.
- 2 Log in as root.
- 3 Start the c-shell:

```
csh
```

- 4 Insert the CD-ROM labelled **Preside MDM 13.4 CD 1 of 2 (Mandatory)** into the CD-ROM drive, pattern-side up.
- 5 Open a terminal window.
- 6 Start the installer:

```
/cdrom/cdrom0/install_mdm.bin
```

*The following progress messages appear in the terminal window:*

```
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the
installer archive...
Configuring the installer for this system's
environment...

Launching installer...
```

An InstallAnywhere countdown window opens, a countdown occurs, then the countdown window closes.

The **MDM <release>** window opens. The left panel of the window shows the current stage in the installation process. As you make selections while running the InstallAnywhere program, the indicator for each stage changes color. The contents of the right panel also changes as you run the program.

**7** Click **Next**.

The title of the right panel changes to **License agreement** and the agreement appears in the right panel of the window.

**8** Read the license information, click **I accept the terms of the License agreement**, then click **Next**.

After a wait, the title of the right panel changes to **System information** and the panel displays:

- the sizes of the disk partitions on your workstation and the suggested sizes
- a list of the MDM software packages that are installed (if any)
- a list of any existing MDM license keys loaded onto the workstation
- a list of the features you can run with the licence that is currently active on the workstation (if a license is active)

**9** Ignore this information and click **Next**.

The title of the right panel changes to **MDM <release> install options**.

**10** Click the **HP OpenView Desktop client** button.

The button becomes highlighted to indicate that you have selected it.

**11** Click **Next**.

The title of the right panel changes to **MDM installation source path** and the panel displays the default installation path of `cdrom/cdrom0` (the default value for a CD\_ROM drive).

**12** If you are loading software from the Preside MDM software CD-ROMs, click **Next** to load the software from CD-ROM(/cdrom/cdrom0).

The title of the right panel changes to **Network Viewer background pixmaps** and the panel contains a list of the optional bitmap images that you can load and use as the background for the Network Viewer tool. For example, you can load a map of the world as the background.

**13** Click **No**,

**14** Click **Next**.

The title of the right panel changes to **Install options summary** and the panel lists what it is going to install, upgrade, or reinstall.

**15** Check that the options in the right panel represent what you want install.

- If the options represent what you want to install, click **Next**. A **Pre-installation summary** appears in the right panel.
- If the options do not represent what you want to install, click **Previous** to go back and change what is incorrect.

**16** Check that the information in the **Pre-installation summary** represents what you want to install and that there is sufficient disk space for the software.

**17** Click **Install**.

The title of the right panel changes to **Installing MDM<release>**.

The InstallAnywhere program begins loading software and displays the name of each package as it loads. InstallAnywhere also prompts you to insert other disks as needed until all of the software is loaded.

Loading software can take from 10 to 45 minutes depending on the workstation hardware and what you have selected.

When loading is complete, the title of the right panel changes to **Install complete** and the panel contains information about success or failure of the program. It also shows the location of the log files for the installation.

**18** Click **Done**.

The **MDM <release>** window closes.

## Setting up the OpenView mediator to obtain surveillance information

### Purpose

Use this procedure to add the following information to the ovdam.cfg file:

- the location of a primary NDAM server (part of the Collector/Server) that supplies the OpenView mediator (part of the Client) with surveillance information
- the location of a backup NDAM server that can supply the OpenView mediator with surveillance information if the primary NDAM server fails (optional)

- the name of device set file that NDAM uses to filter surveillance information for the Client according to geographic region (optional)

**Note:** If you do not specify an optional device set file, by default the Client receives information about all devices managed by the Collector/Server.

### Prerequisites

Ensure that you have the following information:

- the node name or IP address of the workstation that is running the primary NDAM server
- the node name or IP address of a workstation that runs a backup NDAM server process that the OpenView mediator can use if the primary NDAM server fails (optional)
- the name of a device set file on the Collector/Server that is used for filtering information to a client according to geographic region (optional)

### Procedure

1 Log in as root.

2 Using a UNIX editor such as vi, open the following file for editing:

```
/etc/opt/OV/share/conf/C/nortel/nms/odn/ovdam.cfg
```

3 Add as the first line, a line that specifies the location of the primary NDAM server process. Use the following syntax:

```
ndamServer: NDAM<_service name>@<host | ip_address>
```

where:

<\_service name> is the service name of the NDAM process. If there is only one NDAM process running on the workstation and you chose not to specify a service name in the command to start the NDAM process, just enter NDAM and omit the service name.

<host | ip\_address> is the host name or IP address of the workstation that runs NDAM. To use the host name, the IP address must be mapped to the hostname in the /etc/hosts file, or the workstation must have access to a Naming Information Service (yellow pages) server that maps the IP address to the host name. If there is no mapping you must specify the IP address of the workstation.

- 4 Add an entry for an alternate NDAM server that can be used as a backup source for surveillance information, if an alternate NDAM server is available (optional).
- 5 If you want to filter surveillance information to the Client, add a line that specifies the name of the device set file you want to make use of (optional). The device set file must exist on the workstation that runs the NDAM server process. The syntax of an entry is:

```
deviceSet: <device set>
```

where:

<device set> is the name of a device set defined for the NDAM server without the NDAM prefix and the.dev extension. For example, if the file name is NDAM\_eastern\_region.dev, the name of the device set is eastern\_region.

**Note:** The ovdam.cfg file contains an entry that specifies the name of the default typeset file used by NDAM. Do not modify this entry. An example of this entry follows:

```
compTypeSet: OMS_Passport
```

- 6 Save the file and close it.
- 7 Ensure that the file permissions are set to read-write-execute by user, and read-execute by group and by others:

```
chmod 755 /etc/opt/OV/share/conf/C/nortel/nms/odn/  
ovdam.cfg
```

## Restarting the OpenView mediator processes and verifying their status

### Purpose

Perform this procedure to restart the OVDAM and OVAT processes (OpenView mediator processes) on the client to make use of the information you added to the ovdam.cfg configuration file, and to verify that all required processes are running.

### Procedure

- 1 Restart the OVDAM and OVAT processes:

```
/opt/OV/bin/ovstart ovdam
```

```
/opt/OV/bin/ovstart ovat
```

- 2 List the status of OV processes that are running on the workstation:

```
/opt/OV/bin/ovstatus
```

The following processes need to be running:

```
OVsPMD  
ovwdb  
pmd  
ovat  
ovdam  
OVLICENSEMgr
```

If a process is not running, start it by entering the command:

```
opt/OV/bin/ovstart <process name>
```



## Chapter 20

# Configuring online help from a remote MDM

---

This section describes how to configure online help for the local Preside Multiservice Data Manager (MDM) using the online system on a remote MDM.

### Procedure navigation

- “Procedure prerequisites” (page 157)
- “Procedure steps” (page 158)
- “Job aids” (page 158)

### Procedure prerequisites

- Ensure that the MDM online help system is installed and functioning on the remote MDM.
- Install the MDM software on the local MDM; see “Software installation” (page 95).

## Procedure steps

1 Log in to the local MDM as userID root.

2 Source the MDM environment file:

```
ssh  
source /opt/MagellanNMS/bin/nmsch
```

3 Check the current setting for the local Tomcat server:

```
ctxcmd -s TOMCATHOST
```

Notice the return value of the port. For example, "value is:47.135.225.32:8081".

4 Change the IP address and port number to use the remote Tomcat server:

```
ctxcmd -pw TOMCATHOST <serverIP:portnumber>
```

The change is complete when you see the message, "successful context operation."

5 Verify that the IP address and port setting indicate the remote Tomcat server.

```
ctxcmd -s TOMCATHOST
```

## Job aids

**Table 18**  
**Variable definitions**

| Variable              | Definition                                                                                               |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| <serverIP:portnumber> | serverIP is the IP address of the remote MDM; portnumber is the port number for the remote Tomcat server |

## Chapter 21

# Upgrading the MDM software

---

This section describes how to upgrade the Preside Multiservice Data Manager (MDM) software on an MDM network management workstation.

To upgrade the MDM software on a data collection workstation, see “Data collection software upgrades” (page 165).

### Procedure navigation

- “Procedure prerequisites” (page 159)
- “Procedure steps” (page 160)
- “Job aids” (page 163)

### Procedure prerequisites

- Review the MDM Release Supplement document and note:
  - the MDM Platform and Software Level Compatibility section
  - the MDM Software Installation Procedure for the supported migration restrictions
  - the General Release Considerations
  - the availability of software patches for this release of the MDM software
- Contact your Nortel Networks Customer Representative to determine the availability of MDM software patches applicable to this MDM software release.

- If this workstation is part of one of the following network management architectures, ensure that an alternate MDM server workstation is performing the tasks of this workstation
  - redundant fault management
  - redundant fault management with aggregation
  - client-server configuration

## Procedure steps

- 1 Log in to the MDM network management workstation as userID root.
- 2 Increase available disk space by removing obsolete software and data files. For some examples of disk space savings, see “Examples of disk space savings” (page 163).



### CAUTION

Do not remove software or data until you have verified that the software or data is not essential to current or future functional requirements.

- 3 Record the current state of the MDM servers. Using the userID root, type  

```
svmcmd -list > /opt/MagellanNMS/serverList
```

A list of the MDM servers configured on this network management workstation is recorded in file /opt/MagellanNMS/serverList.
- 4 Exit from all MDM applications.
- 5 Shutdown all of the MDM servers; type  

```
/etc/init.d/nmssvm.server stop
```
- 6 If this network management workstation is used for network circuit and service configuration and if the MDM Release Supplement indicates a requirement to upgrade the MDM administration database schema, follow the instructions in section “Database migration preparation” (page 177) then return to this procedure.
- 7 Backup the MDM configuration information.  

You can backup the MDM configuration information to any location. If possible, backup the MDM configuration information to another workstation.

**Note:** Do not restore this backed-up MDM configuration information to the directory `/opt/MagellanNMS/cfg` of the new release. This can cause unexpected results from the MDM software.

- a. Create a directory to store the backups.

```
mkdir /opt/MagellanNMS/<current_release>/cfg
```

- b. Copy the MDM configuration files to the backup directory.

```
cp -r /opt/MagellanNMS/cfg/* /opt/MagellanNMS/
<current_release>/cfg
```

- 8 Backup the MDM data files.

You can backup the MDM data files to any location. If possible, backup the MDM data files to another workstation.

**Note:** Do not restore the backed-up MDM data files to the directory `/opt/MagellanNMS/data` of the new release. This can cause unexpected results from the MDM software.

- a. Create a directory to store the backups.

```
mkdir /opt/MagellanNMS/<current_release>/data
```

- b. Copy the MDM data files to the backup directory.

```
cp -r /opt/MagellanNMS/data/* /opt/MagellanNMS/
<current_release>/data
```

- 9 If the MDM Release Supplement indicates a requirement to upgrade the Solaris operating system, do this now. For more information, see “Solaris” (page 35).
- 10 If the Solaris operating system was upgraded, apply applicable Java Runtime Environment (JRE) patches. For more information, see “JRE patches” (page 39).
- 11 Install the new MDM software. Use the information in section “Software installation” (page 95).

**Note:** Before the InstallAnywhere window closes, you are instructed to restart the network management workstation. Postpone the workstation restart until later in this upgrade process.

- 12 If MDM software patches are available, follow the instructions in section “Installing an MDM software patch” (page 103).
- 13 Reboot the MDM network management workstation; type

```
reboot
```

- 14 If this network management workstation is used for network circuit and service configuration and if the MDM Release Supplement indicates a requirement to upgrade the MDM administration database schema, see “Database migration” (page 178).
- 15 Change a Solaris Common Desktop Environment (CDE) window manager setting to prevent dialog boxes from being hidden.
  - a. Click on the **Style Manager** icon on the CDE tool bar.
  - b. Click on **Window**.
  - c. Disable **Allow Primary Windows On Top**.
- 16 Ensure that the required MDM servers are running.
  - a. Start the MDM Toolset.
  - b. From the MDM main menu, select **System -> Administration -> Server Administration**.
  - c. Select **File -> Refresh Server list**.
  - d. Verify that the same servers that indicated a status of **Running** in step 3 now indicate a status of **Running**.
- 17 If free disk space is insufficient and testing of the new release and subsequent MDM software patches is complete, remove the backed-up software files created by the installation of MDM software patches in step 12.
- 18 To increase the amount of free disk space, remove the previous release of the MDM software. Follow the instructions in section “Uninstall MDM software” (page 181).

**Note:** Do not remove the previous release of the MDM software until thorough testing of the new MDM software is complete.

## Job aids

**Table 19**  
**Examples of disk space savings**

| Description                                                                                                                                                             | Location                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| old versions of MDM software<br><br><b>Note:</b> Do not remove the current version of the MDM software. It may be necessary to rollback the software after the upgrade. | /opt/MagellanNMS/loads/<software_loadname>/ |
| old Passport data models                                                                                                                                                | /opt/MagellanNMS/cfg/PassportSchema/        |
| old Network Models                                                                                                                                                      | /opt/MagellanNMS/data/model/nmf/            |
| RTAC alarm files                                                                                                                                                        | /opt/MagellanNMS/data/rtac/data             |
| old backup data                                                                                                                                                         | /opt/MagellanNMS/data/Backup_Data           |



---

## Chapter 22

# Data collection software upgrades

---

This section describes how to upgrade Preside Multiservice Data Manager (MDM) Management Data Provider (MDP) software on a data collection workstation.

### Procedure navigation

- “Procedure prerequisites” (page 165)
- “Procedure steps” (page 166)
- “Job aids” (page 170)

### Procedure prerequisites

- Review the MDM Release Supplement document and note:
  - the MDM Platform and Software Level Compatibility section
  - the MDM Software Installation Procedure for the supported migration restrictions
  - the General Release Considerations
  - the availability of software patches for this release of the MDM software
- Contact your Nortel Networks Customer Representative to determine the availability of MDM software patches applicable to this MDM software release.
- Review the list of R14.3 document changes in 241-6001-309 *Preside MDM Management Data Provider User Guide*.

- In a distributed data collection architecture, ensure that an alternate workstation is performing the tasks of this workstation.

## Procedure steps

- 1 Log in to the data collection workstation as userID root.
- 2 Increase available disk space by removing obsolete software and data files. For some examples of disk space savings, see “Examples of disk space savings” (page 173).



### CAUTION

Do not remove software or data until you have verified that the software or data is not essential to current or future functional requirements.

- 3 If this is a data collection workstation that does not use the MDP File Prober Manager (mdpfpmgr) to control Passport File Probers, edit the local UNIX crontab and comment-out any File Prober entries. Using the MDP administrator userID, type  

```
crontab -e
```
- 4 Identify the MDM servers currently running. Using the userID root, type  

```
svmcmd -list > /opt/MagellanNMS/serverList
```

A list of the running MDM servers is recorded in file /opt/MagellanNMS/serverList.
- 5 Exit from all MDM applications.
- 6 If your data collection software processes are controlled by the mdpadm process, use mdpadm to halt all MDP processes. Using the MDP administrator userID, type  

```
/opt/MagellanMDP/bin/mdpadm stop all
```

  - a. Type the following command to ensure that File Probers are not currently executing:  

```
ps -ef | grep mdprober
```

If an mdprober process is reported, continue this step until the process has completed.
- 7 Shutdown all of the MDM servers. Using the userID root, type

```
/etc/init.d/nmssvm.server stop
```

**8** Backup the current MDM configuration information.

You can backup the MDM configuration information to any location. If possible, backup the MDM configuration information to another workstation.

**Note:** Do not restore this backed-up MDM configuration information to the directory `/opt/MagellanNMS/cfg` of the new release. This can cause unexpected results from the MDM software.

- a. Create a directory to store the backups. Using the userID root, type

```
mkdir /opt/MagellanNMS/<current_release>/cfg
```

- b. Copy the MDM configuration files to the backup directory. Using the userID root, type

```
cp -r /opt/MagellanNMS/cfg/* /opt/MagellanNMS/  
<current_release>/cfg
```

**9** Backup the MDM data files.

You can backup the MDM data files to any location. If possible, backup the MDM data files to another workstation.

**Note:** Do not restore the backed-up MDM data files to the directory `/opt/MagellanNMS/data` of the new release. This can cause unexpected results from the MDM software.

- a. Create a directory to store the backups. Using the userID root, type

```
mkdir /opt/MagellanNMS/<current_release>/data
```

- b. Copy the MDM data files to the backup directory. Using the userID root, type

```
cp -r /opt/MagellanNMS/data/* /opt/MagellanNMS/  
<current_release>/data
```

**10** Backup the current MDP configuration information.

You can backup the MDP configuration information to any location. If possible, backup the MDP configuration information to another workstation.

**Note:** Do not restore this backed-up MDP configuration information to the directory `/opt/MagellanMDP/cfg` of the new release. This can cause unexpected results from the MDM software.

- a. Create a directory to store the backups. Using the userID root, type

```
mkdir /opt/MagellanMDP/<current_release>/cfg
```



- 17 If Passport groups and nodes were previously defined using the file `/opt/MagellanNMS/cfg/HGDS.cfg` but the MDP used a symbolic link to this file from the file `/opt/MagellanMDP/cfg/mdp/PassportMap.cfg`, remove the symbolic link.
- 18 If necessary, use the Host Group Administration tool (`hgadmin`) to customize the file `/opt/MagellanNMS/cfg/HGDS.cfg` for your Passport network. For more information about the Host Group Administration tool, see 241-6001-303 *Preside MDM Administrator Guide*.
- 19 If necessary, use the Server Administration tool (SVM) to configure the MDM servers. For more information about SVM, see 241-6001-303 *Preside MDM Administrator Guide*.

The servers required by the MDP software are listed in “Servers required by MDP” (page 170).

The SVM-controlled servers are described in detail in 241-6001-310 *Preside MDM Server Reference Guide*.

Experienced MDM customers, those familiar with the Server Administration tool (SVM), can use “Configuring the servers required by MDP” (page 174) to configure the servers required by MDP. Other customers may want to familiarize themselves with SVM before configuring the servers.

- 20 If necessary, un-comment the comments from the crontab entries that launch File Probers.  
  
Nortel Networks recommends that you use the File Prober Manager to control File Probers. For more information about converting your system of crontab entries to use the File Prober Manager, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.
- 21 If necessary, using the MDP Configuration tool `gmdpconfig` with the MDP administrator `userID`, customize your MDP application.
- 22 To monitor data collection alarms, use the instructions in 241-6001-303 *Preside MDM Administrator Guide* to configure an IMDR and a GMDR on the data collection workstation. Use the instructions in 241-6001-011 *Preside MDM Fault Management User Guide* to configure the MDM software for fault monitoring. For more information, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.
- 23 Reboot the data collection workstation. Using the `userID` `root`, type  
  
`reboot`
- 24 Change a Solaris Common Desktop Environment (CDE) window manager setting to prevent dialog boxes from being hidden.

- a. Click on the **Style Manager** icon on the CDE tool bar.
  - b. Click on **Window**.
  - c. Disable **Allow Primary Windows On Top**.
- 25** Ensure that the required MDM servers are running.
- a. Start the MDM Toolset.
  - b. From the MDM main menu, select **System -> Administration -> Server Administration**.
  - c. Select **File -> Refresh Server list**.
  - d. Verify that the same servers that indicated a status of **Running** in step 4 now indicate a status of **Running**.
- 26** If free disk space is insufficient and testing of the new release and subsequent MDM software patches is complete, remove the backed-up software files created by the installation of MDM software patches in step 15.
- 27** To increase the amount of free disk space remove the previous release of the MDM software. Follow the instructions in section “Uninstall MDM software” (page 181).
- Note:** Do not remove the previous release of the MDM software until thorough testing of the new MDM software is complete.

## Job aids

**Table 20**  
**Servers required by MDP**

| Server                             | Comment                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Log Collector (OAMC)               | This server is required to collect MDM logs that can then be displayed using the MDM System Log Display.                                                    |
| Context Server (CTXSVR)            | This server is required for MDM applications to share context.                                                                                              |
| Host Group Directory Server (HGDS) | This server is required for Passport data collection. This server provides the MDP File Prober with access to the network information in the file HGDS.cfg. |
| (Sheet 1 of 3)                     |                                                                                                                                                             |

**Table 20 (continued)**  
**Servers required by MDP**

| Server                                 | Comment                                                                                                                                                                                                                                                                                      |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passport Communications Manager (FDTM) | This server is required if the Statistics Retrieval System (SRS) is configured.                                                                                                                                                                                                              |
| Injected Management Data Router (IMDR) | This server is required for surveillance of the MDP host. For more information, see 241-6001-309 <i>Preside MDM Management Data Provider User Guide</i> .                                                                                                                                    |
| Data Manager Agent (DMA)               | This server is required for surveillance of the MDP host.                                                                                                                                                                                                                                    |
| General Management Data Router (GMDR)  | This server is required for surveillance of the MDP host. For more information, see 241-6001-309 <i>Preside MDM Management Data Provider User Guide</i> .                                                                                                                                    |
| Workstation Surveillance (SFM)         | This server is required for workstation resource monitoring.                                                                                                                                                                                                                                 |
| Data Model Manager (MDPDMM)            | <p>This server is required for Passport data collection.</p> <p>If non-default settings for log level and spool freespace are required, use the SVM tools to customize the server settings.</p> <p>The DMM port setting is no longer required.</p>                                           |
| MDP Disk Manager (MDPDISKMGR)          | <p>This server is mandatory.</p> <p>If non-default settings for log level and available disk space are required, use the SVM tools to customize the server settings. For more information about these settings, see 241-6001-309 <i>Preside MDM Management Data Provider User Guide</i>.</p> |

(Sheet 2 of 3)

**Table 20 (continued)**  
**Servers required by MDP**

| Server                                  | Comment                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| File Prober Manager<br>(MDPFPMGR)       | This server is mandatory for Passport customers.<br><br>If non-default settings for log level and maximum concurrent file probers are required, use the SVM tools to customize the server settings. For more information about these settings, see 241-6001-309 <i>Preside MDM Management Data Provider User Guide</i> . |
| Passport File Manager<br>(MDPPPMGR)     | This server is mandatory for Passport customers.                                                                                                                                                                                                                                                                         |
| DPN File Manager<br>(MDPDPMGR)          | This server is mandatory for DPN customers.                                                                                                                                                                                                                                                                              |
| Vector File Manager<br>(MDPVSSMGR)      | This server is mandatory for Vector customers.                                                                                                                                                                                                                                                                           |
| File Mover Manager<br>(MDPFMMGR)        | This server is required if MDP data files are transferred to customer hosts.                                                                                                                                                                                                                                             |
| Statistics Retrieval System<br>(MDPSRS) | This server is required if the MDP Statistics Retrieval System (SRS) is configured.                                                                                                                                                                                                                                      |
| DPN File Collector<br>(MDPCOL)          | This server is mandatory for DPN data collection.                                                                                                                                                                                                                                                                        |
| (Sheet 3 of 3)                          |                                                                                                                                                                                                                                                                                                                          |

**Table 21**  
**Examples of disk space savings**

| Description                                                                                                                                                 | Location                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| old MDM software<br><br><b>Note:</b> Do not remove the current version of the MDM software. It may be necessary to rollback the software after the upgrade. | /opt/MagellanNMS/loads/<software_loadname>/ |
| old MDP software<br><br><b>Note:</b> Do not remove the current version of the MDM software. It may be necessary to rollback the software after the upgrade. | /opt/MagellanMDP/loads/<software_loadname>/ |
| old Passport data models                                                                                                                                    | /opt/MagellanNMS/cfg/PassportSchema/        |
| old Network Models                                                                                                                                          | /opt/MagellanNMS/data/model/nmf/            |
| old RTAC alarm files                                                                                                                                        | /opt/MagellanNMS/data/rtac/data             |
| old backup data                                                                                                                                             | /opt/MagellanNMS/data/Backup_Data           |
| old archive BDF data                                                                                                                                        | /opt/MagellanMDP/data/mdp/archive           |
| old MDP logs                                                                                                                                                | /opt/MagellanMDP/data/mdp/admin             |
| old raw data files                                                                                                                                          | /opt/MagellanMDP/data/mdp/backup            |

## Configuring the servers required by MDP

This section describes how experienced Preside Multiservice Data Manager (MDM) administrators can configure the MDM servers required by the Management Data Provider (MDP).

### Procedure navigation

- “Procedure prerequisites” (page 174)
- “Procedure steps” (page 174)

### Procedure prerequisites

- This procedure is not standalone. This procedure requires that you be referred from “Procedure steps” (page 166).

### Procedure steps

- 1 Stop the servers. Using the userID root, type  

```
/etc/init.d/nmssvm.server stop
```
- 2 Create a copy of the file /opt/MagellanMDP/lib/mdp/cfg/SVMList.cfg.mdp. For example, type  

```
cp /opt/MagellanMDP/lib/mdp/cfg/SVMList.cfg.mdp  
/tmp/mdp_servers
```
- 3 If necessary, in the file /tmp/mdp\_servers, change the 'user\_group:' setting to reflect the actual MDP administrator userID and MDP groupID. Changing the 'user\_group:' setting is required for those servers prefixed with 'MDP', only.
- 4 If any of the servers indicated in “Servers required by MDP” (page 170) do not exist in either the current version of the file /opt/MagellanNMS/cfg/SVMList.cfg or the file /tmp/mdp\_servers, add the corresponding entries for these servers from the file /opt/MagellanMDP/lib/mdp/cfg/SVMList.cfg.mdm\_base to the file /tmp/mdp\_servers.  
  
The server entries in the file /opt/MagellanMDP/lib/mdp/cfg/SVMList.cfg.mdm\_base use the default settings for each server. If necessary, you can customize these settings according to your requirements for these servers.
- 5 Append the file /tmp/mdp\_servers to the file /opt/MagellanNMS/cfg/SVMList.cfg.
- 6 Return to step# 12 of the previous procedure.

**Note:** Do not restart the SVM at this time.



---

## Chapter 23

# Administration database migration

---

This section describes how to upgrade the Preside Multiservice Data Manager (MDM) administration database schema.

- “Database migration preparation” (page 177)
- “Database migration” (page 178)

## Database migration preparation

Perform this procedure before migrating to a new database schema.

### Procedure navigation

- “Procedure steps” (page 178)

### Procedure steps

- 1 Exit from all MDM configuration applications.
- 2 Using the MDM Server Administration tool, shutdown all Database Synchronization Controllers.
- 3 Disable database access. Edit the file `/opt/MagellanNMS/cfg/dba/dbaccess.cfg` and set the parameter **admindb.disabled** to true.
- 4 If the default database customer does not own the majority of the database entities, it may be necessary to create a new customer and configure this new customer as the default customer. For more information, see 241-6001-400 *Preside MDM Administration Database User Guide*.
- 5 If the destination account is in the same database instance as the source account and the destination account is accessed by the public synonyms,

remove the previous synonyms and establish new synonyms in the destination account. In the Oracle SQL\*Plus interface, type

```
SQL> @/opt/MagellanNMS/lib/sql/admindb/oracle/  
drop_141_syns
```

## Database migration

Perform this procedure to migrate to a new database schema.

### Procedure navigation

- “Procedure prerequisites” (page 178)
- “Procedure steps” (page 178)

### Procedure prerequisites

- “Database migration preparation” (page 177) or
- “Upgrading the MDM software” (page 159)

### Procedure steps

- 1 Launch the Oracle SQL\*Plus interface as the database administrator.

**Note:** Another database user with the following user privileges can perform these tasks: DROP PUBLIC SYNONYM.

- 2 Create a new database user. For more information, see 241-6001-400 *Preside MDM Administration Database User Guide*

**Note:** Do not attempt to populate the new database.

- 3 Connect to the database as the new database user.

```
$ORACLE_HOME/bin/sqlplus <new_user_name>/  
<new_user_password>@database
```

- 4 Create a database link to the previous database user. In the Oracle SQL\*Plus interface, type

```
SQL> CREATE DATABASE LINK <db_link_name> CONNECT TO  
<old_user_name> IDENTIFIED BY <old_user_password>  
USING '<old_database>'
```

- 5 Connect to the database as the DBA user SYSTEM and grant CREATE PROCEDURE privilege to the new user created in step 2.

- 6 Connect to the database as the new database user created in step 2.

```
$ORACLE_HOME/bin/sqlplus <new_user_name>/  
<new_user_password>@database
```

- 7 Create the migration package. In the Oracle SQL\*Plus interface, type

```
SQL> @/opt/MagellanNMS/lib/sql/admindb/oracle/  
migrate_<new_release>.pkg
```

- 8 If the old database exists on a workstation other than the workstation where the new database resides, edit file \$ORACLE\_HOME/network/admin/tnsnames.ora to locate the old database from the new database workstation.

- 9 Execute the database migration process. In the Oracle SQL\*Plus interface, type

```
SQL> @/opt/MagellanNMS/lib/sql/admindb/oracle/  
runMigration <db_link_name>
```

The existing data is propagated to the new database instance and formatted using the new database schema.

- 10 Remove the migration package. In the Oracle SQL\*Plus interface, type

```
SQL> drop package migrate_<new_release>;
```

- 11 Clear the database in preparation for reloading the network configuration data. In the Oracle SQL\*Plus interface, type

```
truncate table admin_node_view;
```

- 12 Enable database access. Edit the file /opt/MagellanNMS/cfg/dba/dbaccess.cfg and set the parameter **databases** to the new database instance and set the parameter **admindb.disabled** to true.

- 13 Restart the database synchronization controller(s) (DBSyncContr) with the command line parameter **-noDiscovery** using the MDM Server Administration tool.

**Note:** Do not proceed until the network configuration data has completed loading.

- 14 Stop the database synchronization controller(s) (DBSyncContr) using the MDM Server Administration tool.

- 15 Restart the database synchronization controller(s) (DBSyncContr) using the MDM Server Administration tool.

**Note:** Do not include the command line parameter **-noDiscovery**.

Discovery is complete when all of the nodes in the ADMIN\_NODE\_VIEW table indicate SUCCESS in the DISCOVERY\_STATUS column.

## Job aids

**Table 22**  
**Variable definitions**

| <b>Variable</b>     | <b>Definition</b>                                  |
|---------------------|----------------------------------------------------|
| <db_link_name>      | name of user's link to the database                |
| <old_user_name>     | previous database user name                        |
| <old_user_password> | password for previous database user name           |
| <old_database>      | name for previous database instance                |
| <new_user_name>     | new database user name                             |
| <new_user_password> | password for new database user name                |
| <new_release>       | the new MDM software release<br>(for example, 143) |
| <old_release>       | the old MDM software release (for example, 142)    |

## Chapter 24

# Uninstall MDM software

---

This section describes how to uninstall Preside Multiservice Data Manager (MDM) software.

Use this procedure to remove MDM software that was installed with the MDM InstallAnywhere tool and has been replaced with a newer version. The purpose of removing a previous release of MDM software is to create additional free disk space, only.

**Note:** Do not use this procedure prior to performing an MDM software upgrade or before re-installing the same MDM software release.

To re-install the same release of MDM software or to upgrade the MDM software on an MDM network management workstation, see “Upgrading the MDM software” (page 159).

To re-install the same release of MDM software or to upgrade the MDM software on a data collection workstation, see “Data collection software upgrades” (page 165).

### Procedure navigation

- “Procedure prerequisites” (page 182)
- “Procedure steps” (page 182)
- “Job aids” (page 183)

## Procedure prerequisites

- Perform the steps in procedure “Removing an MDM software patch” (page 106) to remove MDM software patch files before using this procedure.

## Procedure steps

- 1 Log in to the MDM network management workstation as userID root.
- 2 If this MDM workstation has MDM servers deployed on it, identify the MDM servers currently running. From the MDM main menu, select **System -> Administration -> Server Administration**.  
A list of the running MDM servers is displayed. Record this information.
- 3 Exit from all MDM applications.
- 4 If this is a data collection workstation that does not use MDM Server Administration tool (SVMADM) to control the Management Data Provider (MDP) servers, type  

```
/opt/MagellanMDP/bin/mdpadm stop all
```
- 5 If this is a data collection workstation that does not use the MDP File Prober Manager (mdpfpmgr) to control Passport File Probers, edit the local UNIX crontab and comment-out any File Prober entries.
- 6 If this an MDM server workstation, shutdown all of the MDM servers; type  

```
/etc/init.d/nmssvm.server stop
```
- 7 Change directories to the directory that contains the MDM uninstall tool for the MDM software release to be removed.  

```
cd /opt/MDM<release>_INST
```
- 8 Start the MDM software removal tool **InstallAnywhere Uninstaller**. Type  

```
./uninstall_mdmd[134 or 141] (for release 13.4 or 14.1)
```

```
./uninstall_mdmd (for any release above 14.1)
```

  
The InstallAnywhere Uninstaller window opens.
- 9 Select **Uninstall**.  
The left panel of the window indicates the current stage in the software removal process. As you make selections the indicator for each stage changes color.

The right panel contains information about each step of the process: Preparing, Files, and LaunchAnywhere. As the Uninstaller tool progresses each step in the panel changes color.

Removal of the MDM software can take between 15 and 45 minutes depending on the performance of the workstation hardware.

When software removal is complete, the right panel displays the message **Uninstall Complete**.

The Uninstaller logs are located in the directory `/opt/MagellanNMS/data/install_logs`.

- 10 Select **Done**.
- 11 If this an MDM server workstation, restart all of the MDM servers; type  

```
/etc/init.d/nmssvm.server start
```
- 12 If this is a data collection workstation that does not use MDM Server Administration tool (SVMADM) to control the Management Data Provider (MDP) servers, type  

```
/opt/MagellanMDP/bin/mdpadm start all
```
- 13 If this is a data collection workstation that does not use the MDP File Prober Manager (mdpfpmgr) to control Passport File Probers, edit the local UNIX crontab and uncomment any File Prober entries that were commented-out in step 5.
- 14 If this MDM workstation has MDM servers deployed on it, ensure that the MDM servers identified in step 2 are running.
  - a. From the MDM main menu, select **System -> Administration -> Server Administration**.
  - b. Select **File -> Refresh server list**.
  - c. Verify that the configured servers indicate a status of **Running**.

## Job aids

**Table 23**  
**Variable definitions**

| Variable  | Definition                                         |
|-----------|----------------------------------------------------|
| <release> | the MDM software release number (for example, 142) |



## Chapter 25

# Managing MDM software

---

This section describes the post-installation tasks that you will probably not perform until initial installation has been completed for awhile. These tasks include installing a new release of Preside Multiservice Data Manager (MDM) software, installing a fix for MDM software, and rolling back to an older release of MDM software.

This section contains the following sections that describe software management tasks. These tasks can be performed in any order:

- “Activating an old release of MDM software (rollback)” (page 186)
- “Activating a previous release of MDP software (rollback)” (page 187)
- “Rolling back IP Discovery to MDM 13.4” (page 189)
- “Rolling back DCD to MDM 13.4” (page 189)
- “Rolling back DMA to MDM 14.1 or older” (page 190)

## Activating an old release of MDM software (rollback)

Use this procedure to reactivate a previous version of the Preside Multiservice Data Manager (MDM) software. The release to be reactivated must still be loaded on the MDM workstation.

- 1 Log in as root.
- 2 Display a list of the valid licences on your system:

```
/opt/MagellanNMS/loads/<loadname>/system/config/ \
nms_list_activ_opt
```

where:

<loadname> is the load name for the old software release you are activating. For example, MDM142Dap.

A list of the software releases for which you have a valid licence appears on the screen. Each software release is accompanied by a list of the software sets that the licence entitles you to run.

- 3 Verify that the previous release of software is displayed.
- 4 Determine the current release of the Preside Multiservice Data Manager (MDM) software that is running on the workstation.

```
/opt/MagellanNMS/system/inst/nmsLinks
```

- 5 Determine the software releases available on the workstation:

```
/opt/MagellanNMS/system/inst/nmsLoads
```

- 6 Ensure that the release of software to activate is listed among the loads displayed on the screen. If it is not listed, you will have to re-install the release first.
- 7 Use the InstallAnywhere uninstaller program to delete the current version of the Preside MDM software. See "" (page 190).

- 8 Reset the symbolic links to the older version of Preside MDM software:

```
/opt/MagellanNMS/loads/<loadname>/system/inst/nmsInit
<loadname>
```

where:

<loadname> is the load name for the old software release you are activating. For example, MDM142Dap. Enter the same value for both instances of the <loadname> parameter in this command.

- 9 For MDMWeb users:

Update the file `/opt/MagellanNMS/cfg/SVMList.cfg` to call the MDMWeb agents from their previous directory locations.

If you are rolling back to release 13.3 or earlier, modify the format of the `WebNMS_server.cfg` file so it can be used with the older release of Preside MDM, as described in 241-6001-117 *Preside MDMWeb Installation Guide*.

10 Restore the backed-up configuration and data files.

11 Reboot the workstation:

```
sync
```

```
init 6
```

12 Re-install any SSUP (patch) that needs to be applied to the RSUP you are re-activating. For the instructions to install a SSUP, see “Installing an MDM software patch” (page 103).

## Activating a previous release of MDP software (rollback)

Use these procedures to re-activate an older release of Management Data Provider (MDP) software. This operation is known as a software rollback.

- “Activating a previous release that has not been removed” (page 187)
- “Activating a previous release that has been removed” (page 188)

**Note:** Before you re-install a previous release of MDP software, ensure that you read and understand the software upgrades introduced by this release; you may need to reconfigure the MDP software. For more information about release R14.3, see the R14.3 Release Supplement.

### Activating a previous release that has not been removed

1 Stop the collection of switch data.

2 Ensure that switch data processing is complete.

3 Halt all MDP processes. Using MDP administrator userID, from the UNIX command line, type

```
/opt/MagellanMDP/bin/mdpadm stop all
```

4 On the MDP host, using the userID root, open a UNIX xterm.

5 Identify the loadnames of previous MDP software releases on this workstation.

a. Change directories to the MDP loads directory.

```
cd /opt/MagellanMDP/loads
```

- b. List the available MDP loads.

```
ls
```

The loadnames are in the format:

```
mdp<release_number><load_number>
```

(for example, MDP133Dap).

- 6 Change the software links from the current release to a previous release. Using the workstation userID **root**, from the UNIX command line, type

```
/opt/MagellanMDP/loads/<loadname>/system/init/  
mdpLinks <loadname>
```

where

<loadname> is the name of an MDP load identified in step 1.

- 7 Rename the backed-up configuration directory of the re-activated release. Using the MDP administrator userID, from the UNIX command line, type

```
mv /opt/MagellanMDP/cfg_<YYYY><MM><DD>_<hh><mm>  
/opt/MagellanMDP/cfg
```

where:

<YYYY><MM><DD>\_<hh><mm> is

<year><month><day>\_<hour><minute> (for example, 20020917\_1821).

### Activating a previous release that has been removed

- 1 Stop the collection of switch data.
- 2 Ensure that switch data processing is complete.
- 3 Halt all MDP processes. Using MDP administrator userID, from the UNIX command line, type

```
/opt/MagellanMDP/bin/mdpadm stop all
```

- 4 On the MDP host, using the userID **root**, open a UNIX xterm.
- 5 Re-install the previous software release. For more information about installing the MDP software, see “Software installation” (page 95).
- 6 Rename the backed-up configuration directory of the re-activated release. Using the MDP administrator userID, from the UNIX command line, type

```
mv /opt/MagellanMDP/cfg_<YYYY><MM><DD>_<hh><mm>  
/opt/MagellanMDP/cfg
```

where:

<YYYY><MM><DD>\_<hh><mm> is

<year><month><day>\_<hour><minute> (for example, 20020917\_1821).

## Rolling back IP Discovery to MDM 13.4

To roll back IP Discovery prior to Preside Multiservice Data Manager (MDM) release 13.4, you will need to edit the network setting file.

### Procedure

- 1 Go to the directory `/opt/MagellanNMS/cfg/ipm` and open the `nsdb` file using a text editor.
- 2 This is a tab delimited file. For each line, put the community string in the third token, and the write community string in the fourth token.
- 3 For each entry address, remove the SNMP version

For example, after completing steps 2 and 3, a line that looked like this:

```
*.*.*.*<tab><tab><tab>161<tab><tab>encrypted
Community
```

would now look like this:

```
*.*.*.*<tab>public<tab>private<tab>161<tab>
```

## Rolling back DCD to MDM 13.4

To roll back the DCD to Preside Multiservice Data Manager (MDM) release 13.4, you will need to edit the seed file for each device type.

### Procedure

- 1 Stop the DCD.
- 2 Go to the directory `/opt/MagellanNMS/cfg` and open all the `*.sed` files using a text editor.
- 3 For each IP address, remove the SNMP Version from the last token.

For example, after completing this step, a line that looked like this:

```
GEN ROUTER-
1:47.1.2.205::161:100:encryptedCommunity:SNMPv1
```

would now look like this:

```
GEN ROUTER-1:47.1.2.205::161:100:encryptedCommunity
```

- 4 Restart the DCD.

## Rolling back DMA to MDM 14.1 or older

To roll back the DMA server prior to Preside Multiservice Data Manager (MDM) release 14.2, you will need to edit the SVM configuration.

### Procedure

- 1 Start the Server Administration tool from the Preside MDM window by selecting **System -> Administration -> Server Administration**.  
**Note:** Your user account must be set up run the NMSAdmin toolset at login to be able to see the Server Administration tool in the menus.
- 2 Using the Server Administration tool, stop the DMA server, if it is running.
- 3 Log in as the Server Administrator tool administrator by selecting Enable Editing from the Security menu.
- 4 Edit the server information to remove any of these possible options: -f, -n, or -t.

## Appendix A

# Old installation tasklist

---

This section describes how to install the Preside Multiservice Data Manager (MDM) software using the MDM Software Configuration tool.

- “Installing stand-alone MDM on a workstation from scratch” (page 191)
- “Installing stand-alone MDM on an existing workstation” (page 195)

### **Installing stand-alone MDM on a workstation from scratch**

Perform this procedure to install a stand-alone configuration of the Preside Multiservice Data Manager (MDM) software on a workstation starting from scratch. In a stand-alone configuration, the workstation runs the MDM software independently of any other workstation in the network. By from scratch, we mean that at the beginning of the installation, the workstation is still in its shipping containers and it has no operating system, communications applications, or MDM software installed.

See “Worksheets” (page 209) for a set of forms that you may find useful for obtaining and recording configuration data about the workstation you are installing.

This method uses the Preside MDM configuration tool and is the preferred method when you are going to manage a network that contains DPN switches. See “Installing standalone MDM from scratch using the Preside MDM configuration tool” (page 192).

## Installing standalone MDM from scratch using the Preside MDM configuration tool

Allow a minimum of 9 hours to complete this procedure.

- 1 Ensure that the service data to provide the workstation with network access is already entered into the switch software.

See “This section lists the tasks to set up network access on the switches to be managed by Preside Multiservice Data Manager (MDM) and provides references to the switch documents that contain the procedures required to complete the tasks. In this section, you can find the following information:” (page 29).

- 2 Install the workstation and communications hardware.

Estimated time: 1 hour

See “This section contains the instructions for installing the workstation and communications hardware. In this section, you can find the following information:” (page 199).

- 3 Load and configure the Solaris operating system.

- 4 Install the HSI software.

Estimated time: 0.5 hour

See “Installing HSI/P software” (page 41).

You only need to perform this task if you install an HSI card in the workstation. An HSI card is required if the workstation connects to a DPN switch by an X.25 link that operates at a data rate greater than 19.2 Kbits/s or if the workstation connects to a Passport switch by means of a Frame Relay link.

- 5 Load the X.25 software.

Estimated time: 0.25 hours

See “Loading X.25 software” (page 49).

You only need to perform this task if the workstation is used for managing networks that contain DPN switches or a mix of DPN and Passport switches. You do not need to perform this task in Passport-only networks.

- 6 If you loaded the X.25 software, do one of the following:

- If the workstation is used for managing DPN switches, configure an X.25 link between the workstation and the DPN switch that provides access to the Network Configuration System (NCS).

Estimated time: 1.5 hours

See “Configuring an X.25 link to DPN” (page 57).

- If the workstation is used for managing Passport switches, configure an X.25 link between the workstation and the DPN switch that provides access to the Passport network, then configure an IP connection on the X.25 link to gain access to the Passport switches in the network.

Estimated time: 2 hours

See “Configuring an X.25 link to DPN” (page 57) and “Configuring an IP over X.25 link to Passport” (page 65).

**7** Install SunLink Frame Relay software.

Estimated time: 0.5 hour

See “Installing Frame Relay software” (page 71).

You only need to perform this task if the workstation is used for managing a Passport-only network and is connected to the Passports by means of a Frame Relay link.

**8** Obtain the service parameters needed to configure the MDM software.

Estimated time: 3 hours

See “This section contains the instructions for obtaining the service parameters required for Preside Multiservice Data Manager (MDM). In this section, you can find the following information:” (page 235).

This task involves obtaining the service parameters required to configure the MDM software with the MDM Software Configuration tool. Obtaining the service parameters is not essential because the tool provides you with detailed help about each of the software configurations and parameters you need to enter along the way. However, performing the configuration proceeds more rapidly if you obtain the parameters in advance.

**9** Load the MDM software.

Estimated time: 0.25 hours

See “Software installation” (page 95).

**10** Install an MDM licence and configure the MDM software.

Estimated time: 1 hour

See “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275).

This task consists of the following subtasks:

- a. Set up the root account temporarily to run the MDM Software Configuration tool.

- b. Use the MDM Software Configuration tool to install a licence and configure the MDM software for the DPN and Passport switches in your network.

**11** Perform the post-configuration tasks.

Estimated time: varies widely according to the configuration  
See "Post configuration tasks" (page 285).

A summary of the tasks is as follows:

- a. Set up the kernel for Network Time Synchronization (NTS). Do this only if you configured NTS while using the MDM Software Configuration tool.  
  
See "Setting up the kernel for Network Time Synchronization" (page 287).
- b. Set up the NCSLink.cfg file if the workstation has an X.25 or IP over X.25 connection to the network.  
  
See "Configuring the NCSLink.cfg file" (page 288).
- c. Optionally, set up the workstation to allow administrative operations to be performed from an Xterminal while logged in as root.  
  
See "Allowing root sessions to the workstation" (page 289).
- d. Set the maximum shared memory segment size in the system kernel.  
  
See "Setting the shared memory segment size in the kernel" (page 289).
- e. Reboot the workstation to start all of the servers you configured with the MDM Software Configuration tool.  
  
See "Rebooting the workstation" (page 290).
- f. Configure and start the Frame Relay connection using the passport.frconfig script.  
  
For more information on defining Passport hosts and groups with the passport.frconfig script, see 241-6001-303 *Preside MDM Administrator Guide*.
- g. Set up UNIX groups and UNIX accounts for running MDM, as described in 241-6001-303 *Preside MDM Administrator Guide*.
- h. Configure the GMDR servers for DPN and Passport surveillance.  
  
For information on configuring GMDR to access the surveillance servers, see 241-6001-303 *Preside MDM Administrator Guide*.

- i. Manually install Passport Software Data Definition (SDD) files.  
For more information on managing Passport SDD files, see 241-6001-303 *Preside MDM Administrator Guide*.
- j. Configure the advanced subsystems that are not configurable with the MDM Software Configuration tool. The subsystems and the NTPs that contain information about how to configure them are as follows:
  - Network Configuration Database, 241-6001-308 *Preside MDM Network Configuration Database Administrator Guide*
  - Network Model, 241-6001-015 *Preside MDM Network Model Administrator Guide*
  - DPN SNMP Proxy Agent, 241-6001-210 *Preside MDM DPN SNMP Agent User Guide*
  - Passport/SNMP Device Backup and Restore, 241-6001-807 *Preside MDM Passport/SNMP Devices Backup and Restore User Guide*
  - Administration Database, 241-6001-400 *Preside MDM Administration Database User Guide*

## Installing stand-alone MDM on an existing workstation

Perform this procedure to install Preside Multiservice Data Manager (MDM) software as a stand-alone configuration on an existing workstation. The existing workstation must meet the minimum hardware requirements outlined in “This section contains the instructions for installing the workstation and communications hardware. In this section, you can find the following information:” (page 199).

This method uses the Preside MDM configuration tool and is the preferred method when you are going to manage a network that contains DPN switches. See “Installing standalone MDM on an existing workstation using the Preside MDM configuration tool” (page 195).

### Installing standalone MDM on an existing workstation using the Preside MDM configuration tool

Allow a minimum of 7 hours to complete the installation.

- 1 Ensure that the Solaris operating system is already loaded and configured with disk partitions that have at least the minimum sizes.
- 2 Ensure that service data to provide the workstation with network access is already entered into the switch software.

See “This section lists the tasks to set up network access on the switches to be managed by Preside Multiservice Data Manager (MDM) and provides references to the switch documents that contain the procedures required to complete the tasks. In this section, you can find the following information:” (page 29).

**3** Install the HSI software.

Estimated time: 0.5 hour.

See “Installing HSI/P software” (page 41).

**4** Load the X.25 software.

Estimated time: 0.25 hour

See “Loading X.25 software” (page 49).

You only need to perform this task if the workstation is used for managing networks that contain DPN switches or a mix of DPN and Passport switches. You do not need to perform this task in Passport-only networks.

**5** If you loaded the X.25 software, do one of the following

- If the workstation is used for managing DPN switches, configure an X.25 link between the workstation and the DPN switch that provides access to the Network Configuration System (NCS).

Estimated time: 1.5 hours

See “Configuring an X.25 link to DPN” (page 57).

- If the workstation is used for managing Passport switches, configure an X.25 link between the workstation and the DPN switch that provides access to the Passport network, then configure an IP connection on the X.25 link to gain access to the Passport switches in the network.

Estimated time: 2.0 hours

See “Configuring an X.25 link to DPN” (page 57) and “Configuring an IP over X.25 link to Passport” (page 65).

**6** Install SunLink Frame Relay software.

Estimated time: 0.5 hour

See “Installing Frame Relay software” (page 71).

You only need to perform this task if the workstation is used for managing a Passport-only network and is connected to the Passports by means of a Frame Relay link.

**7** Obtain the service parameters required to run the MDM Software Configuration tool.

Estimated time: 3 hours

See “This section contains the instructions for obtaining the service parameters required for Preside Multiservice Data Manager (MDM). In this section, you can find the following information:” (page 235).

**8** Load the MDM software.

Estimated time: 0.25 hours

See “Software installation” (page 95).

**9** Install an MDM licence and configure the MDM software.

Estimated time: 1 hour

See “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275).

This task consists of the following subtasks:

- a.** Set up the root account temporarily to run the MDM Software Configuration tool.
  - b.** Use the MDM Software Configuration tool to install a licence and configure the MDM software for the DPN and Passport switches in your network.
- 10** Perform the post-configuration tasks.

The estimated time to perform these tasks varies widely with the network configuration and software being used. Therefore we have not provided an estimate for this task.

See “Post configuration tasks” (page 285).



## Appendix B

# Installing workstation and communications hardware

---

This section contains the instructions for installing the workstation and communications hardware. In this section, you can find the following information:

- “Installation overview” (page 199)
- “Determining the workstation hardware required for MDM” (page 200)
- “Determining the communications hardware required for connecting MDM to the network” (page 201)
- “Installing the workstation and communications hardware” (page 206)

### Installation overview

Perform the following procedures to install the workstation and the communications hardware:

- 1 Determine the workstation hardware required for running the Preside Multiservice Data Manager (MDM).  
See “Determining the workstation hardware required for MDM” (page 200).
- 2 Determine the communications hardware required for connecting the MDM workstation to the network.  
See “Determining the communications hardware required for connecting MDM to the network” (page 201).
- 3 Install the workstation and communications hardware.

See "Installing the workstation and communications hardware" (page 206).

## Determining the workstation hardware required for MDM

To run Preside Multiservice Data Manager (MDM) software use a UNIX workstation provided by Sun Microsystems Inc., or any platform that is certified as SPARC Compliant by Sun Microsystems Inc.

Several SPARCstation models are available. The model of workstation (based on its CPU capability), the memory capacity, and the number and capacity of the disk drives required to run MDM depend on a number of factors including:

- the MDM tools and servers you are going to run on the workstation
- the configuration in which the workstation is to be used: standalone, stand-alone CPU server, NFS server, NFS client, Server Set Server, Client Set Server, or various combinations of these configurations

The minimum recommended hardware configuration needed to run MDM software is a stand-alone workstation with the following specifications:

- CPU performance: 400MHz
- RAM: 512 MB
- number of disks and capacity: one disk or two disks with a total minimum capacity of 9 GB
- monitor: 21-inch color

This minimum configuration is suitable for a stand-alone workstation as follows:

- only one operator uses the workstation for managing a network containing up to 200 modules (no X-terminals)
- the workstation runs MDM and no other management software, including Management Data Provider (MDP)

**Note:** This configuration is the minimum configuration needed to run MDM. When purchasing workstations to run MDM, contact your Nortel Networks technical representative to determine the workstation hardware requirements.

To determine the workstation hardware required for installations other than the bare minimum configuration, see the section on choosing a workstation in 241-6001-101 *Preside MDM Engineering Guide*.

## Determining the communications hardware required for connecting MDM to the network

The communications hardware required to connect a Preside Multiservice Data Manager (MDM) workstation to the network depends on the following factors:

- the type of link used for Network Access (X.25, Frame Relay, IP over X.25, IP over Frame Relay, or IP over Ethernet)

For an explanation of which link type to use, see the section on the types of network access in 241-6001-101 *Preside MDM Engineering Guide*.

- the transmission speed required
- the distance between the workstation and the switch that provides network access

An HSI card and the HSI software to drive it are required under the following circumstances:

- When the workstation is managing a Passport-only network and the workstation uses a Frame Relay link for network access. To make full use of the bandwidth provided by the Frame Relay link, install an HSI card in the workstation.
- When the workstation is managing a DPN-only network, or a DPN and Passport network, and the X.25 link to the DPN switches in the network operates at a data rate greater than 19.2 kbits/s. The only exception is UltraSparc workstations equipped with serial ports that operate at datarates up to 64 kbits/s. These ports can be used instead of an HSI card for datarates up to 64 kbits/s, subject to cable length and construction restrictions.

The following figures show the most common configurations for connecting a workstation to the network and the required communications hardware:

- “Communications hardware for DPN-only networks and mixed DPN and Passport networks” (page 203)
- “Communications hardware for Passport-only networks” (page 204)

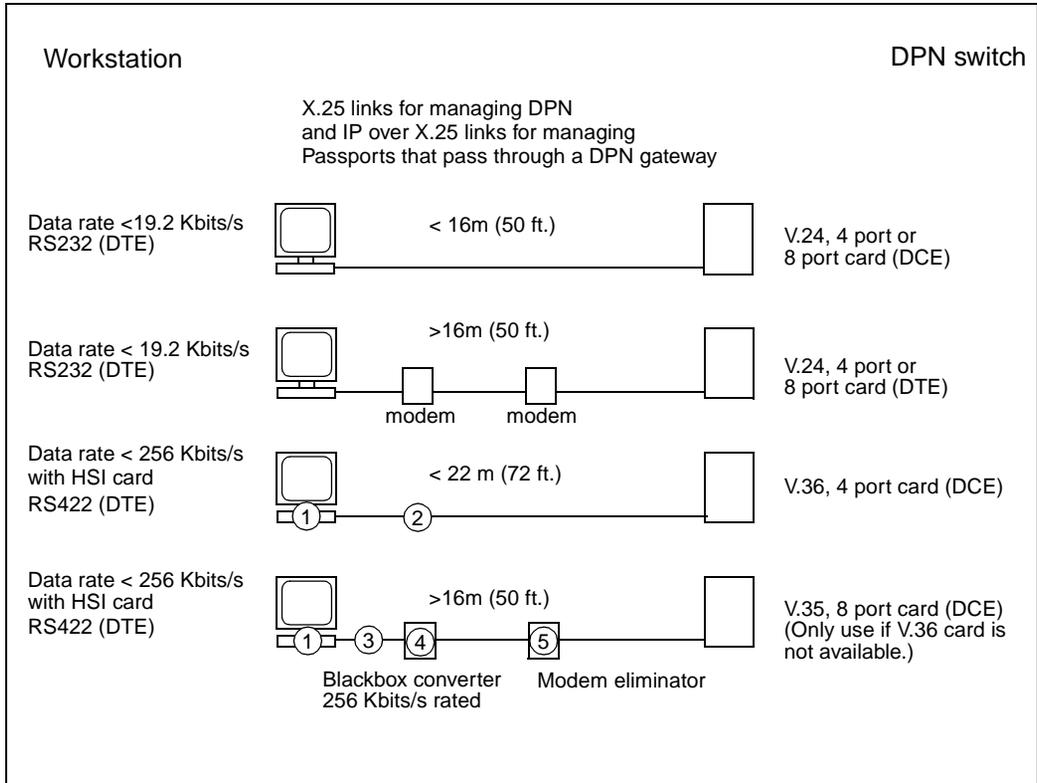
The callouts (1, 2...) in the figures refer to an item that is described in the table “Hardware used for connecting a workstation to the network” (page 205). Items in the figures that do not have callouts are available from local suppliers, and are not listed in the table.

To determine the communications hardware required to connect the workstation to DPN and Passport switches, use the following:

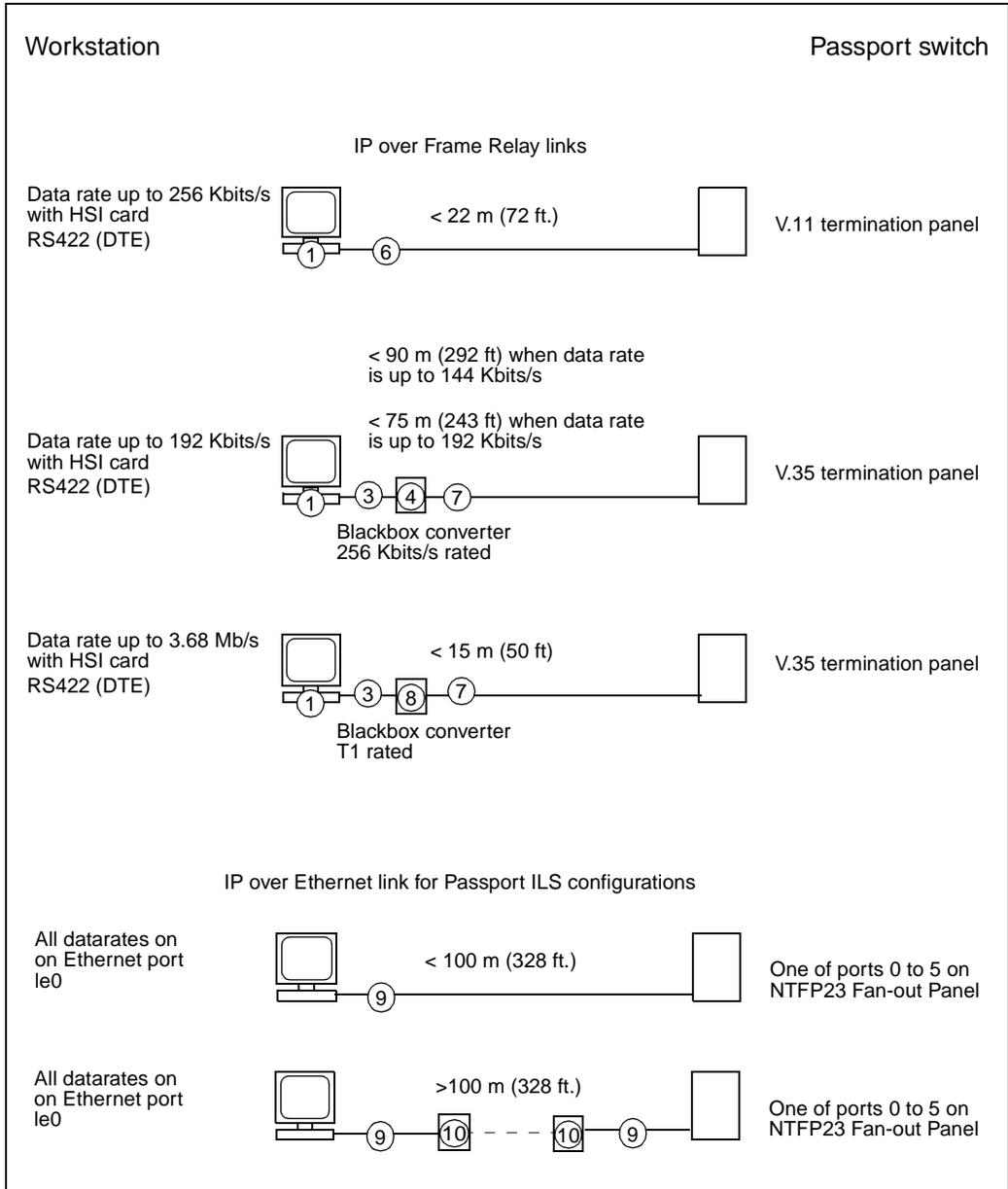
- figure “Communications hardware for DPN-only networks and mixed DPN and Passport networks” (page 203)
- figure “Communications hardware for Passport-only networks” (page 204)
- table “Hardware used for connecting a workstation to the network” (page 205)

Contact Nortel Networks for assistance in determining the communications hardware required for configurations not shown in the “Communications hardware for DPN-only networks and mixed DPN and Passport networks” (page 203).

**Figure 2**  
**Communications hardware for DPN-only networks and mixed DPN and Passport networks**



**Figure 3**  
**Communications hardware for Passport-only networks**



**Table 24**  
**Hardware used for connecting a workstation to the network**

| Item | Part number                  | Manufacturer      | Description                                                                                                                                                                                                                                                                                              |
|------|------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | X1155A                       | Sun Microsystems  | High-speed interface PCI card. This card installs inside the workstation.<br><br>An HSI card is required if the workstation connects to a DPN switch by an X.25 link that operates at a data rate greater than 19.2 kbits/s or if it connects to a Passport switch by means of a Frame Relay connection. |
| 2    | NT7P32AA                     | Nortel            | V.36 cable assembly, 3 m (16 ft.)                                                                                                                                                                                                                                                                        |
|      | NT7P32AB                     | Nortel            | V.36 cable assembly, 9 m (29 ft.)                                                                                                                                                                                                                                                                        |
|      | NT7P32AC                     | Nortel            | V.36 cable assembly, 22 m (65 ft.)<br><br>These cables connect to a V.36 PI card installed in a DPN switch. This card can only be installed in DPN switches that are running release G32 software and up.                                                                                                |
| 3    | TW-EDN37J                    | Blackbox          | RS-422 cable, male - male                                                                                                                                                                                                                                                                                |
| 4    | IC481A or IC41A-R2           | Blackbox          | R-422 to V.35 converter, rated at up to 256 kbits/s                                                                                                                                                                                                                                                      |
| 5    | ME-385 series<br>4038071-002 | Spectron          | Modem eliminator                                                                                                                                                                                                                                                                                         |
| 6    | customer-supplied            | customer-supplied | X.21 to RS449 interface converter cable, constructed according to Sun document <i>SunLink HSI/S 2.0 Installation and Administration Guide</i>                                                                                                                                                            |
| 7    | customer-supplied            | customer-supplied | V.35 34 pin female - 15 pin male                                                                                                                                                                                                                                                                         |
| 8    | IC483A                       | Blackbox          | RS-422 to V.35 converter, T1 rated                                                                                                                                                                                                                                                                       |
| 9    | customer-supplied            | customer-supplied | Cable, Ethernet 10BaseT, maximum length 100 m                                                                                                                                                                                                                                                            |
| 10   | customer-supplied            | customer-supplied | Ethernet Bridge, Hub, or Router                                                                                                                                                                                                                                                                          |

## Installing the workstation and communications hardware

Use this procedure to unpack the workstation, install an HSI card, and connect the workstation to the network.

- 1 Ensure that you have determined the following:
  - the workstation hardware as described in "Determining the workstation hardware required for MDM" (page 200)
  - the communications hardware as described in "Determining the communications hardware required for connecting MDM to the network" (page 201)
- 2 Obtain the hardware you determined in step 1.
- 3 Obtain the following documents:
  - SunSPARCstation Installation Manual
  - Sun HSI/P User's Guide (required if you are installing an HSI card)
  - Blackbox Installation Manual (required if you are installing a Blackbox protocol converter)
  - Spectron Modem Eliminator Manual (required if you are installing a Spectron Modem Eliminator)
- 4 Unpack all of the equipment according to the manufacturer's installation manuals and check for damaged or missing parts.
- 5 If your workstation requires an HSI card, install the card according to the *Sun HSI/ Card Installation Manual*.

**Note:** An HSI card is required if the workstation connects to a DPN switch by an X.25 link that operates at a data rate greater than 19.2 kbits/s or to a Passport switch by means of a Frame Relay connection.
- 6 Connect the components of the workstation according to the *Sun SPARCstation Installation Manual*.

**Note:** Do not switch on power to the workstation at this time.
- 7 Prepare the Blackbox converter (if used). Use the manufacturer's documentation to perform this task.
- 8 Prepare the Modem Eliminator (if used). Use the manufacturer's documentation to perform this task.
- 9 Connect the communications cabling from the workstation to the network, including the Blackbox protocol converter, modem eliminator, or modems, if used.

You are now ready to install and configure the Solaris operating system.



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## Appendix C Worksheets

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This appendix contains a set of worksheets that you can use to record the service parameters needed to configure the Preside Multiservice Data Manager (MDM) software.

See the following sections for information about the worksheets:

- “X.25 link and IP over X.25 connection information” (page 210)
- “Frame Relay information” (page 212)
- “OA group and member information for DPN access” (page 213)
- “Passport group and member information for Passport access” (page 214)
- “Multi-Nodal Naming Service Domains” (page 215)
- “Workstation Surveillance through GMDR” (page 215)
- “Disruptive Command Safeguard (DCS)” (page 217)
- “Network Time Synchronization (NTS) for DPN” (page 218)
- “Network Time Synchronization (NTS) for Passport” (page 221)
- “DPN Surveillance” (page 222)
- “Passport Surveillance” (page 222)
- “Global Alarm Clearing for DPN” (page 223)
- “Global Alarm Clearing for Passport” (page 223)
- “Provisioning File Access (PFAS)” (page 223)

- “Service Integrity Simplification” (page 223)

## X.25 link and IP over X.25 connection information

This section contains two worksheets. Use the following worksheet to capture information about the X.25 links between the workstation and the DPN switch.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | First link | Second Link | Third Link | Fourth Link |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------|-------------|
| <b>Workstation-end of the link:</b><br><br><b>DNA of workstation</b><br><br><b>physical port name on workstation</b><br><br><b>port identifier (zsh or, hih)</b><br><br><b>link number (0 to 8)</b><br><br><b>DNA of workstation</b><br><br><b>DPN -end of the link:</b><br><br><b>Module</b><br><br><b>PE number</b><br><br><b>PI number</b><br><br><b>Port number</b><br><br><b>Information about the X.25 link itself:</b><br><br><b>Default packet size</b><br><br><b>X.25 version</b><br><br><b>Default window size</b><br><br><b>CUG index</b> |            |             |            |             |

Use the following worksheet to capture information about IP connections running on the X.25 links between the workstation and Passport switches in your network. Use this worksheet in conjunction with the previous worksheet. This worksheet has enough space for four IP over X.25 connections. Copy this worksheet the number of times required to suit your network.

|                                                                                                                                                                                                                                                                                                                                                                                                           | First IP5 | Second IP | Third IP | Fourth IP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|----------|-----------|
| <b>Workstation-end of the connection:</b><br><br><b>DNA of workstation</b><br><b>IP address of workstation</b><br><b>physical port name on workstation</b><br><b>port identifier (zsh or, hih)</b><br><b>link number (0 to 8)</b><br><br><b>Passport end of the connection:</b><br><br><b>Host name</b><br><b>IP address</b><br><br><b>Information about the IP connection</b><br><br><b>X.25 version</b> |           |           |          |           |

## Frame Relay information

Use the following worksheet to capture information about the static Frame Relay links between the workstation and the Passport switches in your network. This worksheet has enough space for four Frame Relay connections. Copy this worksheet the number of times required to suit your network.

|                                                                                                                                                                                                                                                                                                                                                                                                    | First link | Second Link | Third Link | Fourth Link |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------|-------------|
| <b>Workstation-end of the link:</b><br><br>physical port name<br>on workstation<br><br>port identifier<br>(zsh or, hih)<br><br>link number (0 to 8)<br><br>IP address of<br>workstation<br><br><b>Passport-end of the link</b><br><br>host name<br><br>IP address<br><br>module<br><br>card<br><br>port<br><br><b>Information about the<br/>                     Frame Relay link:</b><br><br>DLCI |            |             |            |             |

## OA group and member information for DPN access

Use the following worksheet to capture information about each of the OA members and the OA groups to which they belong. This worksheet has enough space for seven members. Your network may have more. Copy the worksheet the number of times required to suit your network.

|                                        | Member | | | | | | |
|---|---|---|---|---|---|---|---|
| <b>OA Member (WS-MDI)</b>              |        |        |        |        |        |        |        |
| <b>Group name</b>                      |        |        |        |        |        |        |        |
| <b>Purpose (surveillance or other)</b> |        |        |        |        |        |        |        |
| <b>OA Name</b>                         |        |        |        |        |        |        |        |
| <b>DNA</b>                             |        |        |        |        |        |        |        |
| <b>CUG</b>                             |        |        |        |        |        |        |        |
| <b>Packet size</b>                     |        |        |        |        |        |        |        |
| <b>X.75 (Y or N)</b>                   |        |        |        |        |        |        |        |
| <b>RPOA</b>                            |        |        |        |        |        |        |        |

## Passport group and member information for Passport access

Use the following worksheet to capture information about Passports and the Passport groups to which they belong. The following worksheet has enough space for 14 Passport members. Your network may have more. Copy the worksheet the number of times required to suit your network.

|                             | Member | | | | | | |
|---|---|---|---|---|---|---|---|
| Hostname of Passport member |        |        |        |        |        |        |        |
| Group name                  |        |        |        |        |        |        |        |
| Purpose of group            |        |        |        |        |        |        |        |
| IP address of Passport      |        |        |        |        |        |        |        |

|                             | Member | | | | | | |
|---|---|---|---|---|---|---|---|
| Hostname of Passport member |        |        |        |        |        |        |        |
| Group name                  |        |        |        |        |        |        |        |
| Purpose of group            |        |        |        |        |        |        |        |
| IP address of Passport      |        |        |        |        |        |        |        |

## Multi-Nodal Naming Service Domains

Use the following worksheet to capture information about the MNSD level 2 domains in your network. This worksheet provides sufficient space for three MNSD domains.

|                                      | Master of domain | Member 1 | Member 2 | Member 3 | Member 4 | Member 5 |
|--------------------------------------|------------------|----------|----------|----------|----------|----------|
| Domain1<br>hostname:<br>IP address:  |                  |          |          |          |          |          |
| Domain 2<br>hostname:<br>IP address: |                  |          |          |          |          |          |
| Domain 3<br>hostname:<br>IP address: |                  |          |          |          |          |          |

## Workstation Surveillance through GMDR

Use the following information to capture the service name of the IMDR server to which the DMA server on this workstation is going to provide its server surveillance information. Only one entry is permitted for a workstation.

|                                  |
|----------------------------------|
| <b>IMDR server service name:</b> |
|----------------------------------|

## Workstation surveillance through NCS

Use the following worksheet to capture the information required to set up workstation server surveillance and workstation surveillance with NCS status probing. Only one entry is permitted for a workstation.

**OA member (ND-MDI destination):**

**DNA of the ND-MDI:**

**CUG index:**

**Packet size:**

**NCS Status probing (Y/N):**

**Probing interval:**

# Disruptive Command Safeguard (DCS)

Use the following worksheet to capture information about disruptive commands that you wish to add to the default set of disruptive commands provided with the Preside Multiservice Data Manager (MDM) software.

|                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Command:</b><br><b>Length:</b><br><b>NCS capability type:</b><br><b>NCS capability level:</b><br><b>NCS capability impact:</b><br><b>Message:</b> |
| <b>Command:</b><br><b>Length:</b><br><b>NCS capability type:</b><br><b>NCS capability level:</b><br><b>NCS capability impact:</b><br><b>Message:</b> |
| <b>Command:</b><br><b>Length:</b><br><b>NCS capability type:</b><br><b>NCS capability level:</b><br><b>NCS capability impact:</b><br><b>Message:</b> |
| <b>Command:</b><br><b>Length:</b><br><b>NCS capability type:</b><br><b>NCS capability level:</b><br><b>NCS capability impact:</b><br><b>Message:</b> |

## Network Time Synchronization (NTS) for DPN

Use the following worksheet to capture information about the Network Time Synchronization configuration for this workstation in your network.

| Parameter                                                                                       | Value |
|-------------------------------------------------------------------------------------------------|-------|
| <b>Parameters for accessing an OA in the NCS of a DPN network:</b>                              |       |
| Destination 1:                                                                                  |       |
| Destination mnemonic:                                                                           |       |
| NCS capability id:                                                                              |       |
| Password:                                                                                       |       |
| Time offset with respect to GMT:                                                                |       |
| How often the Preside Multiservice Data Manager (MDM) and the DPN network synchronize the time: |       |
| Destination 2:                                                                                  |       |
| Destination mnemonic:                                                                           |       |
| NCS capability id:                                                                              |       |
| Password:                                                                                       |       |
| Time offset with respect to GMT:                                                                |       |
| How often the MDM and the DPN network synchronize the time:                                     |       |
| Destination 3:                                                                                  |       |
| Destination mnemonic:                                                                           |       |
| NCS capability id:                                                                              |       |
| Password:                                                                                       |       |
| Time offset with respect to GMT:                                                                |       |
| How often the MDM and the DPN network synchronize the time:                                     |       |
| Destination 4:                                                                                  |       |
| (Sheet 1 of 3)                                                                                  |       |

| Parameter                                                   | Value |
|-------------------------------------------------------------|-------|
| Destination mnemonic:                                       |       |
| NCS capability id:                                          |       |
| Password:                                                   |       |
| Time offset with respect to GMT:                            |       |
| How often the MDM and the DPN network synchronize the time: |       |
| <b>What this MDM workstation uses as a time reference:</b>  |       |
| Radio clock (y/n):                                          |       |
| Internet clock (y/n)                                        |       |
| Server or peer:                                             |       |
| IP address of the Internet clock                            |       |
| XNTP version (optional)                                     |       |
| Comments (optional)                                         |       |
| Local clock (y/n)                                           |       |
| Stratum number of the local clock.                          |       |
| Clock in another workstation (y/n)                          |       |
| Server or peer:                                             |       |
| IP address of the other workstation:                        |       |
| XNTP version (optional):                                    |       |
| Comments (optional):                                        |       |
| <b>How this workstation operates as a time server:</b>      |       |
| The workstation acts primary time server (y/n)              |       |
| The workstation acts as a primary backup time server (y/n). |       |
| IP address of the primary time server:                      |       |
| (Sheet 2 of 3)                                              |       |

| <b>Parameter</b>                                                                                                                                                | <b>Value</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| The workstation acts as a secondary backup time server (y/n)<br><br>IP address of the primary time server:<br><br>IP address of the primary backup time server: |              |
| (Sheet 3 of 3)                                                                                                                                                  |              |

## Network Time Synchronization (NTS) for Passport

Use the following worksheet to capture information about the Network Time Synchronization configuration for this workstation in your network.

| Parameter                                                                                      | Value |
|------------------------------------------------------------------------------------------------|-------|
| <b>Parameter for obtaining the time or providing the time to a Passport module:</b>            |       |
| Time offset with respect to GMT:                                                               |       |
| <b>What this Preside Multiservice Data Manager (MDM) workstation uses as a time reference:</b> |       |
| Radio clock (y/n):                                                                             |       |
| Internet clock (y/n)                                                                           |       |
| Server or peer:                                                                                |       |
| IP address of the Internet clock                                                               |       |
| XNTP version (optional)                                                                        |       |
| Comments (optional)                                                                            |       |
| Local clock (y/n)                                                                              |       |
| Stratum number of the local clock.                                                             |       |
| Clock in another workstation (y/n)                                                             |       |
| Server or peer:                                                                                |       |
| IP address of the other workstation:                                                           |       |
| XNTP version (optional):                                                                       |       |
| Comments (optional):                                                                           |       |
| <b>How this workstation operates as a time server:</b>                                         |       |
| The workstation acts primary time server (y/n)                                                 |       |
| The workstation acts as a primary backup time server (y/n).                                    |       |
| IP address of the primary time server:                                                         |       |
| (Sheet 1 of 2)                                                                                 |       |

| Parameter                                                    | Value |
|--------------------------------------------------------------|-------|
| The workstation acts as a secondary backup time server (y/n) |       |
| IP address of the primary time server:                       |       |
| IP address of the primary backup time server:                |       |
| (Sheet 2 of 2)                                               |       |

## DPN Surveillance

Use the following worksheet in conjunction with the worksheet “OA group and member information for DPN access” (page 213) to capture information about OA groups used for surveillance.

|                              | Group 1 | Group 2 | Group 3 | Group 4 | Group 5 | Group 6 |
|------------------------------|---------|---------|---------|---------|---------|---------|
| <b>Group name:</b>           |         |         |         |         |         |         |
| <b>Destination mnemonic:</b> |         |         |         |         |         |         |
| <b>NCS capability id:</b>    |         |         |         |         |         |         |
| <b>Password:</b>             |         |         |         |         |         |         |

## Passport Surveillance

Use the following worksheet in conjunction with the worksheet “Passport group and member information for Passport access” (page 214) to capture information about Passport groups used for surveillance.

|                    | Group 1 | Group 2 | Group 3 | Group 4 | Group 5 | Group 6 |
|--------------------|---------|---------|---------|---------|---------|---------|
| <b>Group name:</b> |         |         |         |         |         |         |
| <b>Userid:</b>     |         |         |         |         |         |         |
| <b>Password:</b>   |         |         |         |         |         |         |

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## Global Alarm Clearing for DPN

Use the following worksheet to capture information needed to log in to NCS to perform global alarm clearing.

**OA Member (WS-MDI)**

**NCS Capability ID**

**Password**

## Global Alarm Clearing for Passport

Use the following worksheet to capture information needed to log in to Passport(s) to perform global alarm clearing.

**Passport Group Name**

**Passport Group User ID**

**Password**

## Provisioning File Access (PFAS)

Use the following worksheet to capture information needed to access the port on the workstation through which MCFs are to be downloaded.

**Port DNA:**

## Service Integrity Simplification

Use the following worksheet to capture information about the Service Integrity Simplification feature.

**SIS\_MCF\_DETERMINATION\_MODE:**

**SIS\_NAS\_MCF\_MODE:**

**SIS\_MDM\_MCF\_MODE:**

**SIS\_MDM\_MCF\_DAY**

**SIS\_MERGED\_MCF\_MODE**



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## Appendix D

# Loading software with Sun's Admintool

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This appendix contains a procedure for loading software with Sun's Admintool.

*Note:* Nortel Networks recommends that you use the tasks described in section "MDM software installation tasklist" (page 25) to install and configure the Preside Multiservice Data Manager (MDM) software.

- "Procedures overview" (page 225)
- "Installing MDM and mandatory supporting packages" (page 230)
- "Loading optional pixmaps for the Network Viewer" (page 233)

### Procedures overview

The installation CD-ROMs for the Preside Multiservice Data Manager (MDM) contain packages for the following:

- "MDM and MDM supporting software" (page 225)
- "Other software" (page 226)

### MDM and MDM supporting software

Perform the following procedures to install the Preside Multiservice Data Manager (MDM) software and the supporting software packages that are required to run MDM.

- 1 "Determining which packages to install" (page 227)
- 2 "Installing MDM and mandatory supporting packages" (page 230)
- 3 "Loading optional pixmaps for the Network Viewer" (page 233).

## Other software

Procedures for installing or configuring software other than the Preside Multiservice Data Manager (MDM) and MDM supporting software are detailed in other technical publications. The following list details the software and the publications that contain the relevant installation instructions.

- Management Data Provider (MDP)  
*241-6001-309 Preside MDM Management Data Provider User Guide*
- MDMWeb  
*241-6001-117 Preside MDMWeb Installation Guide*
- The nodal provisioning tool,  
*241-6001-610 Preside MDM Nodal Provisioning User Guide*
- ATM service provisioning tool  
*241-6001-600 Preside MDM Service Provisioning for ATM User Guide.*
- Frame Relay service provisioning tool  
*241-6001-603 Preside MDM Service Provisioning for Frame Relay User Guide*
- CES SVC service provisioning tool  
*241-6001-602 Preside MDM Service Provisioning for CES SVC User Guide.*
- IP VPN global update tool  
*241-6001-601 Preside MDM Service Provisioning for IP VPN Global Update User Guide.*
- The EPIC command line interface  
*241-6001-809 Preside MDM EPIC Reference Guide*
- Circuit Management  
*241-6001-612 Preside MDM Circuit Management User Guide*

## Determining which packages to install

The Preside Multiservice Data Manager (MDM) has two installation CD-ROMs:

- MDM software, other application software, and mandatory supporting software are on the MDM CD-ROM. For a list and description of the software provided on the MDM CD-ROM, see the MDM Release Supplement. This table also specifies the appropriate software versions to use.

To determine which packages to install from these MDM installation CD-ROM, see the table “Determining what you need from the CD-ROM” (page 227).

**Table 25**  
**Determining what you need from the CD-ROM**

| If you want to use...           | Then you need...                                                                                                                                                                                                                                                      | Package                                                                                                                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Multiservice Data Manager (MDM) | <ul style="list-style-type: none"> <li>- MDM base</li> <li>- Magellan Contrib software</li> <li>- AUX (Solaris patches for JRE)</li> <li>- JRE for Solaris</li> <li>- Apache server</li> <li>- NTPs for MDM (English)</li> <li>- MDM Help Document Browser</li> </ul> | <ul style="list-style-type: none"> <li>- MDM</li> <li>- MagTcl</li> <li>- AUX</li> <li>- MagJ&lt;release&gt;</li> <li>- MagApa&lt;release&gt;</li> <li>- MDMDOCen</li> <li>- MDMHelp</li> </ul> |
| Background bitmaps              | <ul style="list-style-type: none"> <li>- MDM base</li> <li>- background bitmaps</li> </ul>                                                                                                                                                                            | <ul style="list-style-type: none"> <li>- MDM</li> <li>- NVMAPS</li> </ul>                                                                                                                       |
| (Sheet 1 of 3)                  |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                 |

**Table 25 (continued)**  
**Determining what you need from the CD-ROM**

| If you want to use...                    | Then you need...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Package                                                                                                                                                                                                                                           |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nodal provisioning                       | <ul style="list-style-type: none"> <li>- MDM base (includes service provisioning)</li> <li>- nodal provisioning</li> <li>- nodal provisioning companion (if required)</li> </ul> <p>Note: Carrier data language (CDL) files have been made available on-switch as of the Passport releases starting with p5.1d.67 (BE01SUB), p7.0d.33 (BG0033A, p7.1d.8 (BG0108B), PCR1.1.52 (CA01S6A0, PCR1.2.40 (CA02SBB), PCR1.3.41 (CA03S3C), PCR2.0.39 (CB00S2E), and PCR2.1.37 (CB0137A). CDL for earlier Passport releases is made available in this companion package.</p> | <ul style="list-style-type: none"> <li>- MDM</li> <li>- NP</li> <li>- NPgc</li> </ul>                                                                                                                                                             |
| Circuit Management                       | - MDM base                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | - MDM                                                                                                                                                                                                                                             |
| Data Viewer                              | <ul style="list-style-type: none"> <li>- MDM base</li> <li>- Adventnet Web NMS</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>- MDM</li> <li>- MDM</li> </ul>                                                                                                                                                                            |
| Passport/SNMP Devices Backup and Restore | <ul style="list-style-type: none"> <li>- MDM base</li> <li>- AUX (Solaris patches for JRE)</li> <li>- JRE for Solaris</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>- MDM</li> <li>- AUX</li> <li>- MagJ&lt;release&gt;</li> </ul>                                                                                                                                             |
| Management Data Provider (MDP)           | <ul style="list-style-type: none"> <li>- MDM base</li> <li>- MDP software</li> <li>- Magellan Contrib software</li> <li>- AUX (Solaris patches for JRE)</li> <li>- JRE for Solaris</li> <li>- Apache Server</li> <li>- NTPs for MDM</li> <li>- NTPs for MDP</li> <li>- MDM Document Browser</li> <li>- Statistics Retrieval System (optional feature that requires MDM)</li> </ul>                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>- MDM</li> <li>- MDP</li> <li>- MagTcl</li> <li>- AUX</li> <li>- MagJ&lt;release&gt;</li> <li>- MagApa&lt;release&gt;</li> <li>- MDMDOCen</li> <li>- MDPDOCen</li> <li>- MDMHelp</li> <li>- SRS</li> </ul> |
| MDMWeb                                   | - MDM base                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | - MDM                                                                                                                                                                                                                                             |
| (Sheet 2 of 3)                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                   |

**Table 25 (continued)**  
**Determining what you need from the CD-ROM**

| If you want to use...                                                | Then you need...                            | Package        |
|----------------------------------------------------------------------|---------------------------------------------|----------------|
| Enhanced Passport Interface Controller (EPIC) command line interface | - EPIC software                             | - EPC<release> |
| HP OpenView Desktop                                                  | - MDM base<br>- HP OpenView Desktop for MDM | - MDM<br>- ODN |
| (Sheet 3 of 3)                                                       |                                             |                |

The MDM CD-ROM also provides two other packages for your convenience:

- MagTcl (including a Tcl/Tk interpreter and related extensions)
- MagPerl (including a Perl interpreter and related extensions)

These packages are not required as part of the MDM installation, but are made available so that you can customize network management activities. For example, you can use these packages with Embedded Programming Interfaces.

## Requirements for installing MDMHelp

MDM Help requires that you first install Netscape. Determine the appropriate version of Netscape by referring to the MDM Release Supplement. Install Netscape on the MDM workstation according to procedures defined by Netscape.

MDM Help assumes that you installed Netscape in the path /opt/netscape. If you use a different path to Netscape, then set the path to the Netscape executable using the environment variable NMSWEBBROWSER.

In addition to Netscape, you also need to install other software packages before you install MDMHelp. It is recommended that you install the following packages in this order:

- 1 MDM base
- 2 AUX (Solaris patches for JRE)

- 3 JRE
- 4 Apache
- 5 MDMHelp
- 6 MDMDOCen
- 7 MDPDOCen

For information about which software versions to install, see the MDM Release Supplement.

## Installing MDM and mandatory supporting packages

Use Sun's admintool to install the Preside Multiservice Data Manager (MDM) software and the mandatory supporting software from the MDM CD-ROM.

Do not use this procedure to install the software for the Management Data Provider. See "Procedures overview" (page 225) for more information.

- 1 Ensure that:
  - A CD-ROM drive is connected to your workstation and is powered up.
  - The Solaris operating system is installed and configured.
  - The volume manager is running on your workstation
  - You have the compact disk for the MDM software.
- 2 Log in as root.
- 3 Start c-shell

```
cs
```
- 4 Insert the MDM CD-ROM into the CD-ROM drive, pattern side up. If your drive uses a disk caddy, insert the disk into the caddy pattern side up, then slide the disk caddy into the CD-ROM drive.
- 5 Open a terminal window.
- 6 Start up Sun's admintool as a background process:

```
/usr/bin/admintool &
```

The Admintool: Users window opens.
- 7 From the Browse menu, select Software.

The Admintool: Software window opens and lists all software on the workstation.

- 8 From the Edit menu, select Add.

The Set Source Media dialog opens.

- 9 From Software Locations, select CD with Volume Management.

- 10 Type in the path name of the source media:

`/cdrom/cdrom0`

- 11 Click OK.

The Set Source Media dialog closes.

The Admintool: Add Software dialog opens and displays a list of the software on the CD.

- 12 Click on the name of each software package to load. For a list of the available packages and their dependencies and compatibilities, see "Determining which packages to install" (page 227).

**CAUTION****Difficulty getting the software to work properly**

Respect the package dependencies described in "Determining which packages to install" (page 227).

- 13 In the Admintool Add Software Dialog, click Add.

A Command Input/Output dialog opens, the software begins to load, and a prompt for confirmation appears.

- 14 For the first prompt, enter **Y**.

Installation continues.

- 15 Answer all subsequent prompts for confirmation that appear in the Command Input/Output dialog by entering: **Y**

When loading is complete, the Input/Output dialog displays a message to indicate that loading is successful and complete.



**CAUTION**

**Replying to Command Input/Output dialog in next step**

After you click Add in the Admintool: Add Software Dialog in the next step, you will be prompted for confirmation in the Command Input/Output dialog.

Do not reply to the prompt or press the return key yet!  
Instead, proceed to step 16.

- 16** Place the cursor in the Command Input/Output dialog, press the menu mouse button, pull down the Term Pane menu and choose History ->Store log as new file.
- 17** A Text Save As dialog opens. This dialog is used to specify the file used to store installation log information.
- 18** In the Save As field of the dialog type in the full path name of the log file. It is recommended that you use /var followed by MDM, the name of the package, the date, and .log.  
For example: /var/MDM131Dan010412.log
- 19** Click Save.  
The Text Save As dialog closes.  
The operating system creates a log file for the installation in /var.
- 20** Press the return key.  
The Admintool Add Software dialog closes.
- 21** In the File menu of Admintool Software dialog, select Exit.  
The Admintool Software dialog closes.
- 22** Eject the MDM CD-ROM by typing in the following command in the terminal window.

```
eject cdrom
```

You are now ready to install licenses for the MDM software and to configure it with the MDM Software Configuration tool, as described in “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275).

## Loading optional pixmaps for the Network Viewer

Use the following procedure to load optional pixmap images for Network Viewer.

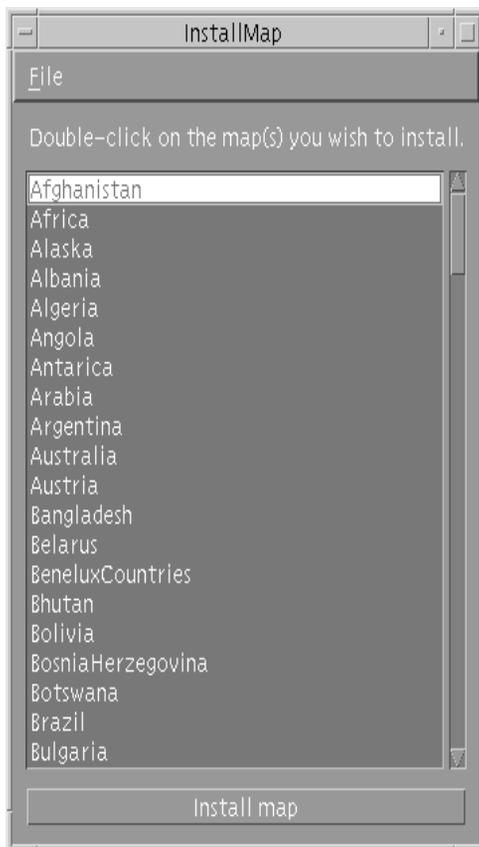
The compact disk that contains the MDM software package also contains a set of optional pixmap images that can be used as backdrops for Network Viewer. You can select one or more optional pixmap images from among approximately 120 pixmap images on the disk and load them by means of the installmap tool. This tool is also provided on the compact disk. The following procedure uses this utility to select and install pixmaps. Running the tool loads the pixmaps into directory `/opt/MagellanNMS/lib/nds/pixmaps`.

- 1 Ensure that:
  - A CD-ROM drive is connected to the workstation and is powered up.
  - The volume manager is running on the workstation.
  - The compact disk for the MDM software is loaded into the CD-ROM drive.
- 2 Log in as root.
- 3 Access the pixmaps directory on the compact disk:  

```
cd /cdrom/cdrom0/NVMaps
```
- 4 Start the installmap tool:  

```
./installmap &
```

The Install Map dialog opens.



- 5 Double click on the names of the pixmaps you wish to install.  
Click Install Map.

---

## Appendix E

# Obtaining the service parameters required for MDM

---

This section contains the instructions for obtaining the service parameters required for Preside Multiservice Data Manager (MDM). In this section, you can find the following information:

- “Overview” (page 236)
- “Software licenses for MDM (mandatory)” (page 237)
- “DPN access (mandatory for DPN)” (page 240)
- “Passport access (mandatory for Passport)” (page 244)
- “Multi-Nodal Naming Service (MNS) (optional)” (page 247)
- “Workstation Server Surveillance through GMDR (optional)” (page 249)
- “Workstation Surveillance through NCS (optional, DPN only)” (page 250)
- “Disruptive Command Safeguard (optional, DPN only)” (page 252)
- “Network Time Synchronization (NTS) (optional)” (page 255)
- “DPN surveillance (optional)” (page 261)
- “Passport surveillance (optional, Passport only)” (page 262)
- “Global alarm clearing (optional, DPN only)” (page 264)
- “Global alarm clearing (optional, Passport only)” (page 265)
- “Surveillance Network Model Updating (optional)” (page 266)

- “Provisioning File Access (optional, DPN only)” (page 267)
- “Service Integrity Simplification (SIS) (optional)” (page 268)

## Overview

Perform the following procedure to obtain the service parameters needed to configure the Preside Multiservice Data Manager (MDM) software with the MDM Software Configuration tool. The tool provides you with detailed help about the required parameters. However, configuring MDM with using the MDM Software Configuration tool is faster if you obtain the parameters in advance.

- 1 Refer to the following sections for information about the service data to obtain for configuring the MDM software with the MDM Software Configuration tool.
  - Service parameters for MDM Base software:
    - “Software licenses for MDM (mandatory)” (page 237)
    - “DPN access (mandatory for DPN)” (page 240)
    - “Passport access (mandatory for Passport)” (page 244)
    - “Multi-Nodal Naming Service (MNS) (optional)” (page 247)
    - “Workstation Server Surveillance through GMDR (optional)” (page 249)
    - “Workstation Surveillance through NCS (optional, DPN only)” (page 250)
    - “Disruptive Command Safeguard (optional, DPN only)” (page 252)
    - “Network Time Synchronization (NTS) (optional)” (page 255)
  - Service parameters for Fault:
    - “DPN surveillance (optional)” (page 261)
    - “Passport surveillance (optional, Passport only)” (page 262)
    - “Global alarm clearing (optional, DPN only)” (page 264)
    - “Surveillance Network Model Updating (optional)” (page 266)
  - Service parameters for Architect:
    - “Provisioning File Access (optional, DPN only)” (page 267)
    - “Service Integrity Simplification (SIS) (optional)” (page 268)

- 2 Write down the information you obtained on the forms provided in “Worksheets” (page 209).

You are now ready to load and configure the MDM software.

## Software licenses for MDM (mandatory)

Before you can run Preside Multiservice Data Manager (MDM) software, you need a license password and a customer identifier. Nortel Networks provides this information along with the MDM software on compact disk. If you require this information, contact your Nortel Networks account representative.

If your license has expired, or you need to extend the set of MDM software your license entitles you to run, obtain a new license from Nortel Networks.

Add the license password and the customer identifier to the following files:

- `/etc/opt/Magellan/LIClicenses.cfg`: the license key file
- `/etc/opt/Magellan/LICcustName.cfg`: the customer identifier file

You can add licensing information to these files by editing them with a UNIX editor, however, this method is not recommended due to the high risk of error. It is recommended that you use the MDM Software Configuration tool. For the instructions to use this tool, see “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275).

See the following sections for information on the service parameters you need for configuring a license:

- “License key file” (page 237)
- “Customer identifier file” (page 239)

### License key file

File `/etc/opt/Magellan/LIClicenses.cfg` contains one or more license keys. A license key is a single line of information that consists of the following fields. You must enter the service parameters in these fields exactly as provided, otherwise the software will not run at all, or you may be unable to run some of the servers and tools.

```
<product name> <release> <customer identifier>  
<host name> <start date> <expiry date> <options bitmap>  
<key>
```

where:

`product name` is the name of the product that the software runs on.

Values: MDM

MDM specifies that the license is to run on MDM products. This is also the default value, and the only value permitted.

`release` is the software release to which the license applies.

Values: the software release code contained in the license password, consisting of up to 6 alphanumeric characters.

Example: R12

`customer identifier` is a unique name that identifies you as a customer.

Values: the customer name contained in the license password, consisting of up to 10 alphanumeric characters with no spaces. This name must match the entry in the customer identifier file `/etc/opt/Magellan/LICcustName.cfg`.

Example: NORTEL

`host name` is the hostname of the workstation on which the software is licensed to run. Currently the software can be run on any workstation.

Values: ANY

ANY specifies that the license is to run on any workstation. This is also the default value.

`start date` is the date at which the license becomes valid.

Values: the start date contained in the license password, consisting of eight digits in the format `yyyymmdd`

Example: 20000120

`expiry date` is the date at which the license expires.

Values: the expiry date contained in the license password. The default is 20300101.

Example: 20100120

`options bitmap` are the hexadecimal characters that represent the software packages you are licensed to run.

Values: the string of up to eight hexadecimal characters in your license password, which represents the software packages you are licensed to run

Example: 336

To obtain a list of the software packages that the options bitmap represents, open a UNIX window or a terminal window and enter the following command:

```
/opt/MagellanNMS/system/config/nms_list_options  
<options_bitmap>
```

`key` is the license password.

Values: the 11 bit encrypted password for your license

## Customer identifier file

File `/etc/opt/Magellan/LICcustName.cfg` contains a single customer identifier. The customer identifier you enter in this file must match one of the `<customer identifier>` fields in the license key file. See “License key file” (page 237) for a description of this field.

## DPN access (mandatory for DPN)

Setting up access to the DPN switches means:

- defining each DPN Operations Agent (OA) in the Network Control System (NCS) as a member of an OA group and entering the service parameters that the Preside Multiservice Data Manager (MDM) software needs to communicate with each OA. The MDM workstation accesses the OA through a workstation management data interface (WS-MDI) on the OA.
- if necessary, adding an OA that has been previously defined as a member of one group to one or more other groups. An OA can be a member of more than one group.

For DPN Access:

- define at least one OA group. This group can contain more than one member
- if you wish to receive alarms and surveillance information automatically from the DPN switches in your network, create at least one special group called a surveillance group dedicated to gathering alarms and surveillance information

Putting each OA into an OA group that is dedicated to gathering alarms and surveillance information allows you to manage surveillance on an organizational or a regional basis. For example, you can define one surveillance group that gathers alarms and surveillance information from the DPN switches in the eastern half of your network and another surveillance group for the DPN switches in the western half of your network.

For guidelines to group each OA, structure them in the NCS hierarchy, and to define userids and passwords for DPN access and DPN surveillance, see 241-6001-303 *Preside MDM Administrator Guide*.

## Service parameters for creating a new OA member

The following parameters are required to define an Operations Agent (OA) as a new member of an OA group:

`Group name` is the name of the OA group to which the new member belongs. If you specify the name of a group that does not already exist when you are using Preside Multiservice Data Manager (MDM) Software Configuration, a new group is created.

Values: a group name consisting of an uppercase string of from 1 to 12 characters. The group name must be unique system wide. If the group name consists of more than one word, join the words by means of underscore characters. If you wish to gather alarms and surveillance information automatically from each OA in your network, we recommend that you create at least one special group, called a surveillance group, that is dedicated to gathering the alarms and surveillance information.

Examples:

the name of a group used for provisioning and troubleshooting:  
OAMGROUP

the name of a surveillance group: SURV\_G1

`OA member` is the name used to identify the connection on the workstation management data interface (WS-MDI) on the OA. An OA can have multiple connections; the OA member parameter defines which of the connections is involved.

Values: a name consisting of a combination of up to 12 alphanumeric characters that begins with a letter. The OA member must be unique on the workstation you are installing.

Example: OAM1

`OA name` is the name of the OA on which the WS-MDI is located

Values: the mnemonic for the OA consisting of up to 12 alphanumeric characters

Example: TopOA

`DNA` is the data network address used to access the WS-MDI.

Values: a valid DNA consisting of up to 15 decimal digits

Example: 9001523123345500

`CUG index` is the index number of the closed user group (CUG) to which the WS-MDI belongs.

Values: a valid two-digit CUG index

`Packet size` is the default size for data packets transmitted between the Preside Multiservice Data Manager (MDM) workstation and the WS-MDI.

Values: 128, 256 or 512. The default is 256.

`MDI connection supported on X.75 (y/n)` specifies whether the connection from the MDM workstation to the WS-MDI passes through an X.75 link. X.75 links are used to interconnect two packet networks, either public or private.

`RPOA number` is the number used to identify the Recognized Private Operating Agency (RPOA) that owns the X.75 link to the WS-MDI.

Values: a valid four-digit RPOA number. This number must be unique for all networks.

Example: 1243

## Service parameters for creating and configuring OA groups

The following parameters are required to add an Operations Agent (OA) that has been previously defined as member of an OA group to one or more other groups. An OA can be a member of more than one OA group.

`Group name` is the name of the OA group to be created or to which an existing member is to be added. If you specify the name of a group that does not already exist when using Preside Multiservice Data Manager (MDM) Software Configuration, a new group is created.

Values: a name consisting of an uppercase string of from 1 to 12 characters. The group name must be unique system wide. If the group name consists of more than one word, join the words by means of underscore characters. If you wish to gather alarms and surveillance information automatically from the DPN switches in your network, we recommend that you create at least one special group, called a DMDR group, that is dedicated to gathering alarms and surveillance information.

Examples:

the name of a group used for provisioning and troubleshooting:  
OAMGROUP

the name of a DMDR group dedicated to gathering alarms and surveillance information: G1

`OA_member` is the name used to identify the connection on the workstation management data interface (WS-MDI) of the OA. You can use the same OA member in more than one OA group.

Values: a name consisting of a combination of up to 12 alphanumeric characters that begins with a letter. The OA member name must be unique network wide.

## Passport access (mandatory for Passport)

Setting up access to the Passport switches means:

- defining each Passport switch as a member of a group of Passport switches and entering the service parameters the Preside Multiservice Data Manager (MDM) software needs to communicate with the Passport switch over an IP link (IP over Frame Relay or IP over Ethernet)
- if necessary, adding a Passport switch that has been previously defined as member of one group to one or more other groups

A Passport switch can be a member of more than one group.

For Passport Access:

- You must define at least one Passport group. This group can contain more than one Passport member.
- If you wish to receive alarms and surveillance information automatically from the Passport switches in your network, we recommend that you create at least one special group, called a surveillance group, whose only purpose is to gather alarms and surveillance information.
- Nortel Networks recommends that you do not put Passport 7000 series switches and Passport 15000 switches in the same group.

Dividing Passport switches into groups allows you to control access to Passport switches according to the type of operations a user can perform, or according to a geographical region. For example, you can define one group for provisioning and another for surveillance, or one group for the Passport switches in the eastern half of your network and another for the Passport switches in the western half of your network.

## Service parameters for creating a new Passport member

The following parameters are required to define a Passport switch as a new member of a Passport group.

`Group name` is the name of the group of Passports to which the new member belongs. If you specify the name of a group that does not already exist, a new group is created for you.

Values: a name consisting of an uppercase string of from 1 to 12 characters. The group name must be unique system wide. If the group name consists of more than one word, join the words by means of underscore characters. If you wish to gather alarms and surveillance information automatically from the Passport switches in your network, we recommend that you create at least one special group, called an FMDR group, that is dedicated to gathering surveillance information.

**Note:** Do not use the name of a Passport module as a group name. Doing so can cause confusion for users of the Command Console.

Examples:

the name of a group used for provisioning and troubleshooting:  
FMGROUP

the name of an FMDR group dedicated to gathering alarms and surveillance information: FG1

`Host name` is the name of the Passport switch as stored in the service data of the Passport switch

Values: the name in the form of an uppercase character string consisting of from 1 to 12 characters, as stored in the Passport switch

Example: host1

`IP address` is the IP address of the Passport switch

Values: a valid IP address consisting of four numbers from 1 to 3 digits, separated by periods

Example: 02.04.02.120

## Service parameters for creating/configuring Passport groups

The following parameters are needed to add a Passport switch that has been previously defined as a member of a Passport group to one or more other groups. A Passport switch can be a member of more than one Passport group.

`Group name` is the name of the group of Passports to which the new member belongs. If you specify the name of a group that does not already exist when using the Preside Multiservice Data Manager (MDM) Software Configuration, a new group is created for you.

Values: a name consisting of an uppercase string of from 1 to 12 characters. The group name must be unique system wide. If the group name consists of more than one word, join the words by means of underscore characters. If you wish to gather alarms and surveillance information automatically from the Passport switches in your network, we recommend that you create at least one special group, called an FMDR group, that is dedicated to gathering surveillance information.

**Note:** Do not use the name of a Passport module as a group name. Doing so can cause confusion when using the Command Console.

Examples:

the name of a group used for provisioning and troubleshooting:  
FMGROUP

the name of an FMDR group for gathering alarms and surveillance information: FMDR\_G1

`Host name` is the name of the Passport switch as stored in the service data of the Passport switch

Values: an uppercase string of from 1 to 12 characters

## Multi-Nodal Naming Service (MNS) (optional)

Configuring MNS domains involves setting up a Preside Multiservice Data Manager (MDM) workstation to run a level 2 MNSD process, and defines the set of workstations that can use that level 2 MNSD process. If the workstation you are installing is a standalone workstation, you do not need MNS.

To manage medium and large networks, several workstations running MDM software can be deployed as servers and clients on the same Ethernet LAN.

The server workstations can be configured to run sets of MDM processes called MDM servers that support the following main areas of MDM services: surveillance, support of the Network Model, provisioning, and network access (access to the DPN switches and Passport switches in the network). Workstations configured to run these servers are referred to as Server Set workstations.

The client workstations can be configured just to run the servers that support user sessions and provide access to the MDM tools. Workstations configured to run these servers are referred to as Client Set workstations. To perform their functions, the servers on the Client Set workstations require the services provided by the servers on the Server Set workstations.

One of the functions of the MNS is to provide software processes running on Client Set and Server Set workstations with a single place to register. Registering allows the processes to locate each other so that they can interact and share services. For this to occur, at least one of the workstations on the LAN must run a level 2 MNSD process. Configuring MNS with MDM Software Configuration sets up a level 2 MNSD process on a workstation. A group of workstations running processes that use the same level 2 MNSD process as a place to register are known as a level 2 MNSD domain. You can have more than one level 2 MNSD domain on the same LAN.

When setting up level 2 MNSD domains:

- You can run create any number of level 2 MNSD domains on the LAN, but you must configure at least one domain.
- For redundancy, consider running a level 2 MNSD process on more than one of the workstations in the same level 2 MNSD domain. For the best possible redundancy, we recommend that you run a level 2 MNSD process on every Server Set workstation in a level 2 MNSD domain.
- You can configure a workstation to belong to more than one level 2 MNSD domain. This is useful if you wish to have the workstation manage different regions in your network, or to use a service that is only available in another domain.
- If you plan to use a Naming Information Service (NIS) and as one of the service parameters to set up this configuration and you enter a hostname that is not defined in the NIS database, you must enter the hostname into the NIS database using Sun's NIS Administration Tool Suite.

### **Service parameters for Multi-Nodal Naming Service (MNS)**

The following parameter is required to set up an MNS domain:

`Host name` is the hostname of a workstation in the level 2 MNSD domain to which Preside Multiservice Data Manager (MDM) workstation belongs. You require the hostname of every workstation in the level 2 MNSD domain.

Values: a hostname for an MDM workstation in this level 2 MNSD domain consisting of up to eight alphanumeric characters. The hostname must represent a workstation that is connected to the same Ethernet LAN. You do not have to specify the hostname for the workstation (`localhost`) when entering the host name parameter - only the hostnames of other workstations in the domain. Software automatically includes `localhost` as one of the workstations in the level 2 MNSD domain.

Example: `acrssy402`

IP address is the IP address associated with the hostname.

Values: a valid IP address consisting of four numbers from 1 to 3 digits separated by periods

Example: 02.04.02.120

## Workstation Server Surveillance through GMDR (optional)

Configuring workstation surveillance through GMDR allows a Preside Multiservice Data Manager (MDM) workstation to forward its own server alarms and status changes (surveillance information) through an IMDR server to a GMDR server that runs on the same MDM workstation or on another MDM workstation. By setting up a hierarchy of GMDR servers on the MDM workstations in your network, it is possible to forward a workstation's server alarms so that they can be displayed on some or all of the MDM workstations in your network.

In a network that only contains DPN switches, or that contains a mix of DPN switches and Passport switches, an alternate method is available for forwarding a workstation's server alarms and surveillance information to other MDM workstations. Instead of routing them on an IMDR server to a GMDR server, they can be routed to the top Operations Agent (OA) in the Network Control System (NCS) that runs on the DPN switches. For information about this alternate method, see "Workstation Surveillance through NCS (optional, DPN only)" (page 250).

If the IMDR server to which server alarms are being forwarded is located on another workstation, the MDM workstation forwarding the alarms and the workstation that is running the IMDR server must both be located on the same LAN.

Setting up a workstation to forward its server alarms and status changes through an IMDR server to a GMDR server requires you to enter service parameters that identify the connection to the IMDR server. See "Service parameters for Workstation Server Surveillance through GMDR" (page 250).

**Note:** When you have completed all of the configuration work using the MDM Software Configuration tool and rebooted the MDM workstation, you must use GMDR Administration to configure the GMDR servers to

obtain surveillance information from the IMDR servers that gather the surveillance information from DMA. For instructions on using the GMDR Administration tool, see 241-6001-303 *Preside MDM Administrator Guide*.

## Service parameters for Workstation Server Surveillance through GMDR

The following parameters are required to set up Workstation Server Surveillance through GMDR.

`IMDR Network Interface Service Name` is the name used to identify the connection to the IMDR server to which the surveillance information is to be routed.

Values: the name of the IMDR server consisting of up to 64 alphanumeric characters.

`Hostname` is the hostname of the remote Preside Multiservice Data Manager (MDM) workstation on which the IMDR server is located.

Values: the hostname of an MDM workstation on the LAN, consisting of up to eight alphanumeric characters. Do not use localhost for this parameter.

`IP address` is the IP address of the workstation that has the IMDR server. You do not need this parameter if the IP address is already defined in the file `/etc/hosts`.

Values: a valid IP address consisting of four numbers from 1 to 3 digits separated by periods.

## Workstation Surveillance through NCS (optional, DPN only)

Configuring Workstation Status Surveillance through Network Control System (NCS) is optional and it only applies if you have DPN switches in your network.

Configuring Workstation Status Surveillance through NCS allows an MDM workstation to inject alarms and component status changes (surveillance information) into the NCS that runs on the DPN switches in your network.

The NCS propagates these status changes throughout the network, including any MDM workstations that are connected to the network.

The workstation status information is injected into a non-DPN workstation management interface (ND-MDI) on an Operations Agent (OA) in the NCS. You can only identify one ND-MDI for injecting alarms into NCS.

An alternate method is available for forwarding a workstation's alarms and surveillance information to other MDM workstations. Instead of routing them through NCS, they can be routed through an IMDR server to a GMDR server on the same workstation or on a remote workstation. For information about this alternate method, see "Workstation Server Surveillance through GMDR (optional)" (page 249).

Setting up Workstation Status Injection includes entering service parameters that allow the MDM workstation to establish communications with the ND-MDI (OA member, DNA, CUG index, packet size) and a parameter to define a probing interval.

The probing interval parameter is passed to the NCS. At the specified interval, the NCS probes the workstation for status information. If the NCS is unable to obtain a reply from the workstation, it assumes that the entire workstation is down, and propagates the workstation's status throughout the NCS. Probing is optional. If probing is not selected, only server alarms from the workstation are propagated throughout the network. Without probing, the NCS has no way of determining that the entire workstation is unavailable.

## **Service parameters for Workstation Surveillance through NCS**

The following information is required to configure Workstation Surveillance through Network Control System (NCS).

`OA member` is the name used to identify the connection on the ND-MDI of the Operations Agent (OA)

Values: a valid OA member consisting of up to 12 alphanumeric characters. The OA member must be one of the those you defined for DPN Access.

Example: TopOA

`DNA` data network address (DNA) used to access the ND-MDI.

Values: a valid DNA consisting of up to 15 decimal digits

Example: 90015634281200

`CUG index` is the index number of the closed user group (CUG) to which the ND-MDI belongs.

Values: any valid two-digit CUG index

`Packet size` is the default size for data packets transmitted between the Preside Multiservice Data Manager (MDM) workstation and the ND-MDI.

Values: 128, 256 or 512; the default is 256

`Probing interval` the time interval for NCS to probe the MDM workstation. This parameter is needed only if you plan to have NCS probe the workstation to determine if it is still alive.

Values: the probing interval in minutes expressed as a number from 1 to 99. The default is 5.

Example: 30

## **Disruptive Command Safeguard (optional, DPN only)**

Configuring the Disruptive Command Safeguard is optional.

Configuring the Disruptive Command Safeguard lets you add commands to the starter set of disruptive DPN commands provided with the Preside Multiservice Data Manager (MDM) software.

The Disruptive Command Safeguard intercepts commands entered at an MDM workstation that have the potential to interrupt service on a DPN module. When a user at a terminal enters a command that is one of the disruptive commands listed in a configuration file, the safeguard displays a warning message (optional) and prompts the user to confirm or cancel the command.

The MDM software includes the file `/opt/MagellanNMS/cfg/DCS.cfg`, which contains a starter set of disruptive commands that are intercepted by the safeguard. This set should be sufficient for most DPN networks; however, you can add to them, if desired.

## Service parameters for the Disruptive Command Safeguard

Service parameters for the Disruptive Command Safeguard are as follows.

`Command` is the name of the potentially disruptive command that you wish to intercept

Values: the name of any valid DPN command. See 241-1001-303 *DPN-100 Operator Commands and Responses* for a list and a description of the valid commands.

Example: ENABLE

`Minimum length` minimum number of characters that you must enter for DPN to be able to recognize the command

Values: a decimal number from 1 to 12 that represents the minimum number of characters that the Network Control System (NCS) for DPN needs to recognize the command. The number must match that specified in the NCS. For the minimum number of characters in an NCS command, see 241-1001-303 *DPN-100 Operator Commands and Responses*.

Example:

ENAble



Minimum number of characters to enter = 3

`NCS capability type` is the type of NCS capability required to execute the command.

Values: NAMS, INHERITED, or SWITCHING. Contact your DPN Network Administrator to determine the NCS capability type set up in your NCS to permit execution of the command.

Example: NAMS

`NCS capability level` is the level of NCS capability required to execute the command.

Values: APPLICATION, OA, NETWORK, LINE, or DEVICE. Contact your DPN Network Administrator to determine the NCS capability level set up in your NCS to permit execution of the command.

Example: APPLICATION

`NCS capability impact` is the NCS capability impact required to execute the command.

Values: NONE, PASSIVE, SERVICE CONFIGURATION, or PRIVILEGED

Contact your DPN Network Administrator to determine the NCS capability impact set up in your NCS to permit execution of the command.

Example: PRIVILEGED

`Message` is the warning message to be displayed when a user enters the command.

Values: any combination of up to 256 alphanumeric characters

Example: Do not enable this module until Friday 13, at which time commissioning will be completed.

## Network Time Synchronization (NTS) (optional)

Configuring NTS is optional.

The NTS system ensures that the time of day is the same on all Preside Multiservice Data Manager (MDM) workstations and switches in a network.

**Note:** NTS is only used to synchronize the time of day and ensure that accounting records, alarms, and logs bear a consistent timestamp. It has nothing to do with clocking on asynchronous data links.

Before attempting to configure NTS, you must plan the timing relationships between the MDM workstations and switches in your network. For instructions to plan these relationships, see the section on synchronizing the network time in 241-6001-303 *Preside MDM Administrator Guide*.

As part of your planning, you must choose whether the workstations are going to supply or obtain the time from each Operations Agent (OA) on the DPN switches the network. If you decide that the workstations are going to supply the time to DPN, you must choose reference time sources for your network which can be any of the following:

- an Internet clock
- a precise timing device such as a radio clock
- the internal clock in the workstation
- the clock in another workstation

**Note:** If you choose a DPN OA as the time source for your network, do not choose any other time source.

Choose one MDM workstation in your network as the primary time server, and, if you have them, a second as the backup time server and a third as the secondary backup time server.

When the planning is complete, you need the service parameters in the following sections.

## Service parameters for obtaining the time or providing the time to a DPN OA

The following parameters are always required regardless of whether a workstation is going to provide the time to an Operations Agent (OA) or obtain the time from an OA. If there are no DPN switches in your network, you do not need any of the parameters in this section.

`OA member` is the name used to identify the connection on the WS-MDI of the OA to which the Preside Multiservice Data Manager (MDM) software logs and synchronizes the time.

Values: a valid OA member consisting of up to 12 alphanumeric characters. The OA member must be one of those you defined for DPN Access.

`NCS capability` is the password that is required to log in to the OA.

Values: a valid NCS capability id consisting of up to 12 alphanumeric characters. Obtain the NCS capability id from your DPN Network Administrator.

`NCS password` is the password required to log on to the OA.

Values: a valid password consisting of up to 12 alphanumeric characters. Obtain the NCS password from your DPN Network Administrator.

`Offset` is the time difference between Greenwich Mean Time (GMT) and the time on this MDM workstation as measured in an easterly direction, starting at Greenwich.

Values: the time difference expressed in minutes (0 to 1440) between GMT and the time on the MDM workstation. The time difference must be specified as though you are travelling around the globe in an easterly direction starting at Greenwich.

**Examples:**

A workstation is located in Ottawa, Canada. As you travel in an easterly direction starting at Greenwich, the time difference between Greenwich and Ottawa is 19 hours. The offset for the workstation is therefore  $(19 \times 60) = 1140$ .

A workstation is located in Auckland, New Zealand. As you travel in an easterly direction starting at Greenwich, the time difference between Greenwich and Auckland is 8 hours. The offset for the workstation is therefore  $(8 \times 60) = 480$ .

`Cron job interval` is how frequently a cron job should be run to synchronize the time between MDM and DPN.

Values:

2, 4, 6, 8, or 12. The default is 6.

The interval for running the cron job depends on the maximum acceptable time difference between the MDM workstation and the DPN switches in your network, and the rate at which the time on the MDM workstation and the DPN switches drift apart.

You can use the following formula to calculate the interval. However, if you have insufficient data to calculate the interval by means of the formula, specify the default value of 6 to start off with, then monitor the drift and use the formula to fine-tune the interval later.

```
interval={(<actual_drift>/<allowable_drift>)+0.5}/24
```

where:

`drift` is the time difference in seconds between MDM and DPN after a 24-hour period.

`allowable drift` is maximum acceptable time difference in seconds between MDM and DPN.

## Service parameters for obtaining the time or providing the time to a Passport module

Passports obtain time settings from the Preside Multiservice Data Manager (MDM) host. For more information about network time synchronization, see 241-6001-303 *Preside MDM Administrator Guide*. For information about setting the offset parameter for the Passport Communications Manager (FDTM), including examples, see 241-6001-310 *Preside MDM Server Reference Guide*.

## Service parameters for a local clock

Only one service parameter is required for a local clock. This service parameter is as follows:

127.127.1. <ref\_id> is the special IP address that is used to designate the local clock.

where:

127.127.1. are digits that are part of the special IP address that is reserved for defining the internal clock as a time source (a server)

<ref-id> is a digit from 1 to 4 that uniquely identifies the internal clock you are using as a time server. It is used to distinguish the IP address of the internal clock from the IP addresses of all other possible internal clocks.

## Service parameters for the clock in another workstation or for an Internet clock

If you choose the clock in another Preside Multiservice Data Manager (MDM) workstation or an Internet clock to be the reference time source for your MDM workstation, the following service parameters are required.

IP address of the time reference is the IP address of the Internet clock or the clock in another workstation. If the clock you selected as a time source is the clock in another workstation, this is the IP address the other workstation. If the clock you selected as a time source is an Internet clock,

this is the IP address of the Internet server that provides access to the Internet clock. For a list of the available servers, open a UNIX window and view the contents of file `/opt/MagellanNMS/doc/help NTSClock.info`.

Values: a valid IP address consisting of four numbers from 1 to 3 digits separated by periods. For the clock in another workstation, the IP address must be a valid IP address for one of the MDM workstations. For Internet clocks, the IP address must be a valid address selected from file `/opt/MagellanNMS/doc/help NTSClock.info`.

**Note:** Although this file was the latest one available when the MDM software was delivered, the contents of this file may no longer be current. It is your responsibility to contact the administrator of the Internet time server you wish to use and ensure that the IP address you enter is correct.

Example: 02.04.02.120

`XNTP version` is the version of the XNTP software that is running on the workstation or the Internet server. The version is only required if the Internet server is running version 1 or version 2 of the XNTP software.

Values: a single-digit number from 1 to 4.

`Comments` are information you wish to add about the workstation or the Internet clock.

Values: a string of up to 256 characters. It is recommended that you enter a string that describes this clock.

Examples:

Internet clock, Hal @ 9000 computers.com

Clock in primary time server workstation, host a

## Service parameters for a Radio Clock

The service parameters required for setting up a Radio Clock vary according to the manufacturer. Refer to the documentation supplied by the manufacturer of the radio clock for the instructions to configure it.

## Service parameters for primary and secondary backup time servers

If you decide that a Preside Multiservice Data Manager (MDM) workstation is going to provide the time to an Operations Agent (OA), the MDM Software Configuration tool prompts you for the type of time server that the MDM workstation is being used as, and for related service parameters, as described in the following paragraphs.

`Workstation server type` is the type of time server that the workstation is in your network. The choices are:

`Primary time server` The workstation acts as the primary time source for the other workstations and the DPN switches in your network.

`Primary backup time server` The workstation acts as the time source for the other MDM workstations and the DPN switches in your network, if the primary time server MDM workstation fails.

`Secondary or other backup time server` The workstation acts as the time source, if the primary and the backup MDM workstations fail.

`IP address of primary time server` is the IP address of the MDM workstation that you chose to be the primary time server for your network. We recommend that you designate one of the MDM workstations in your network as the primary time server for all of the MDM workstations and the Passport switches in your network. If you have sufficient workstations in your network, we also recommend that you designate a second MDM workstation to be a primary backup time server and a third as a secondary backup time server.

Values: a valid IP address consisting of four numbers from 1 to 3 digits, separated by periods

Example: 02.04.02.120

IP address of the next backup time server is the IP address of the MDM workstation that the workstation is to use as a backup time source if the MDM workstation fails from which it is getting the time

Values: a valid IP address consisting of four numbers from 1 to 3 digits, separated by periods

Example: 02.04.02.120

## **DPN surveillance (optional)**

Configuring DPN surveillance allows a Preside Multiservice Data Manager (MDM) workstation to obtain alarms and component status records (surveillance information) automatically from the DPN switches in your network.

Configuring DPN surveillance is optional. Before attempting to configure DPN surveillance, you must have configured DPN Access and created at least one Operations Agent (OA) group for surveillance purposes. This type of group is known as a surveillance group.

To obtain surveillance information, the DPN Data Management Router (DMDR) server on the MDM workstation connects automatically to one workstation management data interface (WS\_MDI) on each of the OAs in the surveillance group. Once logged in, the DMDR server automatically obtains information for all of the devices on each OA monitored by the OA group.

To log in to each OA, the DMDR server requires service parameters that allow the workstation to establish communications. When you configured DPN Access, you supplied all of the information for each OA in the surveillance group. What you supply in this configuration is the Network Control System (NCS) capability id and password of the common user account defined on each OA that is to be used for gathering surveillance information. The NCS capability and password must already be defined for each OA in the group such that it has the same scope and impact on each OA, and causes them to return a customer network identifier (CNMID) of 0, at login.

Configuring DPN surveillance creates a DMDR server for each surveillance group and ensures that the SURNUP server and GMDR servers start when the workstation is booted. A DMDR server is needed to obtain surveillance information from the DPN switches in each OA group.

### **Service parameters for DPN surveillance**

The following information is required to set up DPN surveillance:

`OA group name` is the name of an existing Operations Agent (OA) group for surveillance.

Values: the name of an OA group that you created for surveillance purposes

The OA group name must be one of those you defined for DPN Access.

`NCS capability id` is the Network Control System (NCS) capability required to log on to the OAs in the OA group to obtain surveillance information

Values: a valid NCS capability id consisting of up to 12 alphanumeric characters. Obtain the NCS capability id from your DPN administrator.

`Password` is the password required to access the OAs in the group for surveillance purposes

Values: a valid NCS password. Obtain the password from your DPN administrator.

### **Passport surveillance (optional, Passport only)**

Configuring Passport surveillance allows a Preside Multiservice Data Manager (MDM) workstation to obtain alarms and component status information (surveillance information) automatically from the Passport switches in your network. Configuring Passport surveillance is optional.

Before configuring Passport surveillance, you must have configured Passport Access and created at least one Passport group for surveillance purposes. This type of group is a surveillance group.

To obtain the surveillance information, the FMDR server on the MDM workstation connects automatically to the Passport switches in a surveillance group. These Passport switches are the members of the groups you defined when you configured Passport Access.

Setting up Passport surveillance includes entering service parameters that allow the workstation to establish communications with the Passport switches (userid and password) in each Passport group. See “Service parameters for Passport surveillance” (page 263). The common userid and password used to gather surveillance information from the Passports in a surveillance group must already be defined on all of the Passports in the group such that it has the same scope and impact, and causes all Passport switches to return a customer network identifier (CNMID) of 0, at login.

This configuration also creates an FMDR server for each group and ensures that the SURNUP server and GMDR servers start when the workstation is booted. An FMDR server is needed to obtain surveillance information from the Passport switches in each Passport group.

*Note:* When you have completed all of the configuration work using the MDM Software Configuration tool and rebooted the MDM workstation, you must use GMDR Administration to configure the GMDR servers to obtain surveillance information from the FMDR servers that gather the surveillance information from the network. For the instructions on using the GMDR Administration tool, see 241-6001-303 *Preside MDM Administrator Guide*.

## Service parameters for Passport surveillance

The following information is needed to set up Passport surveillance.

`userid` is the userid required to log on to the Passport switches in the Passport group.

Values: a valid userid for the switches in the Passport group. Obtain the userid from your Passport Administrator. To retrieve active alarms, minimally, the userid must have passive impact on the Passports, a customer ID of 0, and a scope of device or higher.

`Password` is the password required to log on to the Passport switches in the Passport group.

Values: a valid password for the Passport switches in the group. Obtain the password from your Passport Administrator.

**Note:** Active alarms may be obtained from the Passport switch only if the Passport Active Alarm List feature (Passport release PCR 5.1 or higher) is installed and provisioned on Passport.

## Global alarm clearing (optional, DPN only)

Configuring Global Alarm Clearing allows the Preside Multiservice Data Manager (MDM) workstation to clear alarms globally throughout a DPN network by means of the Component Information Viewer (CIV) or the Alarm Display (AD).

Global alarm clearing is optional.

The workstation clears the alarms by logging into a workstation management interface (WS-MDI) on the Top Operations Agent (OA) in the Network Control System (NCS) for the DPN switches, then sending a global alarm clear request message to the NCS.

Setting up global alarm clearing includes entering service parameters (OA member NCS capability id, and password) that allow the MDM workstation to log in to the OA to send the global alarm clear request message.

## Service parameters for Global alarm clearing

The following parameters are required to set up DPN Global Alarm Clearing:

`OA member` is the name of the connection to the WS-MDI on the Top Operations Agent (OA) that the Preside Multiservice Data Manager (MDM) workstation logs on to for clearing the alarms.

Values: a valid OA member consisting of up to 12 alphanumeric characters. The OA member must be the Top OA and one of those you defined for DPN Access.

`NCS_capability_id` is the Network Control System (NCS) capability required to log on to the Top OA.

Values: a valid NCS capability id consisting of up to 12 alphanumeric characters. Obtain the NCS capability id from your DPN Administrator.

`Password` is the password required to access the Top OA

Values: a valid NCS password for the TopOA. Obtain the password from your DPN Administrator.

## Global alarm clearing (optional, Passport only)

Configuring Global Alarm Clearing allows the Preside Multiservice Data Manager (MDM) workstation to clear alarms globally throughout the MDM by means of the Component Information Viewer (CIV) or the Alarm Display (AD).

Global alarm clearing is optional.

Setting up global alarm clearing includes entering service parameters (Passport group name, group user ID, and password) that allow the MDM workstation to log in to the Passport(s) to send the global alarm clear request message.

### Service parameters for Global alarm clearing

The following parameters are required to set up Passport Global Alarm Clearing:

`Passport_group_name` is the name that corresponds to the FGroup field definition with its included Passport members as defined in file `/opt/MagellanNMS/cfg/HGDS.cfg`.

Values: a valid Passport group name consisting of up to 12 alphanumeric characters.

`Passport group user Id` is the Passport group user ID. At a minimum, the user id must have `systemAdministration` impact and scope of device or higher and a customer ID of 0.

Values: a valid Passport group user ID consisting of up to 8 alphanumeric characters. Obtain the user ID from the Passport Administrator.

`Password` is a password that corresponds to the user id.

Values: a valid password consisting of up to 8 alphanumeric characters. Obtain the password from your Passport Administrator.

## Surveillance Network Model Updating (optional)

Configuring Surveillance Network Model Updating allows the Network Model to be updated with alarms and component status information (surveillance information) obtained from the DPN and Passport switches in your network. Surveillance Network Module Updating is optional.

To set up updating of the Network Model with surveillance information, the MDM Software Configuration tool checks for the presence of the following servers in file `/opt/MagellanNMS/cfg/SVMList.cfg` and asks you if you wish to start the servers if they are not already started:

- Network Model Coordinator (DNMNC)
- DPN Network Model Updater (SURNUP)
- Network Model Server (NMSERVER)

It also prompts you for the amount of shared memory that the system kernel needs to make available to the operating system to support the network model.

## Service parameters for Surveillance Network Model Updating

There is only one service parameter for Surveillance Network Model Updating. It is as follows:

`Shared memory size` size of shared memory the kernel allocates to the operating system to support the network model

Values: size of shared memory depends on the size of the network model. The default is 10 MByte. Use the following formula to calculate the amount of shared memory required:

$$(270 + 20\% \times (25 \times \#PM + 60 \times \#EM + 8 \times \#other)) / 1024 \text{ MB}$$

where:

`#PM`, `#EM` and, `#other` are the number of DPN modules, the number of Passport modules and the number of all other components (For example, links) in the network.

## Provisioning File Access (optional, DPN only)

Configuring Provisioning File Access (PFAS) provides Preside Multiservice Data Manager (MDM) software with the information it needs to manage the downloading of Master Control Files (MCF) from the MDM workstation to the modules in a DPN Network. Configuring PFAS is optional.

Configuring PFAS prompts for one service parameter: the Data Network Address (DNA) of the port on a DPN module through which the MCFs are to be downloaded. It uses the default values for all other PFAS service parameters as defined in file `/opt/MagellanNMS/cfg/PFA.cfg`.

## Service parameter for configuring Provisioning File Access

The following service parameter is required for setting up Provisioning File Access (PFAS).

`port dna` Data Network Address for the port on the DPN module through which MCFs are to be downloaded.

Values: a valid DNA, in X.121 format, that includes the Data Network Identification Code (DNIC)

Example: 12011323412

## Service Integrity Simplification (SIS) (optional)

Configuring SIS provides Preside Multiservice Data Manager (MDM) software with the information required to set up the SIS tool. Configuring SIS is optional.

The SIS tool is used to do the following:

- populate the Network Reporting Service (NRS) database automatically with Master Control Files (MCF) for DPN modules and/or with View files for Passport modules
- optionally to run NRS-based Service Integrity checks (NSIC) on data used to populate the Network Configuration Database (NCD)
- populate the Network Configuration Database (NCD)

With the SIS tool, the MCFs and View files are retrieved directly from the modules.

When the SIS tool runs, it does the following for DPN modules:

- determines the valid MCF for each module
- populates the MCF into the NRS database
- optionally runs NSICs
- populates the MCF into the NCD

Similarly, it does the following for Passport modules:

- determines the valid View file for each module
- populates the View into the NRS database
- optionally runs the NSIC checks
- populates the View into the NCD

Valid MCFs and View files are determined by the variables set in the SIS configuration file. Configuring SIS sets up the SIS configuration file `/opt/MagellanNMS/cfg/SIS.cfg`.

Configuring SIS provides you with a detailed explanation of each service parameter as it prompts you for them. You can also find explanations for each parameter in the service integrity audit tool section in 241-6001-022 *Preside MDM Network Reporting System User Guide*.

## Service parameters for configuring SIS

The following parameters are required for configuring Service Integrity Simplification (SIS).

`SIS_MCF_DETERMINATION_MODE` is used to determine which Master Control File (MCF) is to be considered the valid MCF to populate in the Network Reporting Service (NRS) before performing the NRS-based Service Integrity checks (NSIC).

Values:

0 Active mode: populate the NRS database with the Active MCFs

1 Committed mode: populate the NRS database with the Committed MCFs

2 Preside Multiservice Data Manager (MDM) priority mode (default), populate the NRS database with an MDM MCF. If no MCF exists, an error message is generated.

3 No longer used

4 No longer used

`SIS_NAS_MCF_MODE` This variable is no longer used and should be set to 0.

`SIS_NMS_MCF_MODE` specifies the criteria for selecting a valid MDM MCF

Values:

0 select the MDM MCF that has the most recent bundle date

For example, two MDM MCFs have filenames of MC.94051203.4034.0 and MC.94050903.4034.0. The bundle dates in the form <yy><mm><dd><two\_digit\_index> are 94051203 and 9405003. The MCF with bundle number 94051203 is selected.

In a bundle date, a value of <yy> from 00 to 79 represents a year from 2000 to 2079, and a value from 80 to 99 represents a year from 1980 to 1999. For example 20 means 2020 and 89 means 1989.

As a second example, two MDM MCFs have filenames of MC.94051205.4034.0 and MC.94051203.4034.0. The bundle dates are the same, except for the two-digit indexes of 05 and 03. The bundle with the highest index number is selected, that is bundle MC.94051205.4034.0.

1 select the MDM MCF that has the most recent file system date. This means the last MCF downloaded to the PM.

2 select the MDM MCF according to its activation date. One way to activate new service data is to activate it on the same day of every week. Service data is prepared days before its activation and, on the given day of the week, the new service data is activated on every PM. When preparing the service data in MDM, the DATED key is set to the date of

activation. To validate the service data before activation, the future MCFs must be selected by the tool. The day of the week to be used is defined by parameter `SIS_NMS_MCF` day.

For example, if the variable is set to Sunday and the tool is called on Tuesday, March 15, 1995 (date of 950315) SIS selects an MCF with the bundle date closest to, but not exceeding the upcoming Sunday. Say the upcoming Sunday is 950320, and there are MCFs with filenames `MC.950317.4034.0` and `MC.950321.4034.0`. SIS selects the MCF with bundle 950317.

In an activation date, a value of <yy> from 00 to 79 represents a year from 2000 to 2079, and a value from 80 to 99 represents a year from 1980 to 1999. For example 20 means 2020 and 89 means 1989.

3 select the MDM MCF that has a bundle date closest to but not later than a specific date. This is the date you specify by entering the `-nmsdate` option on the `sisauto` command line.

`SIS_NMS_MCF_DAY` specifies a day relative to the current date, to use for selecting MDM MCFs. This applies only when you have specified a `SIS_MCF_DETERMINATION_MODE` of 2 (MDM priority mode).

Values:

|          |                 |
|----------|-----------------|
| -7       | Sunday          |
| -6       | Saturday        |
| -5       | Friday          |
| -4       | Thursday        |
| -3       | Wednesday       |
| -2       | Tuesday         |
| -1       | Monday          |
| 0        | Today (default) |
| 1        | Tomorrow        |
| 2...1000 | in n days       |

`SIS_MERGED_MCF_MODE` This variable is no longer used and should be set to 0.

`SIS_VIEWFILE_DETERMINATION_MODE` specifies which View file is to be considered the valid one to populate into NRS before performing NSICs. This parameter only applies to Passport modules.

Values:

- 0 Current mode. Populate the CURRENT View file in NRS.
- 1 Committed mode. Populate the COMMITTED View file in NRS.
- 2 (default) MDM mode. If an MDM View file exists for the criteria defined by the `SIS_NMS_VIEWFILE_MODE` parameter, then it is populated to NRS. If none exists, an error is generated for the EM.

`SIS_NMS_VIEWFILE_MODE` specifies the criteria for selecting a valid Passport View. This parameter only applies to Passport modules and only when you set `SIS_VIEWFILE_DETERMINATION_MODE` to 2.

Values:

- 0 select the MDM View file with the highest date as part of the file name
- 1 selects the MDM View file with the highest file system date. This means the MDM View file that was downloaded last to the PM.
- 2 (default) select the MDM View according to its activation date. One way to activate new service data is to activate it on a certain day of the week. Service data is prepared several days before the activation and, on the given day of the week, the new service data is activated on every EM. When preparing the service data in MDM, use the date representing the day of activation as the DATED key. In order to validate the service data before the activation, these “future” View files must be selected by the tool.

The day to use is determined by the `SIS_NMS_VIEWFILE_DAY` parameter. If, for example, this parameter is set to Sunday and the tool is called on Tuesday, March 12, 1996 (960312), the MDM View file with a bundle date closest to, but not exceeding, 960317 (the upcoming Sunday)

will be selected. It is also possible to set the `SIS_NMS_VIEWFILE_DAY` variable to today, tomorrow, in 4 days, in 10 days, etc.

3 select the MDM View that has a bundle date closest to but not later than a specific date. This is the date you specify by entering the `-nmsdated_em` option on the `sisauto` command line.

`SIS_NMS_VIEWFILE_DAY` specifies a day relative to the current date, to use for selecting MDM Views. This parameter only applies to Passport modes and when you have specified a `SIS_NMS_VIEWFILE_MODE` of 2 (MDM priority mode).

Values:

|          |                 |
|----------|-----------------|
| -7       | Sunday          |
| -6       | Saturday        |
| -5       | Friday          |
| -4       | Thursday        |
| -3       | Wednesday       |
| -2       | Tuesday         |
| -1       | Monday          |
| 0        | Today (default) |
| 1        | Tomorrow        |
| 2...1000 | in n days       |



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## Appendix F

# MDM Software Configuration tool

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This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:

- “About the MDM Software Configuration tool” (page 275)
- “MDM Software Configuration interface” (page 277)
- “Starting the MDM Software Configuration tool” (page 280)

### About the MDM Software Configuration tool

Use the Preside Multiservice Data Manager (MDM) Software Configuration to perform basic configuration on MDM software at initial installation only. Do not use this tool for configuring any other software packages. For instructions about installing other software packages, see the following documents:

- MDP software, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.
- Passport 4400 integration software, see 241-6001-109 *Preside MDM Passport 4400 Integration Guide*.

The MDM Software Configuration tool lets you configure the following items:

- software licenses for MDM
- service parameters for MDM Base software:
  - DPN Access

- Passport Access
- Multi-Nodal Naming Service
- Workstation Server Surveillance through GMDR
- Workstation Surveillance through NCS
- Disruptive Command Safeguard (DCS)
- Network Time Synchronization (NTS)
- service parameters for Fault:
  - DPN Surveillance
  - Passport Surveillance
  - Global Alarm Clearing
  - Surveillance Network Model Updating (SURNUP)
- service parameters for Configuration:
  - Provisioning File Access (PFAS)
  - Service Integrity Simplification (SIS)

For details about the purposes of these configurations, see “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275).

Configuring subsystems that have dependencies on third-party software or whose configuration spreads over multiple platforms is beyond the scope of the MDM Software Configuration tool. When you have finished using the tool, and just before exiting from it, the tool displays references to NTPs that contain the instructions to configure these subsystems. All NTPs are available online when the installation is completed. The subsystems beyond the scope of the tool are

- Network Configuration Database (NCD)
- General Management Data Router (GMDR)
- Network Model (NM)

## MDM Software Configuration interface

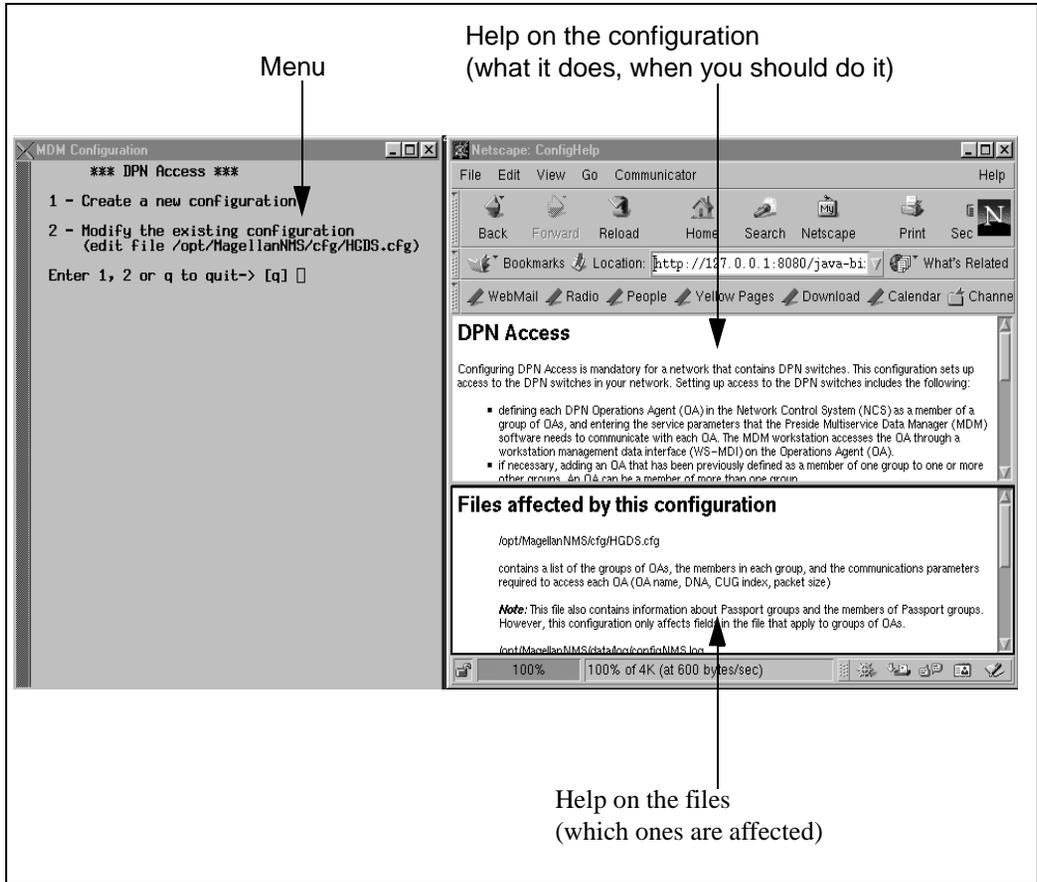
When you start the Preside Multiservice Data Manager (MDM) Software Configuration tool, a main window and Netscape with two help frames open. The main window displays a sequence of cascading menus, submenus, and prompts for configuring subsystems that belong to MDM feature packages. One help frame displays detailed explanations of the information displayed in the main window, and the other frame lists the configuration files modified by the tool.

Information in the help frames is context sensitive; that is, the help information changes according to the information in the main window.

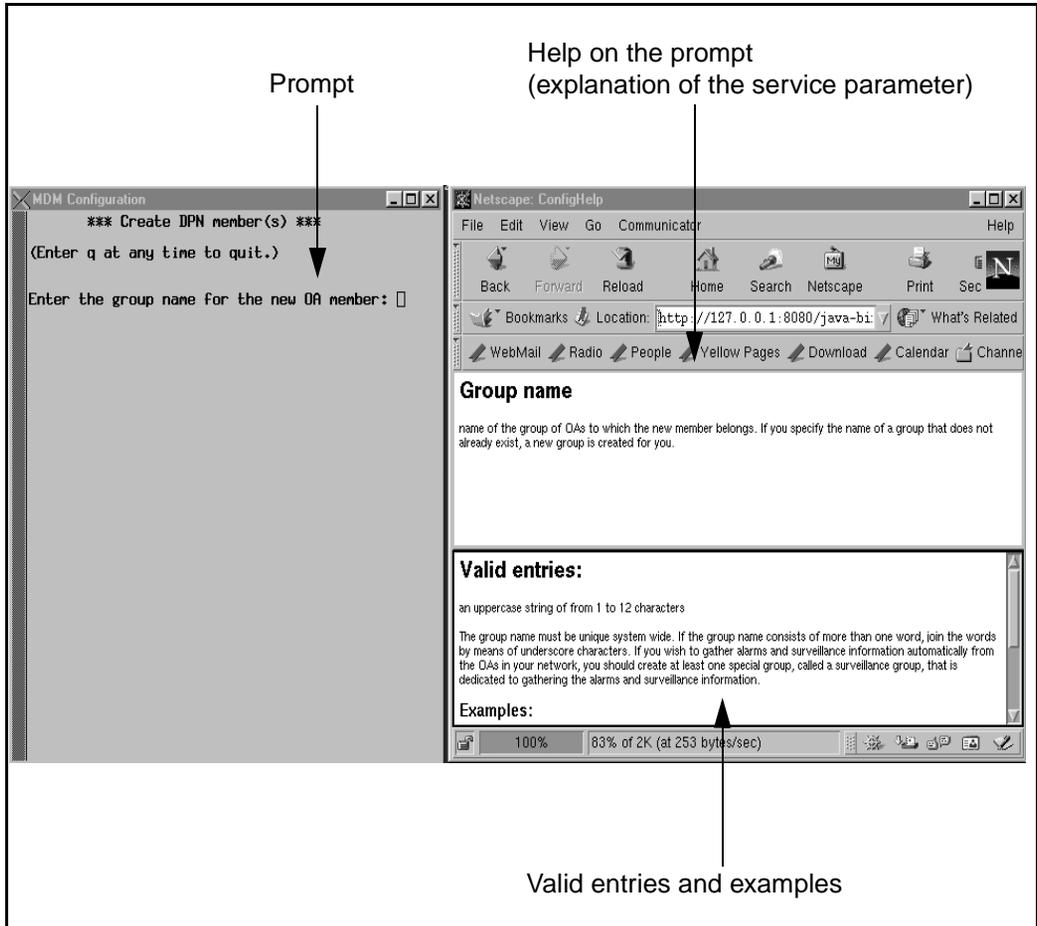
- When the main window displays a menu for configuring a subsystem, the upper help frame displays an explanation of what the subsystem configuration does and when you need to perform the configuration. The lower frame displays information about the configuration files that are modified when you configure the subsystem. See the figure “Example of help windows when the main window is displaying a menu” (page 278).
- When the main window displays a prompt for a service parameter, the upper help frame displays an explanation of the service parameter. The lower frame lists the valid entries for the prompt. When appropriate, the lower frame also displays an example of a valid entry for the service parameter. See the figure “Example of help windows when the main window is displaying a prompt” (page 279).

The MDM Software Configuration tool is intended for use on a workstation that is running a window manager, or on an X-terminal. The tool may be used on a terminal that cannot run a window manager, such as a VT-100 terminal. Because the context-sensitive help information requires the use of X-windows and a window manager, context-sensitive help information cannot be displayed on such terminals. Running the tool without the context-sensitive information requires entering a startup command with the no x-terminal (-nox) option, as described in “Starting the MDM Software Configuration tool” (page 280).

**Figure 4**  
Example of help windows when the main window is displaying a menu



**Figure 5**  
Example of help windows when the main window is displaying a prompt



## Starting the MDM Software Configuration tool

To successfully start the Preside Multiservice Data Manager (MDM) Software Configuration with context-sensitive help, you must know the path to Netscape. For details about starting the online documentation, and setting the path, see 241-6001-804 *Preside MDM Workstation Utilities User Guide*.

You can start the MDM Software Configuration tool by one of the following methods:

- “Using the Preside MDM window” (page 280) (the preferred method)
- “Using a command line” (page 281) (an alternate to the preferred method)
- “Using a command line without context-sensitive help” (page 282) (only intended for terminals that cannot run a window manager, such as VT-100 terminals)

### Using the Preside MDM window

To start the Preside Multiservice Data Manager (MDM) Software Configuration from the Preside MDM window, log on as root. Ensure that the environment is temporarily set up to run the MDM software with the Administration tools. The following procedure begins with steps that set up the root account temporarily to open a Nortel Networks MDM window on the desktop.

- 1 Before you begin configuring the MDM software, obtain the service parameters required, as described in “This section contains the instructions for obtaining the service parameters required for Preside Multiservice Data Manager (MDM). In this section, you can find the following information:” (page 235). Although obtaining the parameters first is not essential because the MDM Software Configuration tool provides detailed explanations for each parameter along the way, configuration will proceed more smoothly and quickly if you obtain the service parameters in advance.
- 2 From Options on the CDE log in panel, select the language you want on the screen. The default is English.
- 3 Log in as root.
- 4 Source the default MDM environment:
  - If the root account is running Bourne or Korn shell (the command prompt is # for Korn shell), enter the following command. Be sure to

enter a period (.) followed by a space as the first two characters of the command.

**. /opt/MagellanNMS/bin/nmssh**

- If the root account is set up to run C-shell enter the following command instead:

**source /opt/MagellanNMS/bin/nmssh**

- 5 Start an MDM session:

```
/opt/MagellanNMS/bin/nmssh &
```

The software copyright dialog opens.

- 6 Click OK. Start MDM with the Administration menu:

```
/opt/MagellanNMS/bin/nmssh Admin.tsets &
```

The Nortel Networks Preside MDM window opens.

- 7 Start the MDM Software Configuration tool by placing the cursor in the dialog area of the window and select System -> Administration -> MDM Software Configuration.

The main window of the MDM Software Configuration tool opens.

You may now configure the MDM software. Use the information in the help windows to assist you in completing the configuration.

- 8 See "Post configuration tasks" (page 285) when you have finished.

## Using a command line

Use the following procedure to start the Preside Multiservice Data Manager (MDM) Software Configuration tool by means of commands:

- 1 Before you begin configuring the MDM software, obtain the service parameters required, as described in "This section contains the instructions for obtaining the service parameters required for Preside Multiservice Data Manager (MDM). In this section, you can find the following information:" (page 235). Although obtaining the parameters first is not essential because the MDM Software Configuration tool provides detailed explanations for each parameter along the way, configuration will proceed more smoothly and quickly if you obtain the service parameters in advance.
- 2 From Options on the CDE log in panel, select the language you want on the screen. The default is English.
- 3 Log in as root.

- 4 Source the default MDM environment:
  - If the root account is running Bourne or Korn shell (the command prompt is #), enter the following command. Be sure to enter a period (.) followed by a space as the first two characters of the command.  
**. /opt/MagellanNMS/bin/nmssh**
  - If the root account is set up to run C-shell enter the command:  
**source /opt/MagellanNMS/bin/nmsscsh**
- 5 Open a UNIX window or a shell tool.
- 6 Start the MDM Software Configuration tool by typing in the following command in the window or shell tool:  
**/opt/MagellanNMS/system/config/nmsconfig**  
The main window of the MDM Software Configuration tool opens.  
You may now configure the MDM software. Use the information in the help windows to assist you in completing the configuration.
- 7 See “Post configuration tasks” (page 285) when you have finished.

## Using a command line without context-sensitive help

Use the following procedure to start the Preside Multiservice Data Manager (MDM) Software Configuration tool by means of commands without the context-sensitive help information. Use this method only if you want to configure the MDM software from a remote terminal that only has VT-100 display capability.

- 1 Before you begin configuring the MDM software, obtain the service parameters required, as described in “This section describes the MDM Software Configuration tool which installs an MDM software license and to perform basic configuration of the software. This section contains the following information:” (page 275). Although obtaining the parameters first is not essential because the MDM Software Configuration tool provides detailed explanations for each parameter along the way, configuration will proceed more smoothly and quickly if you obtain the service parameters in advance.
- 2 From Options on the CDE log in panel, select the language you want on the screen. The default is English.
- 3 Log in as root.
- 4 Start the MDM Software Configuration tool:

```
/opt/MagellanNMS/system/config/nmsconfig -nox
```

The main menu appears but no context-sensitive help windows open.

- 5 Use the tool to configure the MDM software.

You are now ready to perform the post-configuration tasks. See “Post configuration tasks” (page 285).



---

## Appendix G

# Post configuration tasks

---

This section describes the tasks that you need to perform after the Preside Multiservice Data Manager (MDM) software is configured with the MDM Software Configuration tool. Some of the small tasks are contained in this section, while others which are also performed as part of administration operations, are contained in other documents. References are provided to these other documents.

In this section, you can find the following information:

- “Task list” (page 286)
- “Obtaining a list of the reminders displayed when you used the Software Configuration tool” (page 287)
- “Setting up the kernel for Network Time Synchronization” (page 287)
- “Configuring the NCSLink.cfg file” (page 288)
- “Allowing root sessions to the workstation” (page 289)
- “Setting the shared memory segment size in the kernel” (page 289)
- “Rebooting the workstation” (page 290)
- “Configuring and starting a Frame Relay connection” (page 292)
- “Setting up UNIX accounts to run MDM” (page 292)
- “Configuring the GMDR server for surveillance” (page 293)
- “Manually installing SDDs” (page 293)
- “Activating the Active Alarm List” (page 293)

## Task list

Not all installation configuration tasks can be performed with the Preside Multiservice Data Manager (MDM) Software Configuration tool. Some additional tasks must be performed after you have finished using the tool. These tasks are as follows:

- 1 Display a list of the reminders that were recorded automatically in a file when you ran the MDM Software Configuration tool. You must perform the actions listed in the reminders file as part of the configuration work.  
See "Obtaining a list of the reminders displayed when you used the Software Configuration tool" (page 287).
- 2 Set up the kernel for Network Time Synchronization (NTS). Do this only if you configured NTS while using the MDM Software Configuration tool.  
See "Setting up the kernel for Network Time Synchronization" (page 287).
- 3 If a network access connection is going to be set up over an X.25 link, configure the NCSLink.cfg file.  
See "Configuring the NCSLink.cfg file" (page 288).
- 4 Optionally, set up the workstation to allow administrative operations to be performed from an X-terminal while logged in as root.  
See "Allowing root sessions to the workstation" (page 289).
- 5 Set the maximum shared memory segment size.  
See "Setting the shared memory segment size in the kernel" (page 289).
- 6 Reboot the workstation to start all of the servers you configured with the MDM Software Configuration tool.  
See "Rebooting the workstation" (page 290).
- 7 Configure and start the Frame Relay connection using the `passportfr.config` script, as described in 241-6001-303 *Preside MDM Administrator Guide*.
- 8 Set up UNIX groups and UNIX accounts for running MDM, as described in 241-6001-303 *Preside MDM Administrator Guide*.
- 9 If you want to perform circuit monitoring, add the necessary entries to the configuration file  
`/opt/MagellanNMS/cfg/FMDR_pollingSurveillance.cfg`.  
See the FMDR server section in 241-6001-310 *Preside MDM Server Reference Guide* for information on configuring circuit monitoring, and the file `FMDR_pollingSurveillance.cfg`.

- 10 Configure the GMDR servers for DPN, Passport, and workstation server surveillance, as described in 241-6001-303 *Preside MDM Administrator Guide*.
- 11 Manually install Passport software SDDs, as described in 241-6001-303 *Preside MDM Administrator Guide*.

## Obtaining a list of the reminders displayed when you used the Software Configuration tool

One of the final screens displayed when you use the Preside Multiservice Data Manager (MDM) Software Configuration tool contains reminders to perform a set of post-installation tasks. To display the contents of the file in which these reminders are stored, open a UNIX window or a shell tool and enter the following command:

```
more /opt/MagellanNMS/cfg/private/nms_config.remind
```

The next sections describe how to perform the tasks listed in the reminders file or tell you where to obtain the information needed to perform the tasks.

## Setting up the kernel for Network Time Synchronization

Only perform the procedure in this section if you used the Preside Multiservice Data Manager (MDM) Software Configuration tool to set up Network Time Synchronization (NTS) on the workstation.

The following procedure instructs you to use the procedure `config_sys_sync`. This script inserts a statement into the kernel file (`etc/system`) which ensures that the XNTP software has control over setting the time on the workstation. The XNTP software is provided along with the MDM software and is used to synchronize the workstations' time with other workstations and Passport switches in the network.

### Running the `config_sys_sync` script

- 1 Run the `config_sys_sync` script:

```
/opt/MagellanNMS/system/config/config_sys_sync
```

- 2 Enter `y` to confirm the change.

*Note:* Ignore the message to perform a reboot for now.

You are now ready to configure the `NCSLink.cfg` file.

## Configuring the NCSLink.cfg file

Use the following procedure to configure the NCSLink.cfg file for X.25 connections. You need to perform this procedure if you are going to set up an X.25 link on the workstation which will be used for network management purposes.

- 1 Log in as root.
- 2 Copy file NCSLink.cfg from the Preside Multiservice Data Manager (MDM) software directory to the custom directory:

```
cp /opt/MagellanNMS/lib/cfg/NCSLink.cfg /opt/MagellanNMS/cfg
```

- 3 Using an editor such as the Text Editor provided with CDE, modify the single statement in the file according to the following syntax:

```
:p1:p2:
```

where:

**p1**

is the logical link number to use first for X.25 VC setup. Link numbering starts at 0. You assigned link numbers when setting up ports and interfaces with Sun's X.25 Administration Tool, as described in "Configuring an X.25 link" (page 60). The link number that you specify must correspond to a port for a low-speed interface (ZSH0, ZSH1) or a high-speed notifies (HIH0, HIH1...) and it must be an X.25 interface. It cannot be an Ethernet interface or a Frame Relay Interface.

**p2**

is the maximum number of X.25 links available. When attempting to set up a virtual circuit, the software tries to set up an SVC on one of the available x25 links in a round-robin fashion starting with the link specified by the value P1.

Example:

```
:0:1:
```

You are now ready to configure the workstation to permit root sessions from other workstations.

## Allowing root sessions to the workstation

Perform the following procedure if you need to log in to this workstation from a remote X-terminal (workstation, PC, or Macintosh) to perform administrative operations while logged in as root. This procedure is optional.

Perform this procedure if the following message appears when you attempt to perform an administrative operation from an X-terminal while logged in as root:

```
Not on System Console
```

- 1 Log in as root
- 2 Using a UNIX editor, open file `/etc/default/login` for editing.
- 3 Comment out the following statement by placing an octothorpe (#) in front of the statement `CONSOLE=/dev/console`.

Example: `#CONSOLE=/dev/console`

- 4 Save the file and exit from it.

You are now ready to configure the amount of shared memory in the kernel.

## Setting the shared memory segment size in the kernel

The amount of shared memory you need to configure in the kernel of the Solaris operating system on the workstation depends on the following:

- the amount of shared memory to support the size of the Network Model on your workstation
- the amount of shared memory required by the Passport Communications Manager (FDTM) to load Passport models
- the amount of shared memory required by applications other than the Preside Multiservice Data Manager (MDM) software.

The amount of shared memory configured in the kernel must be equal to or greater than the largest of the requirements for each of these items. For more information on configuring shared memory, see 241-6001-303 *Preside MDM Administrator Guide*.

Use the following procedure to allocate a suitable maximum shared memory segment.

- 1 Determine your requirements for shared memory. For the requirements, use the largest of the values obtained from the following sources:
  - In 241-6001-303 *Preside MDM Administrator Guide*, refer to the section on shared memory required by a Network Model
  - In 241-6001-303 *Preside MDM Administrator Guide*, refer to the section on shared memory required by FDTM
  - shared memory required by applications other than MDM, as determined from the documentation that accompanies these applications
- 2 Log in as root.
- 3 In a UNIX access window enter the following command:

```
/opt/MagellanNMS/system/config/\nconfig_sys_shmem <size>
```

where:

<size> is the amount of shared memory, in megabytes, to be allocated. If you omit this parameter, the script uses 10 megabytes as the default. However whatever value you specify, the script overwrites the value in the kernel file only if the value you specify is greater than the value that is already specified in the file. It is recommended that you never go below 10 Mbyte.

You are now ready to reboot the workstation to make the change to the kernel effective.

## Rebooting the workstation

Use the procedures in this section to reboot the workstation. Rebooting the workstation is required to activate the configurations you performed with the the Preside Multiservice Data Manager (MDM) Software Configuration tool and any changes you made to the system kernel.

You need to reboot the workstation after installing the MDM software for the first time, or after installing an RSUP (MDM software upgrade).

**Note:** Any new MDM software you install will not run if your software license is not installed properly. See “Software licenses for MDM (mandatory)” (page 237) for more information.

There are two main ways to perform a reboot and they are described in the following sections:

- “Performing an immediate reboot without warning” (page 291)

Use this procedure if you are sure no other users are logged in. This is the case if you have just installed the MDM software for the first time and have yet to set up any UNIX users and groups.

- “Performing a reboot with warnings to logged in users” (page 291)

Use this procedure if other users are logged in. This is the case if you are installing an RSUP (performing a software upgrade).

## Performing an immediate reboot without warning

- 1 Login in as root
- 2 Enter the following command:

```
reboot
```

The workstation reboots and the CDE login screen is displayed.

## Performing a reboot with warnings to logged in users

- 1 Log in as root.
- 2 Run the shutdown command to trigger a reboot:

```
/usr/sbin/shutdown [-y] [-g <grace period>] -i 6  
["<message>"]
```

where:

**[-y]** specifies that the shutdown is to proceed without being prompted to confirm the reboot just before the shutdown occurs. Omitting this parameter causes a reboot confirmation prompt to appear just before the shutdown takes place.

**[-g <grace period>]** specifies the period in seconds before the shutdown occurs. If you omit this parameter, the default grace period of 60 seconds is used.

**-i6** specifies the level of shutdown. The number 6 specifies that you wish to perform a level 6 shutdown which reboots the workstation using the default init state contained in file /etc/inittab.

[ "`<message>`" ] is an optional message that you can add to the standard system shutdown message that is displayed to all users who are logged into the workstation before shutdown occurs.

**Example**

The following command produces the following responses to all users logged in to the workstation, then the workstation reboots:

```
/usr/sbin/shutdown -y -g 120 -i 6 "====software
upgrade===="
```

```
Shutdown started.   Tue Jun   7 14:51:40 PDT 1994
Broadcast Message from root (pts/1) on foo Tue Jun 7
14:51:41...
The system will be shut down in 2 minutes
==== software upgrade=====
```

## Configuring and starting a Frame Relay connection

If the workstation is connected to Passport switches by a Frame Relay link, you must configure and start the connection. To do this, see the section on defining Passport hosts and groups with the `passport.frconfig.script` in 241-6001-303 *Preside MDM Administrator Guide*.

## Setting up UNIX accounts to run MDM

See 241-6001-303 *Preside MDM Administrator Guide* for the instructions to set up UNIX accounts for running the Preside Multiservice Data Manager (MDM). A summary of the tasks involved is as follows:

- 1 Create groups of UNIX users to run MDM. We recommend that you create at least one group specifically for running MDM.
- 2 Create new user accounts to run MDM or update existing user accounts to run MDM.
- 3 Set up the root account to run the sets of MDM tools required for MDM administration (`Admin.tsets` or `Full.tsets`).

This is required because some of operations performed with the administration tools require root access and some of the files can only be modified with root file permissions. There are two ways set up the root account:

- temporarily by entering commands. The set-up is removed automatically when the root user logs out.
- permanently by modifying set-up files

## Configuring the GMDR server for surveillance

Only configure the GMDR server for surveillance if you used the Software Configuration tool to set up any of the following:

- workstation surveillance through GMDR
- DPN surveillance
- Passport surveillance

Use the instructions in 241-6001-303 *Preside MDM Administrator Guide* to configure the GMDR servers on the workstations in your network and the surveillance servers that supply the GMDR servers with surveillance information.

## Manually installing SDDs

If there are Passport switches in your network, manually install Passport SDDs on your workstation to be able to begin surveillance on them.

A release archive is provided along with a Passport Software release that contains the SDDs you need to install. The release archive is a tar file that is sent to you on tape, CD-ROM, or by electronic file transfer. This file needs to be loaded onto your workstation. For the instructions to manually install Passport SDDs on your workstation, see 241-6001-303 *Preside MDM Administrator Guide*.

## Activating the Active Alarm List

No action is required on the Preside Multiservice Data Manager (MDM) to activate the Active Alarm List. The Passport Active Alarm List feature (Passport release PCR 5.1 or higher) must be installed and provisioned on Passport. For more information, see 241-5701-611 *Passport 7400, 15000, 20000 Data Collection Guide*.



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# Preside Multiservice Data Manager Installer Guide

Release: R14.3

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