NORTEL
NETWORKS

Preside Multiservice Data Manager

Network Backup and Restore

241-6001-807

Preside Multiservice Data Manager
Network Backup and Restore

Publication history

August 2004

15.1 RSUP Standard
Commercial availability except for MPE support which will be available in a
future release.

Contents

Chapter 2
Basic service data backup 47

Chapter 3
Basic service data restore   69

Chapter 4
Current Configuration Backup   87

About this document

This guide describes how to setup and use Preside MDM Passport Service Data Backup and Restore for Passport 6000, 7400, 15000, and 20000 nodes and Preside MDM Passport/SNMP Backup and Restore for Passport 4400 and 4460 nodes.

> *Note:* In this document, Passport refers to Passport Multiservice switches (6000, 7400, 15000 and 20000); Passport/SNMP refers to Passport 4400 and Passport 4460).

The following topics are discussed in this section:

- "Who should read this document and why" (page 13)

- "What you need to know" (page 14)

- "How this document is organized" (page 14)

- "What's new in this document" (page 14)

- "What's new in this document" (page 15)

- "Text conventions" (page 15)

- "Related documents" (page 17)

Who should read this document and why

You should read this document if you are responsible for using Preside MDM to backup and restore the service data for Passport Multiservice switches and Passport 4400 and 4460 SNMP devices.

What you need to know

You should be familiar with the configuration and service data storage on the switch types that you are responsible for maintaining. You should also have a working knowledge of Preside Multiservice Data Manager (MDM).

How this document is organized

The information in this guide is organized as follows:

- "Service Data Backup/Restore setup" (page 19) describes how to set up the Backup and Restore Controllers and Providers.

- "Basic service data backup" (page 47) describes how to back up service data.

- "Basic service data restore" (page 69) describes how to restore service data.

- "Current Configuration Backup" (page 87) describes how to backup the current configuration for Passport 6000, 7400, 15000, and 20000 devices.

- "Current Configuration Recovery" (page 99) describes how to recover service data when a Passport fails or is destroyed.

- "Fundamentals of Preside MDM Backup and Restore" (page 103) describes how the Preside MDM Backup and Restore application functions and provides installation and configuration instructions.

- "Passport Service Data Backup/Restore tool" (page 127) describes the tool GUI.

- "Passport/SNMP Service Data Backup/Restore tool" (page 133) describes the tool GUI.

What's new in this document

This document has been restructured based on the Nortel Networks Modular Task Based Information (MTBI) format. The conceptual information about the MDM backup and restore fundamental and the Backup/Restore GUIs have been moved to the end of the NTP and the procedural information moved to the start of the NTP. This is to facilitate user access to the task based information that supports on-the-job activities.

What's new in this document

The document has been restructured as part of the first phase of the transition to Modular Task-Based Information. In addition, the following feature updates were added to this document:

- "MDM Database Synchronization Support" (page 15)

- "Passport Service Data Backup/Restore GUI" (page 15)

MDM Database Synchronization Support

This document has been updated to include the following enhancements for Database Synchronization, Backup and Restore logging:

- "Backup and Restore logs" (page 125)

Passport Service Data Backup/Restore GUI

The Passport Service Data Backup/Restore GUI has been modified in the following ways:

- Passport Service Data Backup/Restore tool distinct from Passport/SNMP Service Data Backup/Restore tool. Passport Service Data Backup/ Restore tool compatible only with Passport 6000, 7400, 15000, and 20000 devices.

- Passport Service Data Backup/Restore tool provides capability of backing up current configuration

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 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

See the following documents for related information:

General

241-6001-102 *Preside MDM Planning Guide*
241-6001-303 *Preside MDM Administrator Guide*
241-6001-400 *Preside MDM Administration Database User Guide*
241-6001-310 *Preside MDM Server Reference Guide*

Passport 6000

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

Passport 7400/15000/20000

For a list of documents, see NN10600-001 *Nortel Networks Multiservice Switch 7400/15000/20000 Basics: Customer Documentation*.

Passport 4400

Passport 4400 Hardware Installation Manual
Passport 4400 Operators Manual
Passport 4400 CLI Reference for the Command Line Interface

Chapter 1
Service Data Backup/Restore setup

This section describes the setup required to enable the use of the Passport and Passport/SNMP Service Data Backup/Restore applications.

Navigation

Prerequisites to Service Data Backup/Restore setup

ATTENTION	If the Provider is not running on the same machine as the Controller, or if you want to use more than one Provider to share the load, the remote mapping file must modified. For more information, see "Modifying the remote mapping file (optional)" (page 37)

Passport Service Data Backup/Restore setup

The task flow shows you the sequence of procedures you perform to setup the Passport Service Data Backup/Restore tool. To link to any procedure in this document, double-click on the procedure name in the task flow or in the list.

Figure 1
Task flow for setting up Passport Service Data Backup/Restore applications
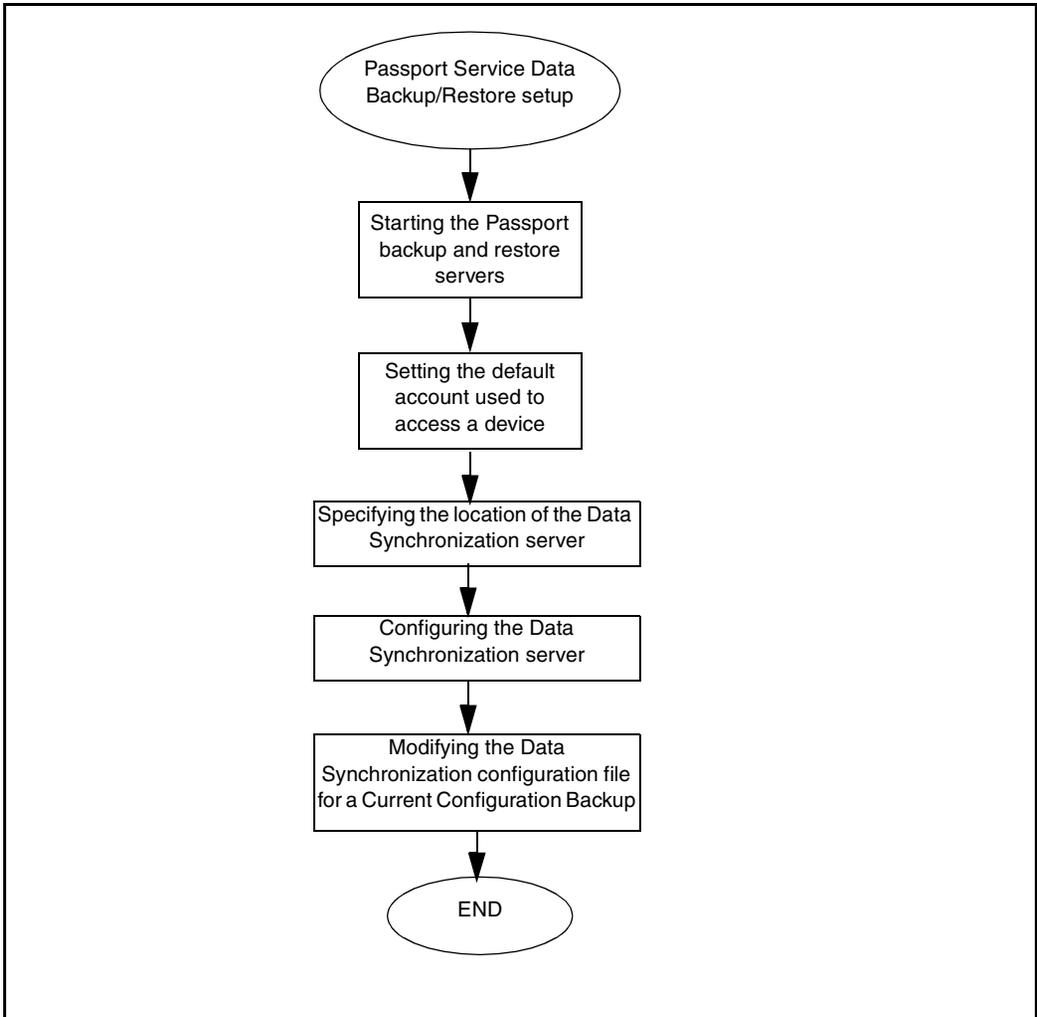
Passport Service Data Backup/Restore setup procedure navigation

Starting the Passport backup and restore servers

Use this procedure to start the servers or to add options.

Prerequisites

- Launch the Server Administration tool: **System** -> **Administration** -> **Server Administration**.

- If you are adding options to a server that is already running, you must stop the server before you add the option.

ATTENTION   The Backup Provider server must be started before the Backup Controller server when using the -notification option.

Procedure steps

1   From the Security menu, select the **Authorize** command.

2   In the **SVM Enter Authorization Password** dialog box, type a valid password and click **OK**.

3   From the **Edit** menu, select **Edit** -> **New server**.

The **SVM New Server Selection** displays.

4   Expand the Configuration Server category to find the server in the list.

5   Select the server and click **Select Server**.

The **SVM Edit Server** opens with the startup command displayed.

6   Optionally, edit the Startup command to add the option(s):

```
/opt/MagellanNMS/bin/<server_name> [-<option> <option
value>]
```

See "Variable definitions" (page 23) for the possible options and their values.

7   Optionally, disable the **Automatic startup at reboot time** option.

8   Click **OK**.

A confirmation dialog displays.

9   Click **Yes** to confirm.

10   Click **Cancel** to close the **SVM Edit Server** window

---

11   Right-click on the server name in the server list.

12   From the pop-up menu, select **Start**.

The server starts.

Variable definitions

Option/Variable	Definitions/Values
-c /opt/MagellanNMS/cfg/ <filename.cfg>	The option to specify a filename for the controller config file if you are using a filename other than Controller.cfg. You must show the full path to the file.
-d	The option to set debugging on. The default is off.
-DB_Synch_port <port>	The option to use the specified port for communication with the DB_Synch. The default is 5050. ***Note:*** You can use this option only if you use Preside MDM with the Administration Database. See 241-6001-400 *Preside MDM Administration Database User Guide*.
-h	The option to display command line usage.
-nbofbck <#>	The option to specify the maximum number of parallel backups. The default # is 5. ***Note:*** This option can only be used with the - notification option.
-notification	The option to enable current configuration backups.
-p <port_no>	The option to specify the port to use. If you use this option, you will override the dynamic port selection process.
<server_name>	The command line value that represents the server name: • Passport Backup Provider = pbckpp • Passport Restore Provider = prstpp • Backup Controller = nsctlbck • Restore Controller = nsctlrst

Setting the default account used to access a device

Use the following procedure to set default userids and passwords to access a device.

Procedure steps

1 From the Preside MDM window, select **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

2 In the Passport Backup and Restore window, select **Set Default Authentication** from the **Options** menu.

The Default Authentication dialog displays.

3 Enter the appropriate user id and password.

4 Click **OK**.

Specifying the location of the Data Synchronization server

Use this procedure if you want the backup and restore process synchronized with the MDM Administration Database. It is necessary to specify the location of the Data Synchronization server for the Backup and Restore tool if the server is not on the local host.

Procedure steps

1 Open the file /opt/MagellanNMS/cfg/bkRst.cfg.

2 Locate the command line that contains

jmx.server.host: localhost

Note: The default value for this attribute is localhost.

3 Change the value of localhost to the location of the Data Synchronization Server. For example

jmx.server.host: wcars123

4 Save then close the file.

Configuring the Data Synchronization server

Passport Service Data Backup and Restore requires that the Data Synchronization server is enabled even if the database is not being used. This is required for the basic backup and the current configuration backup functions.

Procedure steps

1   In the Preside MDM window, select **System** -> **Administration** -> **Server Administration** to open the **Server Administration** tool.

2   From the Security menu, select the **Authorize** command.

3   In the **SVM Enter Authorization Password** dialog box, type a valid password and click **OK**.

4   From the **Edit** menu, select **New Server**.

    The SVM New Server Selection window displays.

5   Expand the server categories to locate the Data Sync Server in this list.

6   Select the server and click **Select Server**.

    The SVM Edit Server dialog displays with the fields pre-filled with default information.

7   In the **Startup command** field, type the following command, as follows:

    ```
    /opt/MagellanNMS/bin/dataSyncServer
    [-help]
    ```

8   Click **OK**.

    A confirmation dialog displays.

9   Click **Yes** to accept this information.

10 Click **Close**.

Modifying the Data Synchronization configuration file for a Current Configuration Backup

Passport Backup and Restore uses the data synchronization configuration file (DataSync.cfg) to display the devices that you can back up and restore. This file contains the list of devices with their userids and passwords, as well as additional fields for each devices.

The configuration file is stored under

/opt/MagellanNMS/cfg/DataSync.cfg

You need to include an entry for every device that Passport Backup and Restore can access on the host machine.

If you have Passport Backup and Restore software on multiple hosts, it is recommended that you duplicate the entries in the data synchronization file.

ATTENTION	The DBSyncController name must be identical to the DBSync name value. For more information on configuring the DBSyncController, refer to 241-6001-400 *Preside MDM Administration Database User Guide*

For security reasons, passwords can be encrypted in a separate file in which case the full path of the file containing the encrypted password replaces the password field in the DataSync.cfg file. MDM provides a tool to encrypt a password, and save it in a separate file, /opt/MagellanNMS/bin passwd_gen. This tool must be run as root. For the procedures to generate a secure password for an MDM server, and how to change a secure password, refer to NN10600-605 *Passport - MDM Network Security: Operations*.

All backup groups must be defined in the HGDS server using the Host Group Administration tool. For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

Passport/SNMP Service Data Backup/Restore setup

The task flow shows you the sequence of procedures you perform to setup the Passport/SNMP Service Data Backup/Restore tool. To link to any procedure in this document, double-click on the procedure name in the task flow or in the list.

Figure 2
Task flow for setting up Passport/SNMP Service Data Backup/Restore applications
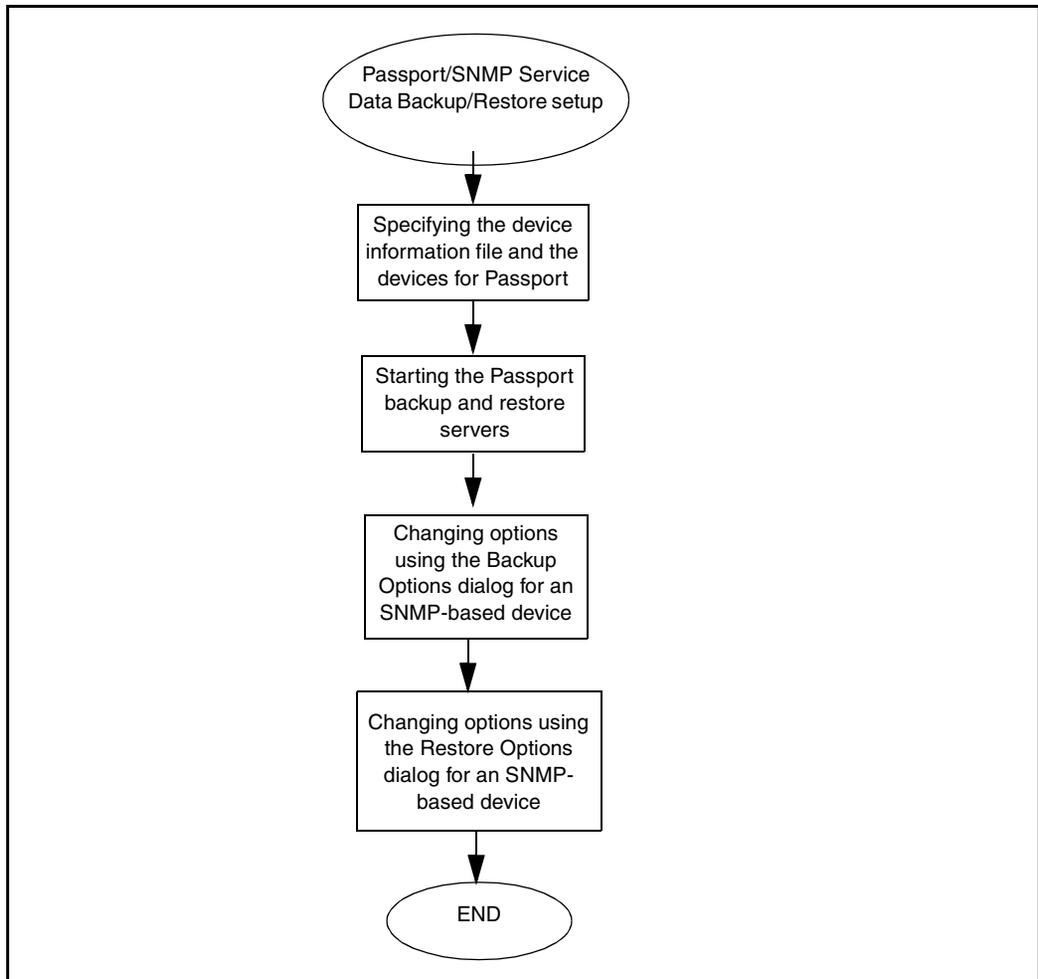
Passport/SNMP Service Data Backup/Restore setup procedure navigation

-

-

-

-

Specifying the device information file and the devices for Passport 4400/4460

You need to use a device information file that has entries for the devices you are going to access.

Prerequisites

- For information about naming the device information file, see "Device information file for Passport 4400/4460 devices" (page 43).

Procedure steps

1 From the Preside MDM window, select **Configuration->Passport 4400->Administration->Passport/SNMP Service Data Backup/Restore**.

2 In the Passport/SNMP Devices Backup and Restore window, select the devices to backup or restore.

   If the devices or device groups are not displayed in the devices area

   a. From the **File** menu, select **Open**.

      The **Open File** dialog opens.

   b. Select a device information file by entering a path and file name in the **File name:** data entry box. You can also select a device information file using the **Look in:** pull-down menu and clicking on the file in the display panel.

   c. Click **Open** to load the selected device information file and close the dialog.

   d. From the Passport/SNMP Devices Backup and Restore main window, select **Options->Save Options** to save the current device information file as the default for future sessions**.** This menu item also saves any changes you make in the **Change Backup Options** and **Change Restore Options** dialogs.

Starting the Passport/SNMP backup and restore servers

Use this procedure to start the servers and to specify the ports to use for the controller servers, or to add other options.

ATTENTION	If the Provider is not running on the same machine as the Controller, or if you want to use more than one Provider to share the load, the remote mapping file must modified. For more information, see "Modifying the remote mapping file (optional)" (page 37).

Prerequisites

- Launch the Server Administration tool: **System** -> **Administration** -> **Server Administration**.

- If you are adding options to a server that is already running, you must stop the server before you add the option.

Procedure steps

1   From the Security menu, select the **Authorize** command.

2   In the **SVM Enter Authorization Password** dialog box, type a valid password and click **OK**.

3   From the **Edit** menu, select **Edit** -> **New server**.

    The **SVM New Server Selection** displays.

4   Expand the Configuration Server category to find the server in the list.

5   Select the server and click **Select Server**.

    The **SVM Edit Server** opens with the startup command displayed.

6   Edit the Startup command to specify the required controller port numbers, as follows:

    To specify the backup controller port:

    /opt/MagellanNMS/bin/nsctlbck [-p 5000]

    To specify the restore controller port:

    /opt/MagellanNMS/bin/nsctlrst [-p 5001]

7   Edit the Startup command to specify the backup and restore provider server ports:

```
/opt/MagellanNMS/bin/<provider_server_name> [-p
<provider_server_port_no]
```

8 Optionally, edit the Startup command to add other option(s):

```
/opt/MagellanNMS/bin/<server name> [-<option> <option
value>]
```

See "Variable definitions" (page 32) for possible options and their values.

9 Optionally, disable the **Automatic startup at reboot time** option.

10 Click **OK**.

A confirmation dialog displays.

11 Click **Yes** to confirm.

12 Click **Cancel** to close the **SVM Edit Server** window

13 Right-click on the server name in the server list.

14 From the pop-up menu, select **Start**.

The server starts.

Variable definitions

Option/Variable	Values/Definitions
-c /opt/MagellanNMS/cfg/ <filename.cfg>	The option to specify a filename for the controller config file if you are using a filename other than Controller.cfg. You must show the full path to the file.
-d	The option to set debugging on. The default is off.
-h	The option to display command line usage.
-m <interface_mapping_file>	Use this option to specify the interface mapping file.This optional file is required when your system has multiple network interfaces. The default interface mapping file is /opt/MagellanNMS/cfg/ifmap.cfg.
	If the file ifmap.cfg exists in directory /opt/MagellanNMS/cfg and is populated with valid mapping information, it is not necessary to specify the -m option. This file is used by default.
	For information about when to use this option, see "Modifying the interface mapping file for Passport 4400/4460 devices" (page 41).
(Sheet 1 of 2)	

Option/Variable	Values/Definitions
-p <provider_server_port_no>	Use this option to specify the port to use for the Backup and Restore Provider servers. The default values are as follows: • Passport 4400 Backup Provider = 5030 • Passport 4400 Restore Provider = 5031 • Passport 4460 Backup Provider = 5040 • Passport 4460 Restore Provider = 5041
<provider_server_name>	The value that represents the provider server name: • Passport 4400 Backup Provider = pbckpp4400 • Passport 4400 Restore Provider = prstpp4400 • Passport 4460 Backup Provider = pbckpp4460 • Passport 4460 Restore Provider = prstpp4460
(Sheet 2 of 2)	

Changing options using the Backup Options dialog for an SNMP-based device

Before you perform a SNMP-based backup, you can change the default values of the Controller, Controller port, and target directory.

Procedure steps

1 From the Preside MDM window, select **Configuration->Passport 4400->Administration->Passport/SNMP Service Data Backup/Restore**.

2 In the Passport/SNMP Devices Backup and Restore window, select **Change Backup Options** from the **Options** menu.

The **Change Backup Options** dialog opens.

3 Modify the **Backup controller host**, **Backup controller port**, or **Target directory**.

4 Click **OK** to close the dialog.

5 From the Options menu, select **Save Options** to save your changes for future sessions. This command also saves the current device information file and any changes you make in the **Change Restore Options** dialog.

Changing options using the Restore Options dialog for an SNMP-based device

Before you perform an SNMP-based restore, you can change the default values of the Controller, Controller port, and source directory.

Procedure steps

1   From the Preside MDM window, select **Configuration->Passport 4400->Administration->Passport/SNMP Service Data Backup/Restore**.

2   In the Passport Backup and Restore window, select **Change Restore Options** from the Options menu.

The **Change Restore Options** dialog opens.

3   Modify the **Restore controller host**, **Restore controller port**, or **Source directory**.

4   Click **OK** to close the dialog.

5   From the Options menu, select **Save Options** to save your changes for future sessions. This command also saves the current device information file and any changes you make in the **Change Backup Options** dialog.

Additional configuration for Passport and Passport/SNMP backup and restore

For both Passport and Passport/SNMP Service Data backup and restore, the Controller uses the remote mapping file (Controller.cfg) to determine the Provider to which a device is connected. You must modify the Controller.cfg file if one or both of the following conditions exist:

- the Provider is not running on the same workstation as the Controller
- more than one Provider is used to share the load

See "Modifying the remote mapping file (optional)" (page 37).

Modifying the remote mapping file (optional)

Add an entry to the remote mapping file for any device that you want accessed by a specific Provider. In this file, each service has a separate service mapping block of commands. You need to include an entry in the service mapping block for each device that you want accessed by a specific Provider.

If you do not create an entry, the Backup and Restore tools assume the device is connected to the local Provider. The Backup and Restore tools support only one remote mapping file.

The format of a service mapping block in the remote mapping file is

```
service=<service_type>
        dev_type=<devtype>
        [dev_name=<devname> | dev_addr=<IPaddress>]
        host=<provider_host>[<:provider_port>]
...
```

where:

`service_type` is either backup or restore.

`devtype` is the name of the device type (PASSPORT, PP4400, or PP4460).

`devname` is the name of the device. You can match a group of devices by using the wildcard character (*).

`IPaddress` is the IP address of the device and has the format n.n.n.n. You can match a group of devices by using the wildcard character (*).

`provider_host:provider_port` is the Provider location; provider_host is the hostname or IP address of the Provider and provider_port is the port number registered to the Provider. The port number for Passports (not PP4400 or PP4460) is dynamic by default. The default values for provider_port are:

`dynamic`   Passport Backup Provider
`dynamic`   Passport Restore Provider
`5030`   Passport 4400 Backup Provider

```
5031    Passport 4400 Restore Provider
5040    Passport 4460 Backup Provider
5041    Passport 4460 Restore Provider
```

If you do not use devname or IPaddress, the Provider identified in provider_host handles the service for all devices of the specified dev_type.

> *Note:* You must include devtype, devname/IPaddress, and host on the same line.

You can include comments in the remote mapping file by inserting an octothorpe (#) at the beginning of the line. You can also include blank lines.

Example

The following example shows a remote mapping file with 2 service blocks. Each device in the service blocks is connected to a different remote host.

```
# Remote mapping file

service=backup
dev_type=PASSPORT dev_addr=42.208.*.111 host=23.257.32.12
dev_type=PP4400 dev_name=PP4400_20 host=bcarse80
dev_type=PP4460 dev_name=PP4460_64 host=winnipeg

service=restore
dev_type=PASSPORT dev_addr=42.208.*.111 host=59.620.6.24
dev_type=PP4400 dev_name=PP4400_20 host=bcarse80
dev_type=PP4460 dev_name=PP4460_64 host=winnipeg
```

Additional configuration for Passport/SNMP backup and restore

In addition to the basic setup tasks, you may have to perform the following configuration tasks, depending on your particular setup.

- "Configuring connectivity between Passport 4400/4460 and a provider (optional)" (page 40)

- "Modifying the interface mapping file for Passport 4400/4460 devices" (page 41)

- "Device information file for Passport 4400/4460 devices" (page 43)

Configuring connectivity between Passport 4400/4460 and a provider (optional)

The following procedure describes how to configure the communication between a Passport 4400/4460 device and a Provider if the Passport 4400/4460 contains a default configuration. A default configuration means no configuration has been entered.

Procedure steps

1   Establish a communication with the Passport 4400/4460 through the serial console port. The default line parameters are 9600N81, which means:

baud rate: 9600
parity: none
bits: 8
stop bit: 1

If successful, you are prompted for a login when you press the Return key.

2   Type *cli* at the login prompt. For the password, press the Return key.

3   Define the Ethernet interface IP address of the Passport 4400/4460 by entering the following CLI (command line interface) command:

```
add ip address entry 3 x.x.x.x y.y.y.y z.z.z.z
```

where:

x.x.x.x   is the IP address of the Passport 4400/4460
y.y.y.y   is the network netmask
z.z.z.z   is the broadcast address

4   Save the configuration with the CLI command:

```
save config update
```

5   Reset the Passport 4400/4460 with the new configuration using the CLI command:

```
reset system current reset
```

Modifying the interface mapping file for Passport 4400/4460 devices

File transfers between a Passport 4400/4460 and a Provider are initiated by the Provider. The IP address of the Provider is delivered to the Passport 4400/4460. The Provider instructs the Passport 4400/4460 to start the file transfer process. The Passport 4400/4460 establishes the TFTP connection and the files are transferred.

If the Provider's host machine has only one network interface (one IP address), that IP address is used for the TFTP connection between the Passport 4400/4460 and the Provider.

The Provider host machine can have multiple network interfaces. For example, the system can have one interface to the LAN and other interfaces to the WAN where the Passport 4400/4460 devices reside. In this configuration the Passport 4400/4460 devices cannot see the IP address of the interface to the LAN. In this situation you need to configure the Provider to use the correct interface address for the TFTP connection. You do this by creating an interface mapping file.

The Passport 4400 and Passport 4460 Providers can use the interface mapping file to determine the IP address used as the TFTP server address. The Passport 4400/4460 device connects to the TFTP server address for TFTP file transfers. Each line in the interface mapping file defines the mapping of the host address and the Passport 4400/4460 address or addresses. The host address is the TFTP server address.

The interface mapping file is named ifmap.cfg.

The format of ifmap.cfg is

    `<interface IP address> <device IP address(es)>`

where:

`interface IP address` is the IP address of the interface to be used and has the format n.n.n.n.

device IP address(es)   is the IP addresses of the devices and has the format n.n.n.n. You can match a group of devices by using the wildcard character (*).

You can include comments in the interface mapping file by inserting an octothorpe (#) at the beginning of the line. You can also include blank lines.

Example

The following example shows an interface mapping file for a host machine that has 3 network interfaces: one connects to the LAN and the other two are connected to separate networks of Passport 4400/4460 devices.

```
# Interface mapping file
# The last entry is the interface address to the LAN,
# which needs to map to any device address.
# This last entry can be omitted.

131.147.0.1 131.147.*
131.148.0.1 131.148.*
32.123.1.1  *
```

Device information file for Passport 4400/4460 devices

Passport/SNMP Service Data Backup and Restore uses the device information file (devices.cfg) to display the devices that you can back up and restore. You need to include an entry for every device that Passport/SNMP backup and restore can access on the host machine. You do not need to include all devices in a single file; you can create as many device information files as you want and select one from the main window before performing a backup or restore.

The device information file enables you to group devices. This option enables you to back up or restore all devices within a particular group.

If you have Passport/SNMP Service Data Backup and Restore software on multiple hosts, it is recommended that you duplicate the entries in the device information files. However, you can divide the entries into device information files on different hosts so that each host backs up and restores only those devices managed by that host.

The device information file does not have a naming convention.

Its format is

```
device: type = <devtype> name = <devname>
        addr = <IPaddress>[:<port>] [userid = <id>]
        [passwd = <password>]
group: name = <groupname>
member: name = <devname>
```

where:

device: indicates information about a particular device.

devtype   is the name of the device type (PP4400, or PP4460).

devname   is the name of the device.

IPaddress   is the IP address of the device and has the format n.n.n.n.

port   is the port number of the device.

id is the userID for a Passport and the READ community string for a Passport 4400/4460.

password is the user password for a Passport and the WRITE community string for a Passport 4400/4460.

group: indicates information about a group of devices.

groupname is the name of the group to which the device belongs.

member: indicates information about a member of the group. You need to place all members of a group directly after the group line.

> *Note:* You must include devtype, devname, IP address, id, and password on the same line.

You can include comments in the device information file by inserting an octothorpe (#) at the beginning of the line. You can also include blank lines.

Example

The following example shows a device information file.

```
device: type = PASSPORT name = NODER05 addr = 82.152.6.19
device: type = PASSPORT name = NODER06 addr = 82.152.6.32
device: type = PASSPORT name = NODERF addr = 82.232.33.74

device: type = PP4400 name = PP4400_20 addr = 35.195.4.173
device: type = PP4400 name = PP4400_EMU addr = 82.195.1.45

device: type = PP4460 name = PP4460_64 addr = 35.195.4.173
device: type = PP4460 name = PP4460_CAL addr = 82.195.1.45

group: name = group01
member: name = NODER05
member: name = NODER06
member: name = NODERF

# You can put a device in more than one group.
group: name = group02
```

```
member: name = NODERF
member: name = PP4400_20
member: name = PP4400_EMU

group: name = group03
member: name = PP4460_64
member: name = PP4460_CAL

device: type = PP4400 name = TEST addr = 15.190.6.58
device: type = PASSPORT name = NODE_TOR addr = 18.232.1.32

group: name = group03
member: name = TEST
member: name = NODE_TOR
```

Chapter 2
Basic service data backup

Use the Passport Service Data Backup/Restore tool and the Passport/SNMP Service Data Backup/Restore tool to backup service data.

ATTENTION	Use Passport Service Data Backup/Restore for Passport 6000, 7400, 15000, and 20000 nodes. Use Passport/SNMP Service Data Backup/Restore for Passport 4400 and 4460 nodes.

Navigation

Prerequisites to service data backup

- For Passport Service Data backup, launch the Passport Backup and Restore GUI: **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

- For Passport/SNMP Service Data backup, launch the Passport/SNMP Backup and Restore GUI: **Configuration->Passport 4400 ->Administration->Passport/SNMP Service Data Backup/Restore**.

Passport service data backup procedures

The task flow shows you the sequence of procedures you perform to backup Passport service data. To link to any procedure in this document, double-click on the procedure name in the task flow or in the "Passport service data backup procedure navigation" (page 50) list.

Figure 3
Passport service data backup procedures
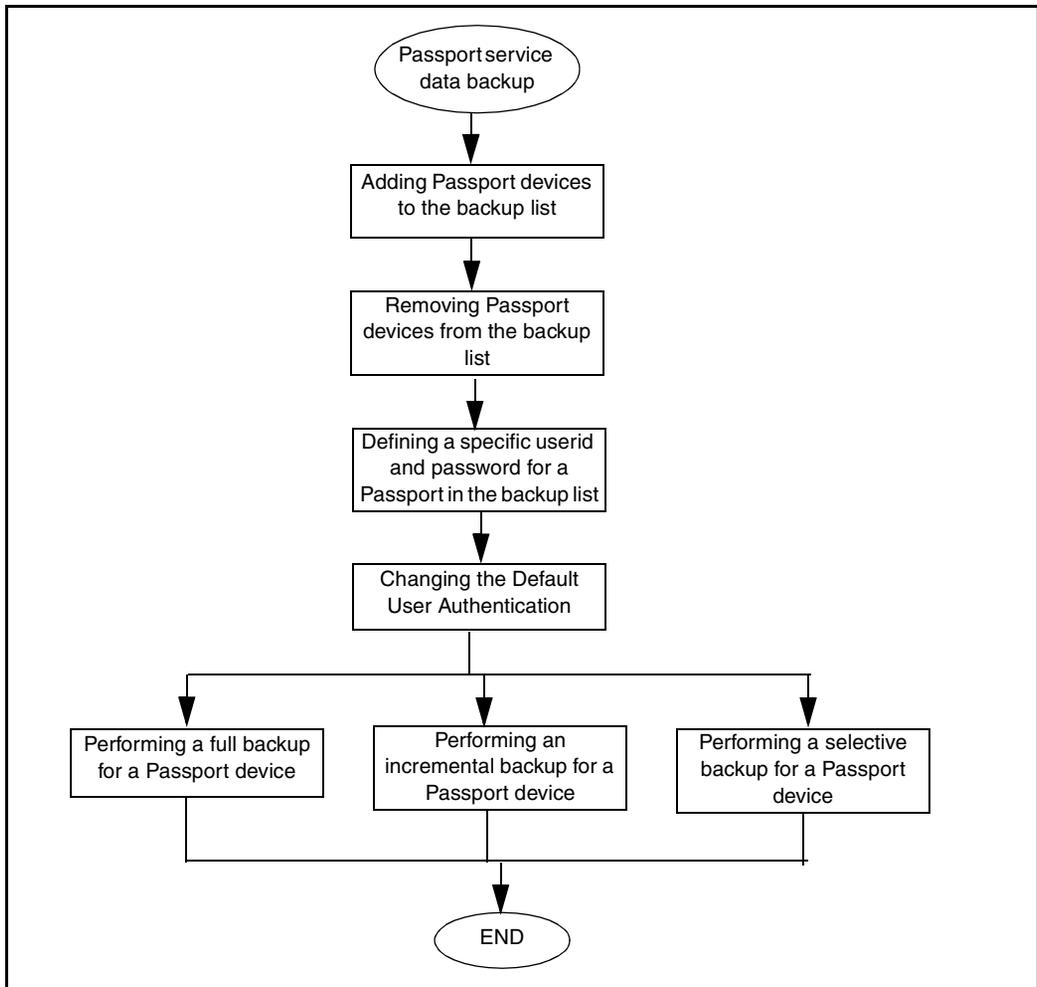
Passport service data backup procedure navigation

Adding Passport devices to the backup list

Use this procedure to add devices to the list of devices that you wish to backup.

Procedure steps

1   Select the **Backup Configuration** tab.

2   Select **Add** to launch the Add Devices Dialog.

3   From the left pane, select a group of devices or expand the group and use the Ctrl key to select a number of devices within a group.

4   From the drop down list, in the right pane, select a backup mode (Incremental or Full).

5   If a specific userid and password is required for the device, enter the values in the user ID and Password fields and uncheck the **Use default** checkbox.

If you wish to use the default userid and password, click the **Use default** checkbox.

6   Click **OK**.

The devices display in the Device List.

Removing Passport devices from the backup list

Use this procedure to remove devices from the list of devices that you wish to backup.

Procedure steps

1   Select the **Backup Configuration** tab.

2   In the Device List, select the devices you wish to remove.

3   Click **Remove**.

4   In the confirmation dialog, select **Yes** to confirm or **No** to cancel the removal.

Defining a specific userid and password for a Passport in the backup list

A specific userid and password can be defined when you add the node to the node list or you can set it later using the following procedure.

Procedure steps

1   Select the **Backup Configuration** tab.

2   Select a node in the **Device List** section.

3   In the Device Details section, in the **Authentication** tab, enter a userid and password.

4   Clear the **Use default** checkbox.

Changing the Default User Authentication

Use the following procedure to define a default userid and password which is used for all node access unless overridden by a specific userid and password for the node.

Procedure steps

1   Select **Options** ->**Set default authentication**.

2   Enter the userid and password in the appropriate fields.

3   Click **OK**.

The new userid and password are used on the next node access.

Performing a full backup for a Passport device

Use this procedure to backup all views on the device to the MDM backup data file.

Procedure steps

1   Select the **Backup Configuration** tab.

2   Select **Add** to launch the **Add Devices** dialog.

3   From the left pane, select a group of devices or expand the group and use the Ctrl key to select a number of devices within a group.

4   Select a device in the Device list:

5   Click in the **Mode** title and select **Full** from the drop-down list.

6   Click **Backup**.

The progress of the backup is displayed in the **Messages** area. If the backup is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

Note: To cancel a backup in progress click **Cancel**.

Performing an incremental backup for a Passport device

Use the following procedure to backup only backup files that are not already in the MDM backup data file.

Procedure steps

1   Select the **Backup Configuration** tab.

2   Select **Add** to launch the **Add Devices** dialog.

3   From the left pane, select a group of devices or expand the group and use the Ctrl key to select a number of devices within a group.

4   Select a node in the nodes list.

5   In the **Mode** title, select **Incremental** from the drop-down list.

6   If you wish to specify a backup of views later than a specific date, enter the date in the date field. (for example July 3, 2003

7   Click **Backup**.

The progress of the backup is displayed in the **Status** area. If the backup is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

Note: To cancel a backup in progress click **Cancel**.

Performing a selective backup for a Passport device

Use the following procedure to backup only a single specified file to the
MDM backup data file.

Procedure steps

1   Select the **Backup Configuration** tab.

2   Select **Add** to launch the **Add Devices** dialog.

3   From the left pane, select a group of devices or expand the group and
select a device. You can use the Ctrl key to select a number of devices
within a group.

4   Leave the default mode as is and click **OK**.

The Passport Backup and Restore window appears with the selected
devices in the device list.

5   In the **Mode** column for each device, click on the default mode to open the
mode list and select **Selective**.

The Configuration column in the table is enabled.

6   Click in the **Configuration** cell to display the available views on the
device.

Note: This step may take a few seconds to complete because the
application must access the device and list all the view names.

7   Click **Backup**.

The progress of the backup is displayed in the **Messages** area. If the
backup is unsuccessful, an error dialog is displayed that specifies the
device and the reason for the failure.

Note: To cancel a backup in progress click **Cancel**.

Passport/SNMP service data backup procedures

The task flow shows you the sequence of procedures you perform to backup Passport service data. To link to any procedure in this document, double-click on the procedure name in the task flow or in the "Passport/SNMP service data backup procedure navigation" (page 58) list.

Figure 4
Passport/SNMP service data backup procedures
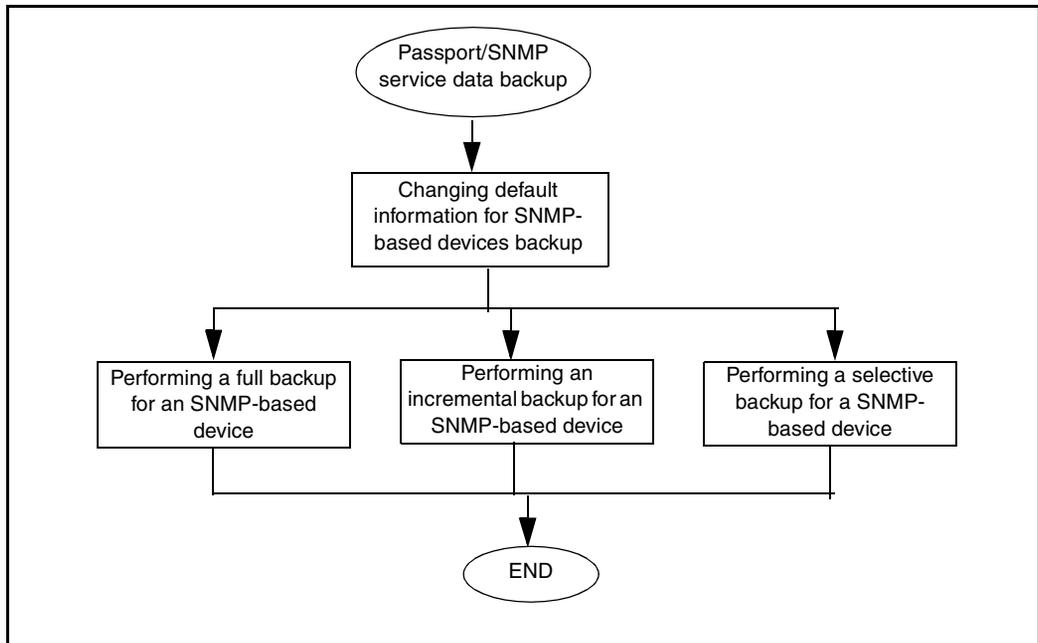
Passport/SNMP service data backup procedure navigation

Changing default information for SNMP-based devices backup

You can change the default information for any device type listed in the main window.

Procedure steps

1   In the Passport/SNMP Devices Backup window, double-click on the entry that you need to change in the **Default Backup Information** area.

The **Change Default Information** dialog opens.

2   Make the required changes.

3   Click **OK** to save your changes and close the dialog.

Performing a full backup for an SNMP-based device

Perform a full backup to copy all the service data on a selected device or devices to the MDM backup data file.

Procedure steps

1 In the Passport/SNMP Devices Backup window, select only the device or devices whose service data you need to back up from the **Backup Information** area of the window.

The selected devices have a check mark in the **Bck** column. All other devices have no entry in the **Bck** column.

2 In the **Backup Mode Selection** area, click **full**.

3 Click **Backup**.

When the backup completes successfully, a message is displayed in the **Message** area. If the backup is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

Performing an incremental backup for an SNMP-based device

Perform an incremental backup to copy only that service data changed or created since the last backup. For Passport 4400/4460 devices, an incremental backup is the same as a full backup because this device has only one view.

Procedure steps

1   In the Passport/SNMP Devices Backup window, select only the device or devices whose service data you need to back up from the **Backup Information** area of the window.

The selected devices have a check mark in the **Bck** column. All other devices have no entry in the **Bck** column.

2   In the **Backup Mode Selection** area, click **incr**.

3   Click **Backup**.

When the backup completes successfully, a message is displayed in the **Message** area. If the backup is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

Performing a selective backup for a SNMP-based device

Perform a selective backup to copy only the service data that you select. For Passport 4400/4460 devices, a selective backup is the same as a full backup because this device has only one view.

Procedure steps

1   In the Passport/SNMP Devices Backup window, select only the device or devices whose service data you need to back up from the **Backup Information** area of the window.

    The selected devices have a check mark in the **Bck** column. All other devices have no entry in the **Bck** column.

2   In the *Backup Mode Selection* area, click **sel**.

    The **List Views** button is enabled.

3   Click the **List Views** button and select the required view file. You can display selected view files by using the **Filter** data entry field and pressing **<return>**.

    OR

    Enter the name of the required view file in the **sel** data entry field and press **<return>**.

    The view file name is displayed in the **sel** data entry field and in the **View** column of the Backup Information area.

4   Click **Backup**.

   When the backup completes successfully, a message is displayed in the **Message** area. If the backup is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

Using the command line interface to perform backups

You can use the command line to perform full, incremental, or selective backups. You can perform multiple backups on multiple devices in a single command. You have the option of obtaining the backup information from a file.

To display online help for this command, use the *-h* option on the command line.

Navigation

- "Procedure step" (page 63)

- "Backup file naming convention" (page 65)

Procedure step

Enter the following command as one continuous command:

```
/opt/MagellanNMS/bin/nsbck
[-full <devtype> <devname> <devaddr> <id> <pw>]
[-incr <devtype> <devname> <devaddr> <id> <pw>]
[-view <viewname> <devtype> <devname> <devaddr>
<id> <pw>]
[-cdir <backup_dir_path>
[-demand [<group_label> [<nodename>]]]
[-f <backup_info_file>]
[-chost <controller_address>]
[-nolog] | [-log [<logfile>]]
[-nc <#_concurrent_connections>]
```

Table 1
Variable definitions for backup using the command line interface

Variable	Definition
-full	indicates a full backup
-incr	indicates an incremental backup
-view	indicates a selective backup
devtype	is the device type, such as PASSPORT, PP4400, PP4460
devname	is the name of the device
(Sheet 1 of 2)	

Table 1 (Continued)
Variable definitions for backup using the command line interface

Variable	Definition
devaddr	is the IP address of the device and has the format n.n.n.n
id	is the userID for a Passport and the READ community string for a Passport 4400/4460
pw	is the user password for a Passport and the WRITE community string for a Passport 4400/4460
viewname	is the name of the view file for a selective backup
-cdir	is the backup directory used for this backup operation
-demand	is used only for current configuration backups. For information about this option and its variables, see "Scheduling current configuration backups" (page 97).
backup_dir_path	is the path to the backup directory
-f	indicates that the backup information is obtained from a file
backup_info_file	is the name of the file containing backup information. Each line in the file has the same format as the -full, incr, or -view options
-chost	indicates the remote Controller to be used in place of the Controller running on the local host.
controller_address	is the address of the Controller and has the format host[:port]
-nolog	indicates that output messages are to be discarded
-log	indicates that output messages go to stdout/stderr or to a log file. The default is stdout/stderr
logfile	is the name of the file to which output messages go. If not specified, the messages go to the file mbrbackup.log in the current directory (where the tool runs)
-nc	indicates the number of concurrent backups to be performed. By default, Passport/SNMP Devices Backup tries to back up 5 different devices concurrently. This parameter is useful when you are backing up a large number of device
#_concurrent_connections	is the number of concurrent backups
(Sheet 2 of 2)	

Examples

The following command is used to perform daily backups of service data.

```
/opt/MagellanNMS/bin/nsbck \
  -incr PASSPORT PP1 123.123.1.1 my_id my_pw \
  -incr PASSPORT PP2 123.123.1.2 my_id my_pw \
  -full PP4400 PP4400_A 123.2.8.1 private public \
  -full PP4400 PP4400_B 123.2.8.2 private public \
  -full PP4460 PP4460_CAL 123.4.4.1 private public
```

You can also create a file, for example *backup.info*, that contains the following lines:

```
-incr PASSPORT PP1 123.123.1.1 my_id my_pw
-incr PASSPORT PP2 123.123.1.2 my_id my_pw
-full PP4400 PP4400_A 123.2.8.1 private public
-full PP4400 PP4400_B 123.2.8.2 private public
-full PP4460 PP4460_CAL 123.4.4.1 private public
```

Type the following command to perform the same backup operation using the above file *backup.info*:

```
/opt/MagellanNMS/bin/nsbck -f backup.info
```

Backup file naming convention

The service data backup files have the following naming convention:

```
./<devtype>/<devname>/<timestamp>.<dataset>/ \
<datafiles...>
```

Note: The period (.) represents the Passport/SNMP Devices Backup and Restore root directory.

where:

devtype   is the device type (PASSPORT, PP4400, or PP4460).

devname   is the device name.

timestamp   has the format yyyymmddhhmmss

datatset   is the dataset name.
For Passport, the dataset name is the Passport view file name.
For Passport 4400/4460, the dataset name is either COMMIT or ACTIVE.

<datafiles...> are the names of one or more files that are backed up.

Examples

The following example indicates that a backup was done of the Passport switch NODE10 on January 4, 1998 at 10:20:30 a.m.

```
./PASSPORT/NODE10/19980104102030.mydata.full.001
```

The following example indicates that a backup was done of the Passport 4400 switch PP01 on December 29, 1998 at 5:25:48 p.m.

```
./PP4400/PP01/19981229172548.COMMIT
```

The following example indicates that a backup was done of the Passport 4460 switch PP4460_CAL on March 18, 2000 at 1:45:16 p.m.

```
./PP4460/PP4460_CAL/20000318134516.COMMIT
```

Viewing the Passport backup repository

If the backup server is running locally, use the following procedure to view all the backup files in the backup repository.

Procedure steps

1   Telnet into the remote workstation with the appropriate userid and password.

2   Navigate to the repository directory.

3   Use unix directory commands to view the contents of the backup repository.

Chapter 3
Basic service data restore

Use the Passport Service Data Backup/Restore tool and the Passport/SNMP Service Data Backup/Restore tool to restore service data.

ATTENTION	Use Passport Service Data Backup/Restore for Passport 6000, 7400, 15000, and 20000 nodes. Use Passport/SNMP Service Data Backup/Restore for Passport 4400 and 4460 nodes.

Navigation

- "Prerequisites to service data restore" (page 69)

- "Passport service data restore procedures" (page 70)

- "Passport/SNMP service data restore procedures" (page 79)

Prerequisites to service data restore

- Before you perform a restore, you need to start up the Restore Controller and Providers. For more information, see "Service Data Backup/Restore setup" (page 19)

- For Passport Service Data restore, launch the Passport Backup and Restore GUI: **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

- For Passport/SNMP Service Data restore, launch the Passport/SNMP Backup and Restore GUI: **Configuration->Passport 4400 ->Administration->Passport/SNMP Service Data Backup/Restore**.

Passport service data restore procedures

The task flow shows you the sequence of procedures you perform to restore Passport service data. To link to any procedure in this document, double-click on the procedure name in the task flow or in the "Passport service data restore procedure navigation" (page 70) list.

Figure 5
Passport service data restore procedures
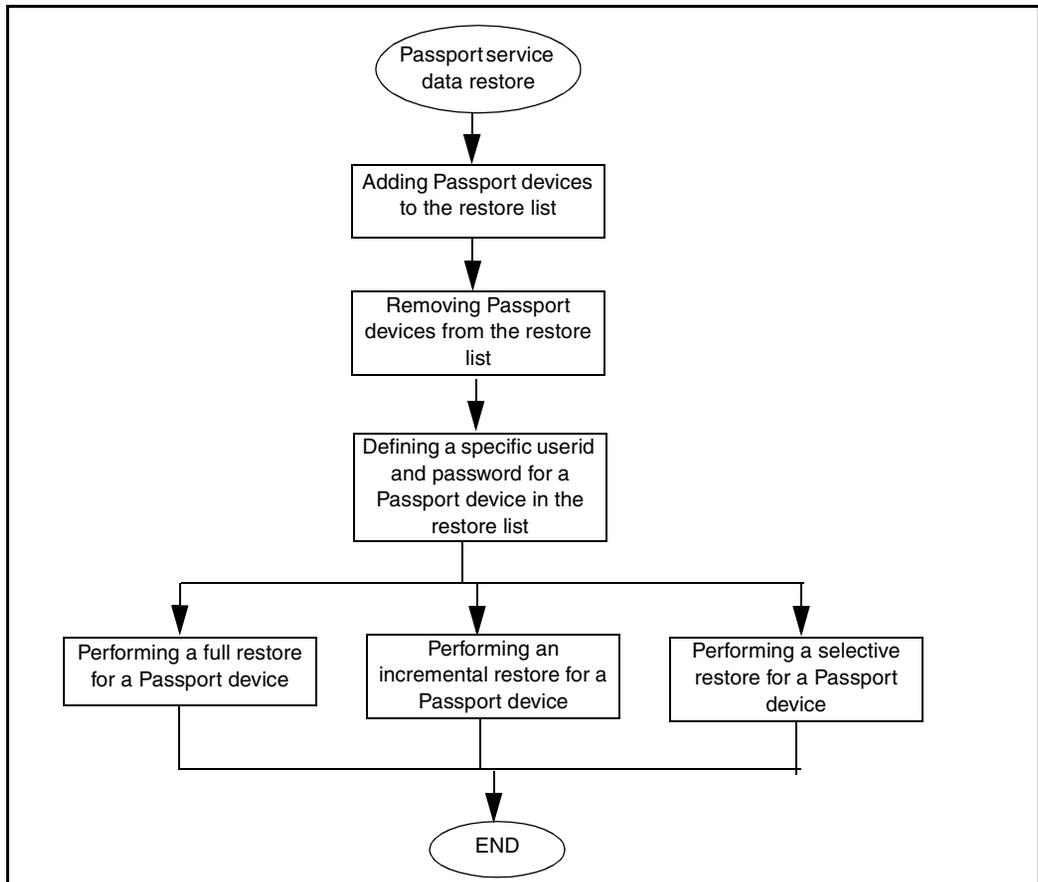
Passport service data restore procedure navigation

- "Adding Passport devices to the restore list" (page 72)

- "Removing Passport devices from the restore list" (page 73)

- "Defining a specific userid and password for a Passport device in the restore list" (page 74)

- "Performing a full restore for a Passport device" (page 75)

- "Performing an incremental restore for a Passport device" (page 76)

- "Performing a selective restore for a Passport device" (page 77)

Adding Passport devices to the restore list

Use the following procedure to add devices to the Devices List.

Procedure steps

1   From the **Passport Service Data Backup/Restore** window, select the **Restore Configuration** tab.

2   Click **Add** to open the **Add Device** dialog.

3   Select a group of devices or expand the group and use the Ctrl key to select a number of devices.

4   Select the appropriate restore mode, from the **Mode** column (full or incremental).

5   If a specific userid and password is required for the device, enter the values in the User ID and Password fields and uncheck the **Use default** checkbox.

    If you wish to use the default userid and password, click the **Use default** checkbox.

6   Click **OK**.

    The IP addresses for the devices are retrieved from HGDS and the device displays in the Devices list.

    For devices that are not in HGDS, you are prompted for their IP address. If you are prompted for an IP address, do step 7.

7   If you know the IP address, enter the correct IP address in the form and click **OK** and the device is added to the Devices list.

    If the IP address is unknown or the device is not valid, press **Cancel** and the device is not added to the Devices list.

Removing Passport devices from the restore list

Use this procedure to remove nodes from the list of nodes that you wish to backup.

Procedure steps

1   From the **Passport Service Data Backup/Restore** window, select the **Restore Configuration** tab.

2   In the Device List, select the devices you wish to remove.

3   Click **Remove**.

4   In the confirmation dialog, select **Yes** to confirm or **No** to cancel the removal.

Defining a specific userid and password for a Passport device in the restore list

A specific userid and password can be defined when you add the device to the restore list or you can set it later using the following procedure.

Procedure steps

1 From the **Passport Service Data Backup/Restore** window, select a device.

2 In the **Device Details** section, enter a userid and password.

3 Clear the **Use default** checkbox.

Performing a full restore for a Passport device

Use the following procedure to copy all the files from the repository and restore the data to the same or to another Passport device.

Procedure steps

1   From the **Passport Service Data Backup/Restore** window, select the **Restore Configuration** tab.

2   Click **Add** to open the **Add Device** dialog.

3   Select a group of devices or expand the group and use the Ctrl key to select a number of devices.

4   Select a device from the **Device List**.

5   Click in the **Mode** title and select **Full** from the drop-down list.

6   If you want to restore the service data to a different device, click in the **To Device** title to open the drop-down list and select the device whose data you want to restore.

7   Click **Restore**.

8   After a successful restore, you need to activate the restored data. See "Activating the restored Passport data" (page 78).

Performing an incremental restore for a Passport device

Use the following procedure to copy files, based on a specific date, from the repository and restore the data to the same or to another Passport device.

Procedure steps

1 From the **Passport Service Data Backup/Restore** window, select the **Restore Configuration** tab.

2 Click **Add** to open the **Add Device** dialog.

3 Select a group of devices or expand the group and use the Ctrl key to select a number of devices.

4 Select a device from the **Device List**.

5 Click in the **Mode** title and select **Incremental** from the drop-down list.

6 If you want to restore the service data to a different device, click in the **To Device** title to open the drop-down list and select the device whose data you want to restore.

7 Define a date in the date column. (For example, July 4, 2003)

All the files, with the date and time that are not greater than the specified date, will be restored.

8 Click **Restore**.

9 After a successful restore, you need to activate the restored data. See "Activating the restored Passport data" (page 78).

Performing a selective restore for a Passport device

Use the following procedure to copy a specific file from the repository and restore the data to the same or to another Passport device.

Procedure steps

1   From the **Passport Service Data Backup/Restore** window, select the **Restore Configuration** tab.

2   Click Add to open the Add Device dialog.

3   From the left pane, select a group of devices or expand the group and select a device. You can use the Ctrl key to select a number of devices within a group.

4   Leave the default mode as is and click **OK**.

The Passport Backup and Restore window appears with the selected devices in the device list.

5   Select a device from the **Device List**.

6   In the **Mode** column for each device, click on the default mode to open the mode list and select **Selective**.

The Configuration column in the table is enabled.

7   Click in the **Configuration** cell to display the available views on the device.

Note: This step may take a few seconds to complete because the application must access the device and list all the view names.

8   If you want to restore the service data to a different device, click in the **To Device** title to open the drop-down list and select the device whose data you want to restore.

9   Click **Restore.**

10 After a successful restore, you need to activate the restored data. See "Activating the restored Passport data" (page 78).

Activating the restored Passport data

Passport Restore restores the backup configuration data onto the Passport disk. After a successful restore, perform the following procedure to activate the restored data.

Procedure steps

1   Establish a telnet session to the Passport.

2   Download to the Passport any required application software missing from the Passport disk.

3   Enter provisioning mode.

4   Activate the restored view and confirm the activation.

5   If required, commit the activated view.

Passport/SNMP service data restore procedures

The task flow shows you the sequence of procedures you perform to restore Passport/SNMP service data. To link to any procedure in this document, double-click on the procedure name in the task flow or in the "Passport/ SNMP service data restore procedure navigation" (page 79) list.

Figure 6
Passport service data restore procedures
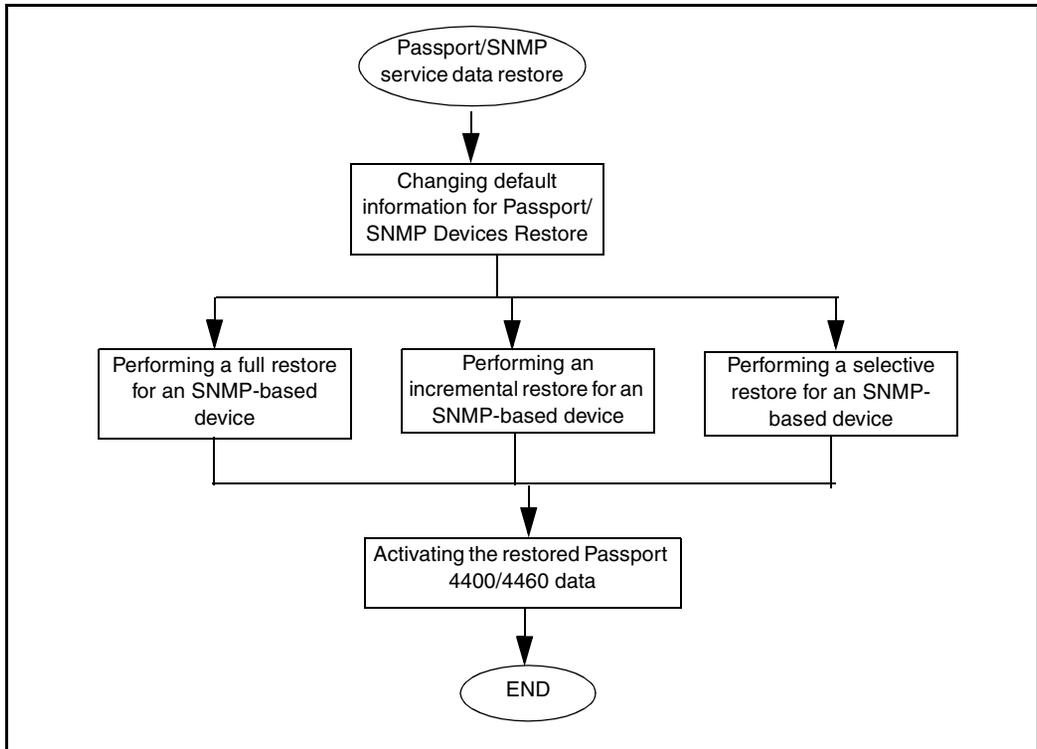
Passport/SNMP service data restore procedure navigation

- "Changing default information for Passport/SNMP Devices Restore" (page 81)

- "Performing a full restore for an SNMP-based device" (page 82)

- "Performing an incremental restore for an SNMP-based device" (page 83)

- "Performing a selective restore for an SNMP-based device" (page 84)

- "Activating the restored Passport 4400/4460 data" (page 85)

Changing default information for Passport/SNMP Devices Restore

You can change the default information for any device type listed in the main window.

Procedure steps

1   In the **Default Restore Information** area of the **Passport/SNMP Service Data Backup/Restore** window, double-click on the entry that you need to change.

   The **Change Default Information** dialog opens.

2   Make the required changes.

3   Click **OK** to save your changes and close the dialog.

Performing a full restore for an SNMP-based device

Perform a full restore to restore all backed up service data to a selected device or devices.

Procedure steps

1   From the **Passport/SNMP Service Data Backup/Restore**, click on the Restore command button.

The Passport/SNMP Devices Restore window opens.

2   Select only the device or devices whose service data you need to restore from the **Restore Information** area of the window.

The selected devices have a check mark in the **Rst** column. All other devices have no entry in the **Restore** column.

3   In the **Restore Mode Selection** area, click **full**.

4   Click **Restore**.

When the restore completes successfully, a message is displayed in the **Message** area. If the restore is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

5   After a successful restore, you need to make the restored data active. See "Activating the restored Passport 4400/4460 data" (page 85).

Performing an incremental restore for an SNMP-based device

Perform an incremental restore restores service data, based on a date that you specify. If you do not specify the date, an incremental restore is the same as a full restore.

Procedure steps

1   From the **Passport/SNMP Service Data Backup/Restore**, click on the Restore command button.

The Passport/SNMP Devices Restore window opens.

2   Select only the device or devices whose service data you need to restore from the **Restore Information** area of the window.

The selected devices have a check mark in the **Rst** column. All other devices have no entry in the **Restore** column.

3   In the **Restore Mode Selection** area, click **incr**.

4   In the **Restore Mode Selection** area, fill in the **Date** field. The restore process restores the service data that was backed up on that date. If no backup exists for that date, the restore process restores the service data that was backed up closest to, but not exceeding, that date.

5   Click **Restore**.

When the restore completes successfully, a message is displayed in the **Message** area. If the restore is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

6   After a successful restore, you need to make the restored data active. See "Activating the restored Passport 4400/4460 data" (page 85).

Performing a selective restore for an SNMP-based device

Perform a selective restore to restore only the service data that you select.

Procedure steps

1 From the **Passport/SNMP Service Data Backup/Restore**, click on the Restore command button.

The Passport/SNMP Devices Restore window opens.

2 Select only the device or devices whose service data you need to restore from the **Restore Information** area of the window.

The selected devices have a check mark in the **Rst** column. All other devices have no entry in the **Restore** column.

3 In the **Restore Mode Selection** area, click **sel**.

The **List Views** button is enabled.

4 Click the **List Views** button and select the required view file. You can display selected view files by using the **Filter** data entry field and pressing **<return>**.

OR

Enter the name of the required view file in the **sel** data entry field and press **<return>**.

The view file name is displayed in the **sel** data entry field and in the **View** column of the **Restore Information** area.

5 Click **Restore**.

When the restore completes successfully, a message is displayed in the **Message** area. If the restore is unsuccessful, an error dialog is displayed that specifies the device and the reason for the failure.

6 After a successful restore, you need to make the restored data active. See "Activating the restored Passport 4400/4460 data" (page 85).

Activating the restored Passport 4400/4460 data

Passport/SNMP Devices Restore restores the backup configuration data onto the non-committed bank of the Passport 4400/4460. After a successful restore, perform the following procedure to activate the restored data.

Procedure steps

1   Establish a connection to the Passport 4400/4460 through the serial console port. Alternatively, you can start a telnet session if there is IP connectivity between the Passport 4400/4460 and the workstation.

2   Verify the status of the restore by entering the following CLI (command line interface) command:

   `show tftp error`

   The response should be:

   ```
   LastOperStatus  : <status>
   ServerIPAddr    : <x.x.x.x>
   FileName        : <filename>
   TransferBank    : toBank<3|4>
   PortNumber      : <xxx>
   ```

3   Confirm that the LastOperStatus variable indicates a successful download. The value of TransferBank indicates to which bank the configuration data was restored.

4   Set the active configuration bank to the bank to where the configuration data was restored by entering the CLI command:

   `set system firmware activeConfigBank bank<x>`

   where <x> is the bank to which the configuration data was restored.

5   Reset the Passport 4400/4460 by entering the CLI command:

   `reset system current reset`

   The configuration takes effect once the Passport 4400/4460 has completed boot up.

Chapter 4
Current Configuration Backup

Use the Passport Service Data Backup/Restore tool to perform a backup of a Passport 6000, 7400, 15000, and 20000 current configuration. This functionality is used for Node Recovery as well as to enable backup capability for Passport view and journal files. It supports the database synchronization mechanisms to ensure that the MDM Administration Database is updated with the latest configuration.

Navigation

- "Prerequisites to current configuration backup" (page 87)
- "Backup server configuration for current configuration backup" (page 88)
- "Performing a Current Configuration Backup" (page 96)
- "Scheduling current configuration backups" (page 97)

Prerequisites to current configuration backup

- The devices to be backed up must be specified in a user configuration file. This configuration file also determines if backups are on_demand, and if database synchronization should be done. See "Modifying the Data Synchronization configuration file for a Current Configuration Backup" (page 27).

Backup server configuration for current configuration backup

The task flow shows you the sequence of procedures you perform to configure the backup server for current configuration backup of Passport service data. To link to any procedure in this document, double-click on the procedure name in the task flow or in "Configuring the backup server for current configuration backup procedure navigation" (page 88).

Figure 7
Configuring the backup server for current configuration backup procedures
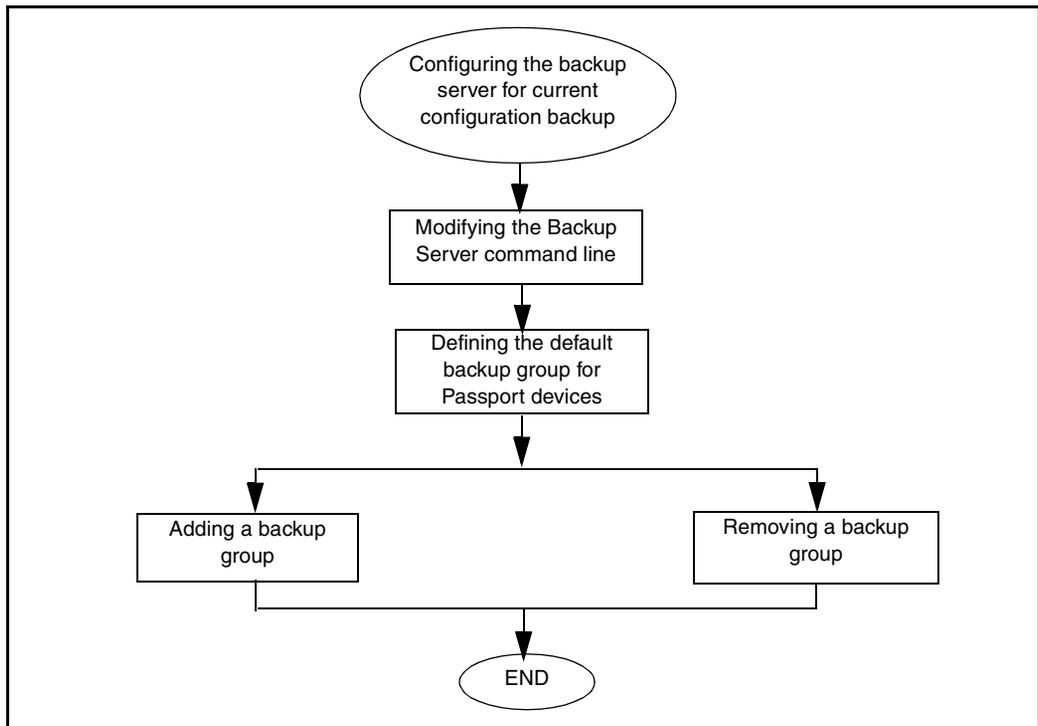
Configuring the backup server for current configuration backup procedure navigation

- "Modifying the Backup Server command line" (page 90)

- "Defining the default backup group for Passport devices" (page 92)

- "Adding a backup group" (page 93)

- "Removing a backup group" (page 95)

Modifying the Backup Server command line

To support the Current Configuration backup and database synchronization, and to configure the maximum number of parallel backups, you must add options to the command line for the Backup Server.

Procedure Steps

1   Open the Server Administration tool and perform authorization. For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

2   Select **Backup Controller** from the Server list.

3   Right click to select **Edit Server**.

The **SVM Edit Server** window displays.

4   In the **Startup command** field, add the following options to the command line.

```
/opt/MagellanNMS/bin/nsctlbck - notification -nbofbck
<#>
```

where:

The -nbofbck <#>, where # is the maximum number of backups, limits the number of backups that can be performed in parallel. This option can only be used with the -notification option for backup on alarm or on demand; this option cannot be used for a basic backup. The default # is 5. Backup requests coming after the maximum number are queued in a waiting queue and are transferred to the executing queue if the executing queue is not full. That is, it has less than the maximum number of parallel backups, as specified in the nbofbck <#> option of the Backup Server command line. By limiting the number of simultaneous backups, you reduce congestion problems that may occur with a large number of backups. It is recommended that the default be left at 5, unless engineering information is available.

-notification option, when included, allows the system to perform current configuration backups.

Any changes you make to the server startup command take effect when the server is restarted. For instructions on how to use the Server Administration tool, see the 241-6001-303 *Preside MDM Administrator Guide*.

> **CAUTION**
> **Starting the Backup Controller**
> The Backup Provider must be started before the Backup
> Controller (Backup Server) when using the -notification
> option. The Backup Controller is known as the Backup
> Server when the -notification option is specified. See
> "Current Configuration Backup" (page 87).

Note: The Backup Controller is known as the Backup Server when the -
notification option is specified. For example:

```
/opt/MagellanNMS/bin/pbckpp
/opt/MagellanNMS/bin/nsctlbck -notification
```

Defining the default backup group for Passport devices

The default group options can be used for any backup group that you add. You must verify that the values in the default group options are acceptable for your system. Use the following procedure:

Procedure steps

1   Start the Server Administration tool.

   For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

2   In the Server Administration window, select the **Backup Controller**.

3   Right click to select **Edit Configuration** and then **Backup Server**.

   The Configuration Editor displays. For information on the displayed parameters, refer to "Configuration Editor window" (page 118).

4   Expand the Default group element.

5   Select **Authentication** and

   a.   enter the appropriate username,

   b.   enter the password

      OR

      set the usePassword File to **True** and enter the location of the password file in the passwordFileName field.

6   Verify that the values in the Backup and DBSynch elements are appropriate.

7   From the **File** menu, select **Save**.

Adding a backup group

Define a set of Passport devices as part of a group that will be backed up together at the same time in the same manner. Specify the manner in which this group is backed up.

Note: If you do not define the values of the backup group, the system uses the values defined in the default backup group.

Procedure steps

1   Define a group in the HGDS system using the Host Group Administration tool. For more information on adding groups, refer to 241-6001-303 *Preside MDM Administrator Guide*.

Note 1:   If the Backup Controller is already running, you must run the Passport kick script. This script is used to update the HGDS, FDTM and FMDR servers with the new information, without having to restart the servers.

Note 2:   An existing group can be used. It does not have to be defined as a backup group.

2   Start the Server Administration tool.

For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

3   In the Server Administration window, select the **Backup Controller**.

4   Right click to select **Edit Configuration** and then **Backup Server**.

The Configuration Editor displays. For information on the displayed parameters, refer to "Configuration Editor window" (page 118).

5   Select the **BackupServer** element.

6   Right click and select **Add Element**.

The **Add Element** dialog displays.

7   Verify that **Group** is selected and click **OK**.

8   Select the **New Group** element.

9   Enter the Group name.

10   Verify that the **enabled** field is set to **True**.

Note: At this point, you can accept the values that you defined for the default backup group by selecting **Save** from the **File** menu which completes this procedure or you can specify new options using step 11 through step 19.

11 Select your new group from the element tree.

12 Right click to select **Add Element**.

13 In the **Add Element** dialog, select **Authentication** and click **OK**.

14 Repeat step 12 and step 13, selecting **BackupOptions** and **DBSynchOptions**.

At this point, your new group has three sub-elements (Authentication, BackupOptions and DBSynchOptions).

15 Click on the group element to expand it.

16 Select **Authentication** and

a. enter the appropriate username,

b. enter the password

OR

set the usePassword File to **True** and enter the location of the password file in the passwordFileName field.

17 Select the **BackupOptions** element and verify that onAlarm is set to **True** if you wish backups to be performed on alarm.

Note that you do not have to select this option at this time. You can set this option later using the Backup and Restore tool. For more information, refer to "Modifying the Data Synchronization configuration file for a Current Configuration Backup" (page 27).

18 Select **DBSyncOptions** and

a. Verify that enabled is set to **True** if you wish to send a notification to the Data Sync server and have the database updated whenever a backup is performed.

b. Enter the name of the DBSyncController in the **server** field. Note that if you leave the server field blank, the system defaults to localhost.

19 Select **Save** from the **File** menu.

Removing a backup group

If a group no longer requires backing up, you can remove it from the DataSync.cfg file.

Procedure steps

1   Start the Server Administration tool.

For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

2   In the Server Administration window, select **Backup Controller**.

3   Right click to select **Edit Configuration** and then **Backup Server**.

The Configuration Editor displays.

4   Select the group you wish to remove.

5   Right click to select **Remove Element**.

6   In the Confirmation dialog, select **Yes**.

7   If the group was specific to the backup system and is no longer needed, remove it using the Host Group Administration tool. For more information on removing groups, refer to 241-6001-303 *Preside MDM Administrator Guide*.

Performing a Current Configuration Backup

Use this procedure to perform a Current Configuration Backup of a group of devices.

Procedure steps

1 From the Preside MDM window, select **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

2 Select **Tools** -> **Backup Current Configuration**.

The Backup Current Configuration window displays.

3 Click **Add**.

The **Add Group** window displays.

4 Select a group of devices or expand the group and select a device. You can use the Ctrl key to select a number of groups or a number of devices within a group.

5 Select one group or select a number of groups using the Ctrl key.

6 Click **OK**.

The Groups you wish to backup are displayed in the **Group List**.

7 Click **Backup**.

If the backup request is successfully scheduled, the Messages pane indicates that the process has started. Note, however, that this type of backup is scheduled as background activity and does not provide updates to the Messages pane.

8 View the Backup Status of all current configuration backups by selecting **Tools->Show Server Log** from the menu bar.

A window displays a snapshot of the end of the server log. To refresh the text in this window, close the window by pressing the **Cancel** button and re-selecting **Tools->Show Server Log** from the menu bar.

Scheduling current configuration backups

Create a cron job to schedule current configuration backups on one or more of the Passports listed in the DataSync.cfg file.

Navigation

- "Procedure steps" (page 97)

- "Variable definitions" (page 97)

- "Procedure job aid" (page 98)

Procedure steps

1   From the xterm window, type the following command:.

```
crontab -e
```

An empty vi file is displayed on the screen.

2   Type the following command:

```
<time> * * [<day> [<day_range>]] /opt/MagellanNMS/bin/
nsbck -demand [<group_label> [<nodename>]]
```

Variable definitions

Variable	Definition	Values
day	The day of the week that the backup is to occur.	Enter 1 for Monday, 2 for Tuesday, 3 for Wednesday, and so on. To schedule backups on non-consecutive days, type the command for each day.
day_range	The range of days that the backup is to occur.	Enter a range of consecutive days e.g. 2-5
group_label (optional)	The group name in the DataSync.cfg that contains the list of Passports that are to be backed up.	To schedule backups on more than one group, type the command for each group.
(Sheet 1 of 2)		

Variable	Definition	Values
nodename (optional)	The name of a Passport in the DataSync.cfg.	To schedule backups on more than one Passport, type the command for each Passport.
time	The time that the backup is to occur.	Enter the time of day in hours and minutes e.g. 0 0 for midnight.
(Sheet 2 of 2)		

Procedure job aid

The following example shows a crontab file that performs backup on all devices from Monday to Friday at midnight:

```
0 0 * * 1-5 /opt/MagellanNMS/bin/nsbck -demand
```

The following example shows a crontab file that performs backup on three different groups on Monday, Tuesday and Wednesday at midnight:

```
0 0 * * 1 /opt/MagellanNMS/bin/nsbck -demand group1
0 0 * * 2 /opt/MagellanNMS/bin/nsbck -demand group2
0 0 * * 3 /opt/MagellanNMS/bin/nsbck -demand group3
```

Chapter 5
Current Configuration Recovery

Use the Passport Service Data Backup/Restore tool to perform current configuration recovery for Passport 6000, 7400, 15000, and 20000 nodes.

Note: For information on backing up views/journals for Recovery, see "Current Configuration Backup" (page 87).

A Passport Devices Recovery recovers the committed configuration of the Passport, its journal log files, and downloads the recent software, and restores them to a replacement Passport.

CAUTION
Files will be overwritten
Before reconnecting a replacement Passport to the network, edit the DataSync.cfg file to turn off backup on alarm for the device, and then restart the Backup Server. See "Modifying the Data Synchronization configuration file for a Current Configuration Backup" (page 27). This step prevents the Backup Server from being triggered by a reconnect alarm, which would back up this device and overwrite the recovery.info and avl. info files.

Navigation

- "Performing a current configuration device recovery" (page 102)

Prerequisites to current configuration recovery

- Before proceeding with this procedure, ensure that the Backup Server has been configured properly. See "Backup server configuration for current configuration backup" (page 88) and "Modifying the Backup Server command line" (page 90)

- When you are recovering a mix of devices, you must recover all Passport 7400s (specifying the Passport 7400 software distribution site) in one procedure. Then, you must repeat the procedure for the Passport 15000 (specifying the Passport 15000 software distribution site) to recover those nodes. The software distribution site is different for the Passport 7400s and Passport 15000s.

- Launch the Passport Backup and Restore GUI: **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

Defining the Software Distribution Site for a Passport node recovery

Use this procedure to define the software distribution site to be used in Node Recovery.

1   From the **Passport Service Data Backup/Restore** window, select **Set Software Distribution Site** from the **Options** menu.

The Software Distribution Site dialog displays.

2   In the appropriate fields, enter the IP host name, userid and password of the Software Distribution Site.

3   Click **OK**.

Performing a current configuration device recovery

Use this procedure to perform a current configuration recovery for a Passport device.

Procedure steps

1 From the **Passport Service Data Backup/Restore** window, select the **Recover Device** tab.

2 Click **Add** to open the **Add Device** dialog.

   Note: The **Add Device** dialog displays only devices that have a recovery.info file. Only those devices that have had a current configuration backup have a recovery.info file.

3 Select a group of devices or expand the group and use the Ctrl key to select a number of devices.

4 Select the **Use default** box to use the default password or enter the user ID and Password.

5 Click **OK**.

   The devices are displayed in the **Device List**.

6 Select the device(s) on which to perform the Node Recovery.

   The date column displays the date of the last current view backup. The view column displays the name of the committed view. The software column displays the software version active at the time.

   You can view the last journal number and the journal status of a device by selecting the **Configuration Information** tab in Device Details. The **Application Versions** tab displays the software application version that was used for this configuration.

7 Click **Recover**.

   You can cancel the recovery process by clicking **Cancel**.

Chapter 6
Fundamentals of Preside MDM Backup and Restore

Preside MDM provides two distinct interfaces for backup and restore activities:

- Passport Service Data Backup/Restore, used for the Passport 6000, 7400, 15000, and 20000 devices

- Passport/SNMP Service Data Backup/Restore, used for Passport 4400 and 4600 devices

You can perform basic backup and restore functions using both interfaces. In addition, you can use Passport Service Data Backup/ Restore to perform a current configuration backup on Passport 6000, 7400, 15000, and 20000 devices.

Navigation

Backup configuration files

The remote mapping file (Controller.cfg) is used for both Passport and Passport/SNMP Service Data backup when you need to access a Provider that is not running on the same host machine as the Controller. When this situation occurs, the remote mapping file needs an entry for the node, or nodes, on the remote Provider that the Controller is attempting to access. You can also use the remote mapping file to distribute the workload over several Providers.

Passport service data backup configuration files

The data synchronization file (DataSync.cfg) is used to specify backup information for current configuration backup, current configuration recovery and data synchronization information for Passport nodes. It lists the groups (as defined in the Host Group Directory Service) that will be used to determine which nodes to backup, and the backup options. It includes configuration information for the Backup server and the DB synchronization controller. This file is updated using the Configuration Editor to modify all the parameters.

Passport/SNMP service data backup configuration files

The device information file (devices.cfg) has an entry for each node that Passport/SNMP Backup and Restore services. This file contains information about the nodes supported by the Backup and Restore tools. The Backup and Restore applications automatically create and update the file /opt/ MagellanNMS/data/nst/devices.cfg using GMDR for Passport 4400/4460.

The interface mapping file (ifmap.cfg), which is only for Passport 4400 nodes, is used when the Provider's host machine has multiple network interfaces. You can use the interface mapping file to map the IP address of the appropriate host interface to the IP addresses of the nodes that need to connect to that host interface.

For more information on the use of these configuration files, see "Passport Service Data Backup/Restore tool" (page 127).

File and Directory structure

The table "Backup and restore file and directory structure" (page 105) summarizes the location of the main backup and restore files and directories.

Table 2
Backup and restore file and directory structure

Directory/Files	Location
Backup Directory for each Passport device containing the Passport views and journal log files	/opt/MagellanNMS/data/Backup_Data/ PASSPORT<Passport_name>
Backup server log files	/opt/MagellanNMS/data/log/bckRst/backup.dlog /opt/MagellanNMS/data/log/bckRst/restore.dlog
For Passport devices only	
Remote mapping file	/opt/MagellanNMS/cfg/Controller.cfg
Data synchronization configuration file (for current configuration backup and recovery)	/opt/MagellanNMS/cfg/DataSync.cfg
For Passport 4400 devices only	
Device information file	/opt/MagellanNMS/data/nst/devices.cfg
Interface mapping file	/opt/MagellanNMS/cfg/ifmap.cfg

Connectivity requirements for Passport nodes

You need FTP and FMIP access to backup and restore Passport 6000, 7400, 15000, and 20000 nodes. This is not a requirement for Passport 4400 and 4460 backup and restore.

Connectivity requirements for Passport 4400/4460 devices

- The Passport 4400 and Passport 4460 Providers need IP connectivity to their respective devices.

  For information on how IP connectivity is established with a Passport 4400 device, see "Configuring connectivity between Passport 4400/4460 and a provider (optional)" (page 40).

  To verify the IP connectivity between the Providers and a Passport 4400/4460 device, type the command *ping w.w.w.w* on the Passport 4400/4460, where *w.w.w.w* is the IP address of the workstation where the Providers reside.

- The Passport and Passport 4400/4460 devices must be configured to allow them to communicate with the workstations on which their associated Providers are running.

Backup and Restore server architecture

The servers are referred to as controllers and providers. The Backup controller and provider back up the most recent information from the Passport and store it on a backup site. The Restore controller and provider are responsible for restoring the backed up information to the Passport nodes.

See "Passport Current Configuration Backup and Restore architecture" (page 107) and "Backup and Restore Architecture" (page 108).

Figure 8
Passport Current Configuration Backup and Restore architecture
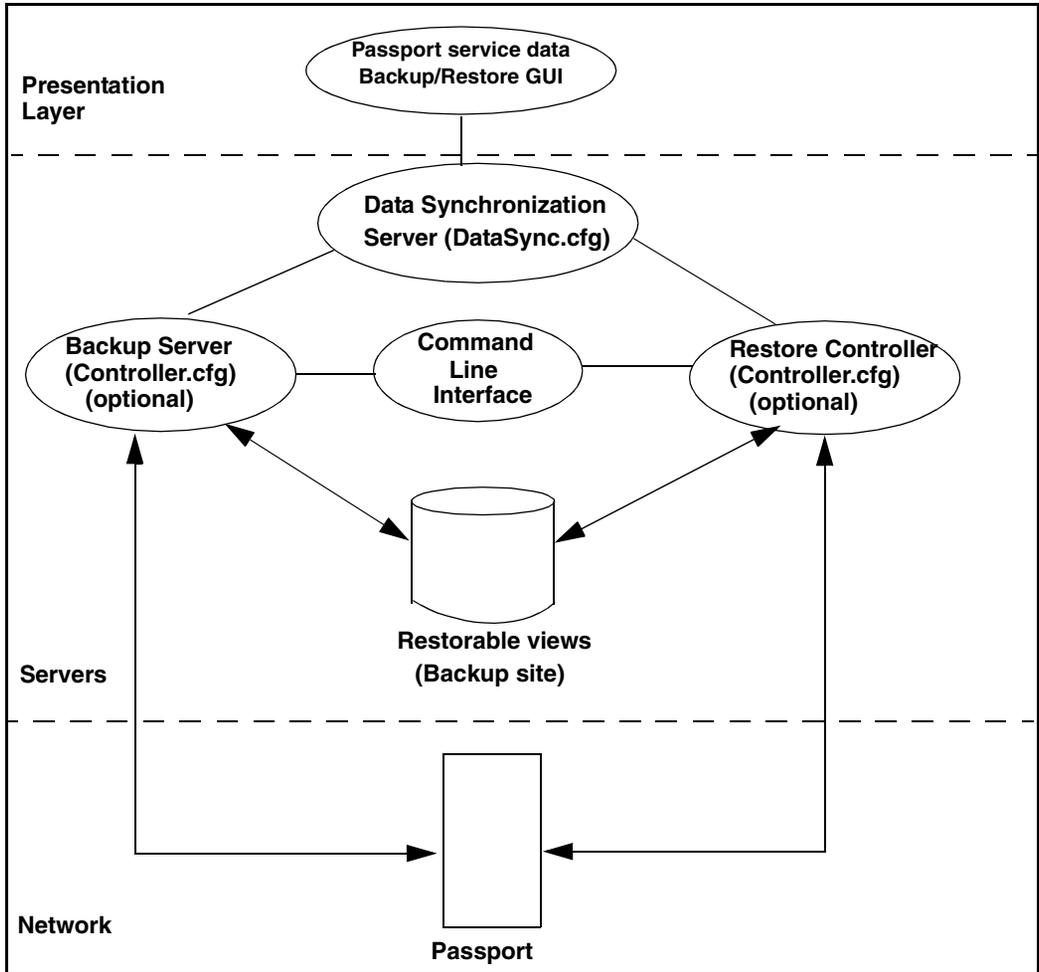
Figure 9
Backup and Restore Architecture
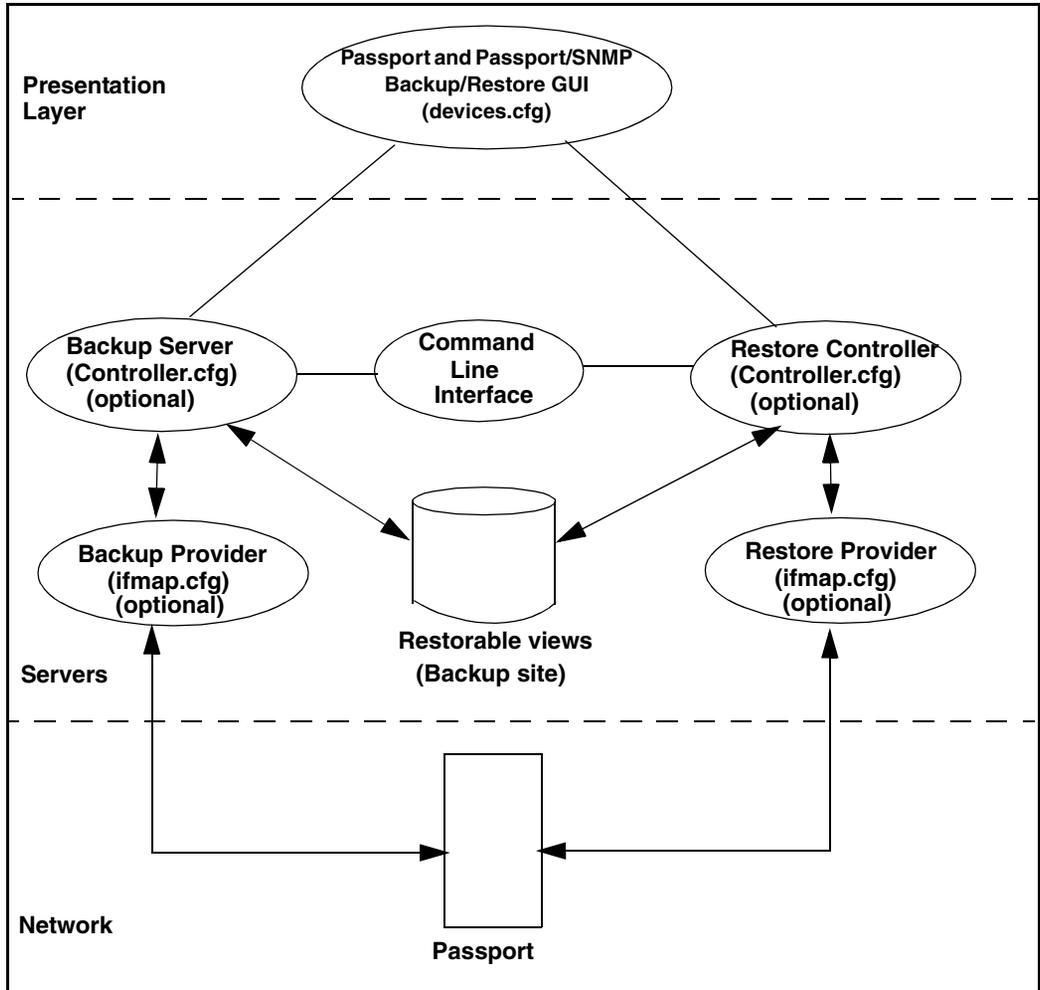
Backup and Restore server redundancy

To ensure Backup server reliability, redundancy can be set up for the Backup and Restore servers. Backup server redundancy may be critical if there is a requirements to be able to quickly recover a node to its current configuration. Two or more independent Backup servers can be running at the same time on different MDM workstations. See "Backup server redundancy" (page 109).

Figure 10
Backup server redundancy
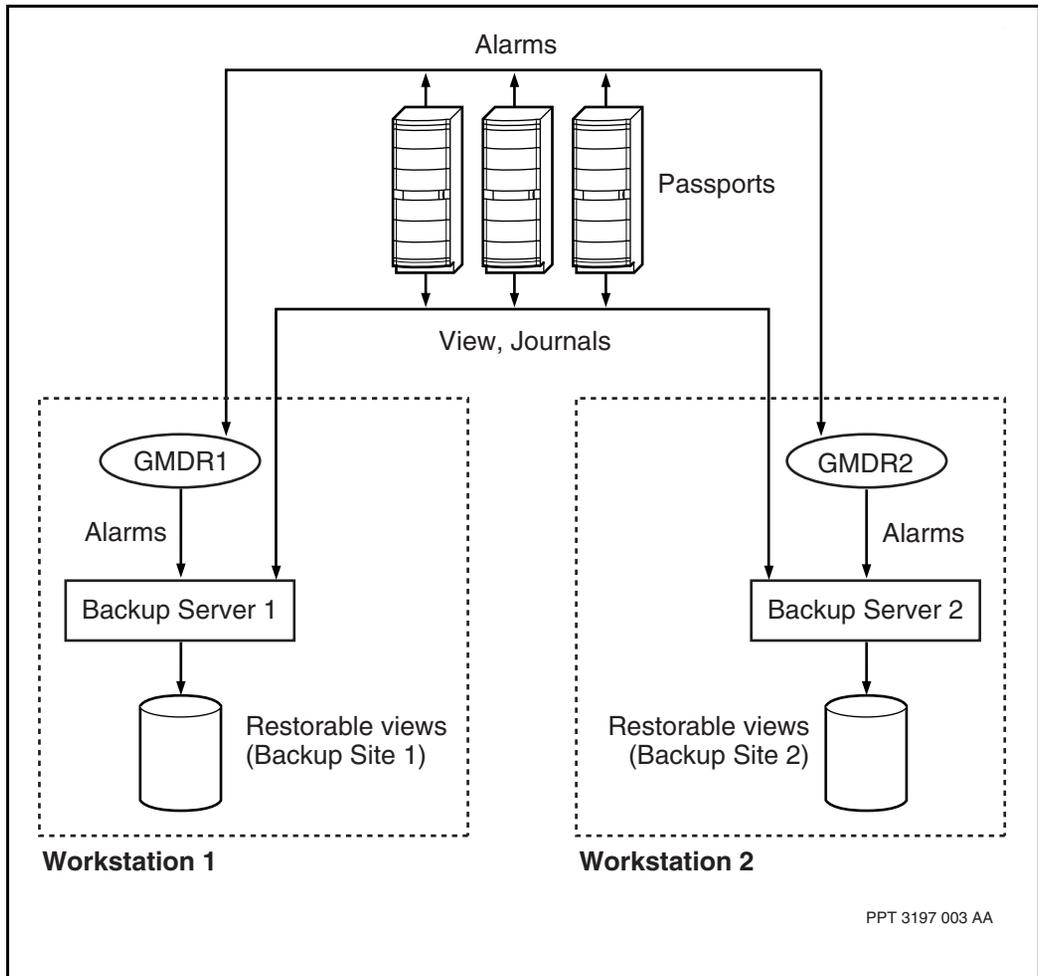
Both Backup servers cover the same Passports and are triggered by the same alarms from GMDR, which are generated by the Passports. A command line option can specify the host to which the GMDR server connects (see "Interface with GMDR" (page 122).

In the illustration in "Backup server redundancy" (page 109), the Backup servers connect to two different GMDR's, one for each Backup server. In another possible scenario, one common GMDR could be running on a separate workstation. Both Backup servers would receive alarms from this GMDR and trigger the servers to do backups. Regardless of the setup, two backups are done in parallel and independently. The two Backup servers do not communicate with each other.

Similarly, two separate Restore controllers could run on workstation 1 and workstation 2 respectively and have a remote workstation with two separate instances of the recover tool connecting to the distinct Restore controllers.

Basic backup functions

The basic service data backup enables you to back up view files for a single device or for multiple devices of the same type.

Passport and Passport/SNMP Service Data Backup/Restore provide three types of backup:

- A *full* backup copies all views of the service data on the selected device or devices and stores the data on MDM to a file in /opt/MagellanNMS/ data/<backup data file name>. The full backup overwrites any views already stored in the MDM backup data file.

- An *incremental* backup copies only service data changed or created since the last backup. Like the full backup, you can perform an incremental backup on either one or multiple devices.

- A *selective* backup copies specific service data that you select. You can perform a selective backup on either one or multiple devices.

ATTENTION	The result of all three backup types is the same for Passport/ SNMP devices because these devices have only one view. Therefore, if you select a full backup, you backup one view. Conversely, if you select a selective or incremental backup, you backup the same view. The configuration data for Passport 4400/4460 devices are stored in two memory banks (bank3 and bank4). Passport/SNMP service data backup does not back up both banks, only the committed bank is backed up.

The Passport and Passport/SNMP backup function copies only the configuration data of the device. The service data views that make up the configuration data are found on the device disk in a set of files in individual directories under the directory /provisioning. The backup function also copies the special files that are found under the directory /provisioning/netsentry.

The configuration data for Passport 4400/4460 devices are stored in two memory banks (bank3 and bank4). Passport/SNMP Devices Backup does not back up both banks, only the committed bank is backed up.

Backup groups

The system administration uses the Configuration Editor to define attributes in a default backup group. When you add a new backup group, you can either define specific values for the new group or, if you don't define any values, the system automatically uses the values of the default group.

All backup groups are defined in the HGDS server using the Host Group Administration tool. For more information, refer to 241-6001-303 *Preside MDM Administrator Guide*.

Basic restore functions

The Passport and Passport/SNMP Service Data Backup and Restore tools restore functions can be performed on one or multiple devices.

For Passports 6000, 74000, 15000, and 20000, MDM restores backed up configuration data onto the Passport disk. The data backed up from one Passport can also be restored to another Passport of the same type.

The Passport 4400/4460 has two memory banks, called bank 3 and bank 4, for configuration data. Passport/SNMP Devices Restore restores backed up configuration data onto the non-committed bank.

You can perform three types of restore:

- A *full* restore restores all backed up service data to the selected device or devices. For the Passport Service Data restore, this overwrites any previously restored view on the device. For the Passport/SNMP restore, this adds the new view and does not overwrite any previously restored view on the device. In both cases, the restore function does not overwrite protected views on the device. The committed view is always a protected view and cannot be restored.

- An *incremental* restore restores service data based on a specified date. For the Passport Service Data restore, if you do not specify the date, an incremental restore is the same as a full restore. You are not required to specify a date for the Passport/SNMP Service Data restore as the default sets the restore function to the current date.

- A *selective* restore restores specific service data that you select.

Current configuration backup for Passport nodes

Passport Service Data Backup and Restore can be used to perform a current configuration backup for Passport 6000, 7400, 15000, and 20000 nodes.

The backup server must be started with the -notification option to enable the current configuration backup. In addition, the -nbofbck option can be used to specific the maximum number of backups that can be performed in parallel. Backup requests coming after the maximum number are queued in a waiting queue and are transferred to the executing queue if the executing queue is not full. That is, it has less than the maximum number of parallel backups, as specified in the nbofbck <#> option of the Backup Server command line. By limiting the number of simultaneous backups, you reduce congestion problems that may occur with a large number of backups. It is recommended that the default be left at 5, unless engineering information is available

When the current configuration backup has been used, you can perform the node recovery functions for Passport 7400, 15000, and 20000 nodes with PCR 5.1 or later.

Overview of current configuration backup

In this Backup mode, the Backup Server retrieves the most current configuration of the switch. A current configuration is the combination of the committed configuration and activations that have occurred on that switch. It is not possible in all cases to retrieve all of the current configuration.

In the case where on-switch journaling is enabled, the Backup Server retrieves the journal files and the committed configuration of the switch. In other words, the current configuration is completely backed up to the MDM. In addition, the complete current configuration can be synchronized with the Administration Database.

However, if journaling is not enabled/available, it is not possible to obtain a complete current view. If a user has performed provisioning and activations on the switch without saving, then only the committed view can be backed up on the MDM. The activations will not be backed up to the MDM, until they are saved, activated and a "confirm prov" command has been performed.The "confirm prov" command is extremely important in cases where journaling is not enabled/available.

Once the Backup Server retrieves the most current view and journal log files from the Passports, and completes their storage to a local disk, it notifies the Data Synchronization Server and passes it the view and journal information. These notifications trigger the synchronization process.

The Data Synchronization Server compares the view and journal information that it receives from the Backup Server with the contents of the view and journal information contained in the database to determine if the database is synchronized. If the database is not synchronized with this information, the Data Synchronization Server initiates the translation of the missing views and journals into database compatible format.

The Data Synchronization Administration tool is used to view synchronization activities and basic status information, based on information provided by the Data Synchronization Server.

There are two options for configuring your system. These options are defined in the configuration file:

* **On Alarm with journaling supported** uses alarm notification for configuration changes from the device to trigger the backup of Passport view and journal files. The database can then be synchronized using this information. This mode can be used for near-real-time synchronization of both backup and database information.

  The figure, "Backup server architecture for current configuration backup including Database Synchronization" (page 123) shows the sequence of events that occur. The Backup server receives an alarm from GMDR when a provisioning change is made. This alarm triggers the Backup server to start a backup. The Backup Server communicates to the Backup

Provider, which sends a request to the Passport to back up the most current view name and journal files. The new files are stored on the backup site.

On Alarm for complete view (with journaling not supported) is used for pre-PCR 5.1 releases. In this case, a complete configuration file is transferred for each provisioning confirmation done on each Passport. This may cause engineering issues in terms of OAM network and workstation capacity, and is not recommended.

The On Alarm option requires that the Backup Server be configured to listen to a particular GMDR server, which provides the notification based on the alarm information from the node. Without the GMDR server, the Backup Server cannot receive the real-time notification of the provisioning changes. If the GMDR runs on a different host than the Backup Server, you can specify this. See "Interface with GMDR" (page 122) for more information.

- **On Demand** uses a command line trigger to backup Passport views and journals. This command line trigger can also be used in a cron job to provide a scheduled backup and database capability. If journaling is not supported or enabled, the operator must ensure that a save, activate, and "confirm prov" has been done to ensure availability of the current view.

Backup Server functionality for current configuration backup

When the Backup Server is started with the -notification option, it initiates a backup for the devices that have On_Alarm set to **True**, whenever it receives a commit, confirm, reset or node reconnect alarm. The following information is obtained from the Passport:

- committed view name

- number of journals

- current view name

- journalDisabledReason attribute

- restorePossible attribute

- activation time = (in this case, activation time is the *d prov* time of the last journal backup)

This information is stored in the recovery.INFO file. The Backup Server compares this information with what has already been backed up and then transfers the necessary view and journal files.

When journaling is not enabled, the Passport sends only Confirm and Node Reconnect alarms. When the Backup Server receives the Confirm and Node Reconnect alarms, it recovers the current view from the Passport. The customer must save, activate, and confirm prov to ensure that a current view is available.

In this case, the current view has a valid name. The Backup Server checks if it already has the backed up file, and if not, it transfers the file to the backup site. There are no journals to be transferred.

To trigger a backup of all the Passports simultaneously, you can edit the DataSync.cfg file to give all the Passport nodes the same group label and execute the command **/opt/MagellanNMS/bin/nsbck -demand** without specifying a group. Note that this is not recommended due to possible engineering and performance impacts. The maximum number of Passports in a group is 50.

The actual FTP backup session is performed the same as an FTP backup triggered by an alarm with On Alarm.

Backup site directory structure

The journal files are stored by the Backup tool in a subdirectory of the view they are associated with. If a new set of journal log files is created for the same view, another journal directory is created.

The naming convention for the journal directories is <timestamp>journal. The timestamp comes from the Passport file system and is the creation date of the file.

/provisioning/journal/current/journalView

This directory is created with the first journal log file.

The following files are also created on the backup site:

- "view.INFO file" (page 117)

- "recovery.INFO file" (page 117)

- "avl.INFO file" (page 117)

view.INFO file

A view.INFO file is created on the Backup site for each view. This file contains the name of the base view as stored on the Backup site, and enables the association of the proper base view to a delta view. For each backup or restore, the tool checks if the base view is on the Backup site. If not, it will backup or restore it. The base view is a portable or complete view.

The format of the file is as follows:

BASE_NAME <timestamp>.<viewname>

For example:
BASE_NAME 200301261812228.view1.full.001

The view.INFO file is located on the backup site with the view. For example, a named view1.full.001 on a Passport NODE1 is found at the following location:

/opt/MagellanNMS/data/Backup_Data/Passport/NODE1/
200301261812228.view1.full.001/view.INFO

recovery.INFO file

A recovery.INFO file is also generated during each backup. This file contains the committed view name, the current view name, the journal directory name, the number of journal files, and two values: restorePossible and journalStatus. These two values come from the switch at the time when the backup was done. When a Node Recovery is performed, it reads this recovery.INFO file in order to restore the needed information.

avl.INFO file

The recovery.INFO file and the avl.INFO file are MDM-specific files and are created by the Backup Server during a backup. These files do not exist on the Passport and are used by the Node Recovery tool to recover a Passport node

on a replacement Passport. When a node is recovered, the software that is being run must be downloaded to the replacement Passport. Therefore, each backup must also contain the current AV list. This information is stored in a new file called avl.INFO.

Configuration Editor window

The Configuration Editor allows you to edit the DataSync.cfg file. You can launch the Configuration Editor from Server Administration Tool.

The editor has two panes. The left pane displays the symbol for the server which can be expanded to display a tree hierarchy which lists all the devices or groups of devices. Each device or group element can be expanded to display three parameter categories. The right pane displays the parameters contained in the selected category.

Data Synchronization file parameters

The following table describes each of the backup and restore-related fields contained in the DataSync.cfg file.

Table 3
Data Synchronization file parameters for Backup Server

Category	Field	Description	Default
BackupServer	port	Option to specify the Backup server port, to communicate with.	5050
	dataDir	Option to specify the backup data directory where the views and/or journals are stored.	/opt/Magellan/ NMS/data/ Backup_Data
Authentication	username	Username to access device	
	password	Password to access device	
	usePasswordFile	Determines if a password file is used for access to the account	false
	passwordFile	Path to the file that contains an encrypted password	
(Sheet 1 of 2)			

Table 3
Data Synchronization file parameters for Backup Server (Continued)

Category	Field	Description	Default
BackupOptions	onAlarm	Determines if the devices in the group are backed up when the sever receives a configuration event from a device	true
DBSync Options	enabled	Determines if a dbsynchcontroller is notified when the device is backed up true	true
	server	Name of the server to notify when a device is backed up	
(Sheet 2 of 2)			

Table 4
DBSyncController configuration file parameters

Category	Field	Description	Default
DBSyncController	name	Option to specify the name of the DBSync Controller.	hostname
	port	Option to specify the port that the DBSyncControler listens to.	5757
	maxParallelUpdates	Option to limit the number of simultaneous updates by the DBSyncController that can occur	5
	mode	Option to specify which database ("config", "admin", or "both") to be updated/synchronized.	Both
	connection-Timeout	Option to specify the time-out value which server attempts to connect to the Backup Server	45
(Sheet 1 of 3)			

Table 4
DBSyncController configuration file parameters (Continued)

Category	Field	Description	Default
	username and epassword	You must enter a user name and an encrypted password. If only the Administration Database is used, enter the user name and encrypted password for the account that owns the Administration Database. If the Configuration Repository is used, or if both the Administration Database and Configuration Repository are used, enter the user name and encrypted password for the account that owns the Configuration Repository.	
	dataDir	Option to specify the directory where the DBSyncController data are stored	
AutoDiscovery	autoDiscovery	Option to specify whether or not automatic discovery is enabled.	false
Logging	logErrorToFile	Option to specify logging DBSyncController errors to file	true
	logFileName	Name of the log file	/opt/ MagellanNMS/ data/dbsync/ dbsync.log
PPConfigServer	host	Option to specify the host name or ip of the Passport Configuration server to communicate with.	localhost
	port	Option to specify the Passport Configuration (PCS) server port, to communicate with.	6760
(Sheet 2 of 3)			

Table 4
DBSyncController configuration file parameters (Continued)

Category	Field	Description	Default
	dataDir	Option to specify where the PPConfigServer data are stored.	/opt/ MagellanNMS/ data/fps
Operational Data	dataDir	Option to specify the directory where the operational data are stored.	/opt/ MagellanNMS/ data/opcoll
	schema	Option to specify the operational data schema	/opt/ MagellanNMS/lib/ cfg/ opdbcoll.schema
BackupServer	host	Option to specify the Backup server host name or IP address, to communicate with	localhost
	port	Option to specify the Backup server port, to communicate with.	5050
	dataDir	Option to specify the backup data directory where the views and/or journals are stored. ***Note:***	/opt/Magellan/ NMS/data/ Backup_Data
	deviceConfigFile	Option to specify the device configuration file directory.	/opt/ MagellanNMS/ cfg/ BackupNodes.cfg
Note: If there is more than one Backup server, you need to specify the above parameters for each of them.			
(Sheet 3 of 3)			

Interface with GMDR

The GMDR process must be available whenever an On_Alarm backup must occur. The GMDR process ensures that the Backup Server is notified of a provisioning change on the Passport.

GMDR sends alarms to the Backup Server when a notification alarm is received from the Passport. If GMDR runs on a different host than the Backup Server, you can specify the GMDR host with the option -gmdrhost as follows:

```
/opt/MagellanNMS/bin/nsctlbck -notification -gmdrhost
<hostname>
```

Data synchronization

If synchronization has been specified in the DataSync.cfg file, the Database Synchronization server is notified that a backup has occurred. For more information on this capability, see "Current Configuration Backup" (page 87). For more information on the Administration Database, see 241-6001-400 *Preside MDM Administration Database User Guide*.

Figure 11
Backup server architecture for current configuration backup including Database Synchronization
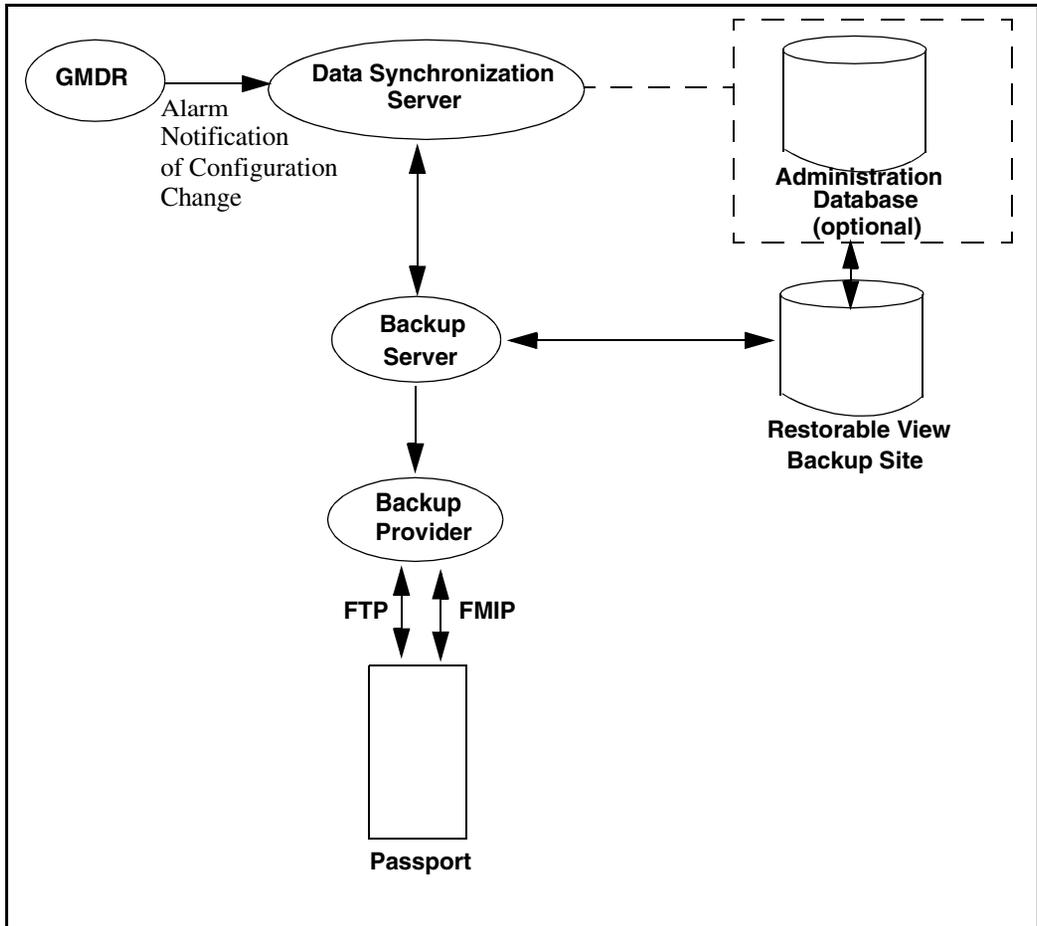

Node recovery

If the Current configuration mode of backup is used, the system has the additional functionality to recover the most current view from the backup site and restore this information, potentially to a replacement Passport. It is also used as input for database synchronization.

This functionality is available only for Passport 7400, 15000, and 2000 nodes with PCR 5.1 or higher. See "Current Configuration Recovery" (page 99).

Backup and Restore logs

The OAMC server collects logs from the Backup Controller and the Restore Controller. These logs can also be sent directly to a log file. See the diagram "Backup and Restore log collection" (page 125). The Backup Controller logs are stored in /opt/MagellanNMS/data/log/bckRst/backup.dlog. The Restore Controller logs are stored in /opt/MagellanNMS/data/log/bckRst/restore.dlog. Logging is automatically enabled as a default. The default log levels included are error, warning and notice.

Figure 12
Backup and Restore log collection
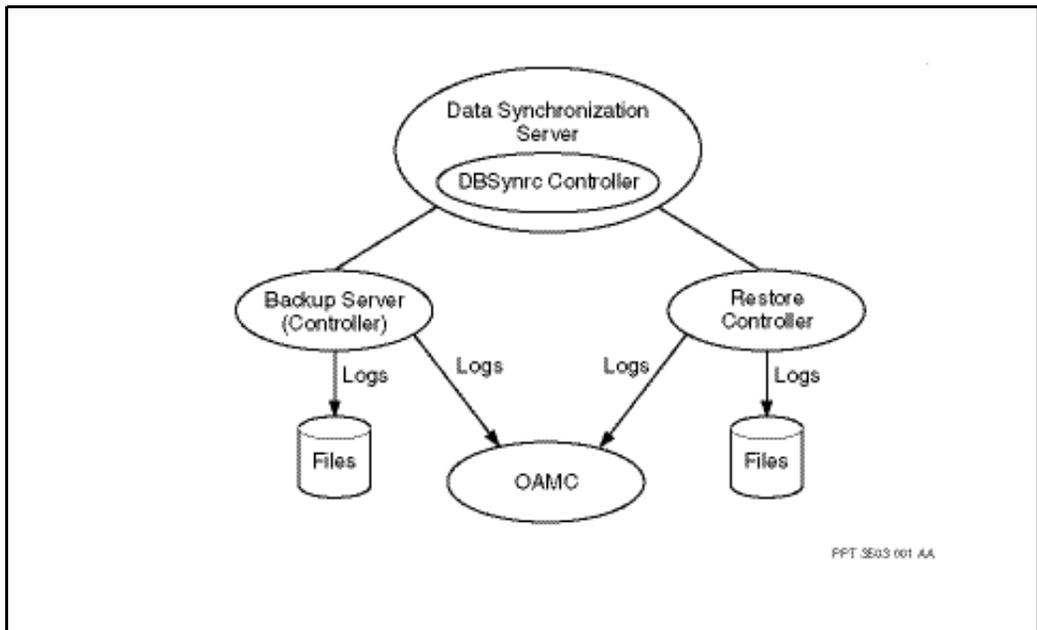
Chapter 7
Passport Service Data Backup/Restore tool

The Passport Service Data Backup/Restore tool provides a GUI that is used to backup the configuration data for the devices in your network, to restore configuration data that is lost or corrupted, and to recover the complete configuration data in the event of a catastrophic data loss or corruption.

ATTENTION	Use this tool with Passport 6000, 7400, 15000, and 20000 devices. For Passport 4400 and 4460 SNMP devices, see "Passport/SNMP Service Data Backup/Restore tool" (page 133).

Navigation

-

Passport Service Data Backup/Restore GUI

The Passport Service Data Backup and Restore is launched from the Preside MDM toolset under **Configuration->Passport->Administration->Passport Service Data Backup/Restore**.

The main window of the interface consists of the following sections:

- "Menu bar" (page 128)

- "Function tabs" (page 129)

Menu bar

The menu bar is located at the top of the main window. See the following sections for information on the menu bar entries:

- "File menu" (page 128)

- "Options menu" (page 128)

- "Tools menu" (page 129)

- "Help" (page 129)

File menu

The File menu contains the following items:

- *Reconnect* reconnects you to the administration database.

- *Exit* exits the Backup/Restore interface.

Options menu

The Options menu contains the following items:

- *Set Default Authentication* opens a dialog where you enter a default userid and password that is used to connected to the selected nodes unless you enter a specific userid and password.

- *Set Software Distribution Site* opens a dialog where you can edit the host, userid and password for the software distribution site (SDS). The SDS is used to download software to a node when using the node recovery mode.

- *Edit Server Configuration* opens a dialog allowing the user to change the following:

— backup server host name: name of backup server

— backup server port number: port number of backup server

— backup directory: path to location of backed up data

— restore server host name: name of restore server

— restore server port number: port number of restore server

— restore directory: path to location of restored data

Tools menu

The Tools menu contains the following items:

- *Backup Current Configuration* opens the **Backup Current Configuration** window. You use this window to perform a current view backup of a group of devices.

Help

The Tools menu contains the following item:

- *Help on Window* displays online documentation describing the Passport Backup and Restore window.

- *What's this* changes your cursor to an arrow with a question mark. Pointing the arrow at certain items in the window and clicking the item opens help on that item.

Function tabs

Three tabs are available to select the required tool function. Selecting a tab displays a panel containing a device list, device details, and messages sections appropriate to the function.

- "Backup Configuration panel" (page 129)

- "Restore Configuration panel" (page 130)

- "Recover Device panel" (page 131)

Backup Configuration panel

The Backup Configuration panel consists of three sections: Device List, Device Details, and Messages. You can click the arrow beside each section label to display or hide the section.

Device List

The Device List consists of four columns. The columns are populated when you use the Add command button to add the device(s) that you want backed up.

Table 5
Backup configuration panel device list

Column	Description
Type	Device type e.g. Passport
Device	Device name
Mode	Backup mode (incremental, selective, or full)
Configuration	View of the device to be used for selective backup.

Device Details

The Device Details section contains the Authentication panel which displays userid and passwords you entered when you added the device using the Add command button.

Messages

The Messages section of the Backup window displays information about the Backup process. The text in the Messages section is recorded in the log file located in $HOME/MagellanNMS/bkRst.log.

Restore Configuration panel

The Restore Configuration window displays a list of devices you have selected to restore the configuration views back to the device.

The Restore Configuration panel consists of three sections: Device List, Device Details, and Messages. You can click the arrow beside each section label to display or hide the section.

Device List

The Device List consists of five columns. The columns are populated when you use the Add command button to add the device(s) that you want backed up.

Table 6
Restore configuration panel device list

Column	Description
Type	Device type e.g. Passport
Device	Device name
Mode	Backup mode (incremental, selective, or full)
Configuration	View of the device to be used for selective backup.
Date	Used in incremental mode. All views before or equal to that date are restored if they are not already on the device.
To Device	The node where the configuration is to be restored.

Device Details

The Device Details section contains the Authentication panel which displays userid and passwords you entered when you added the device using the Add command button.

Messages

The Message section of the Restore window displays information about the Restore process.

Recover Device panel

> **ATTENTION**   The recover capability is available only if you used current configuration backup.

The Recover Device window displays a list of devices you want to recover back to their last known configuration. Recover detects the last configuration data backed up for the device, restores the configuration information and the software as well as resets the switch to bring the configuration into service.

The Device Details section of the Recover window has three tabs that you can select:

- *Authentication* displays userid and passwords for the selected node

- *Configuration* displays Journal status information for the selected node

- *Application Versions* displays the list of software on the Passport at the time of the latest backup.

The Messages section of the Recover window displays information about the recover process. See "Current Configuration Recovery" (page 99).

Command buttons

All the function tab panels contain the following command buttons:

- *Add* opens the Add Device dialog which allows you to select a device and enter the default authentication information for the device. The Backup Configuration and Restore configuration Add Device dialog allows you to select either incremental or full mode.

- *Remove* removes the selected node from the list.

Each of the Backup Configuration, Restore Configuration, and Restore Device panels contains its respective command button to initiate the appropriate task, as follows:

- The Backup Configuration panel *Backup* command button initiates a backup on all the nodes selected in the Device List.

- The Restore Configuration panel *Restore* command button restores the data for the nodes selected in the Device List.

- The Recover Device *Recover* command button initiates a recover on all the nodes selected in the Device List.

Chapter 8
Passport/SNMP Service Data Backup/Restore tool

Use Passport/SNMP Service Data Backup and Restore to perform basic backup and restore for Passport 4400 and Passport 4460 nodes using the SNMP protocol.
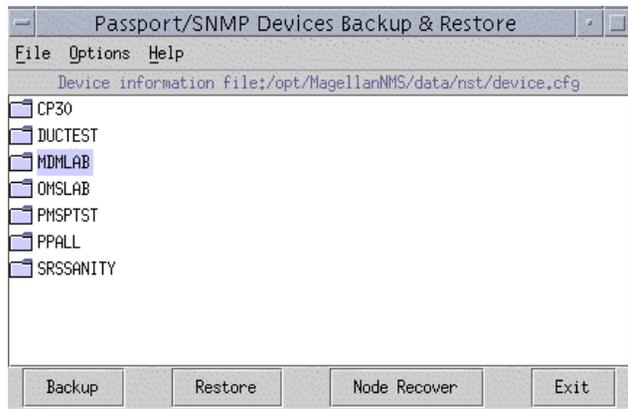
The Passport Service Data Backup and Restore is launched from the Preside MDM toolset under **Configuration->Passport 4400->Administration->Passport/SNMP Service Data Backup/Restore**.

Passport/SNMP Devices Backup and Restore window

The Passport/SNMP Devices Backup and Restore tool lets you back up and restore service data on Passport 4400 and 4460 SNMP devices. You can choose full, incremental, or selected backup and restores for single or multiple devices. You can also perform a Node Recover for a replacement Passport in the event of a disaster.

The figure "Passport/SNMP Devices Backup and Restore window" (page 134) shows a sample window.

Figure 13
Passport/SNMP Devices Backup and Restore window

The Passport/SNMP Devices Backup and Restore window consists of the following components:

- "Menu bar" (page 134)

- "Configuration file area" (page 135)

- "Devices area" (page 135)

- "Command buttons" (page 144)

Menu bar

The menu bar is located at the top of the main window. See the following sections for information on the menu bar entries:

- "File menu" (page 134)

- "Options menu" (page 135)

- "Help menu" (page 135)

File menu
The File menu contains the following items:

- *Open* opens the Open File dialog. From this dialog, you can set the device information file that Passport/SNMP Devices Backup and Restore uses. For more information, see "Open File dialog" (page 136).

- *Exit* exits Passport/SNMP Devices Backup and Restore.

Options menu
The Options menu contains the following items:

- *Change Backup Options* opens the Change Backup Options dialog. From this dialog you can set Controller information and the target directory for the backup data. For more information, see "Change Backup Options dialog" (page 138).

- *Change Restore Options* opens the Change Restore Options dialog. From this dialog you can set Controller information and the source directory for the restore data. For more information, see "Change Restore Options dialog" (page 139).

- *Save Options* saves, for future sessions, the current device information file and the changes you make in the Change Backup Options and Change Restore Options dialogs. This information is saved in the preferences file $home/.NS/.nsOptions where $home is your home directory.

Help menu
The Help menu contains the following item:

- Help On Window displays online documentation describing the Passport/ SNMP Devices Backup and Restore window.

Configuration file area
This display field shows the name of the device information file in use by Passport/SNMP Devices Backup and Restore. You can use the *Open* option of the File menu to select another device information file.

Devices area
The devices listed in the current device information file are displayed in this area. Group names are indicated by filled folder icons. You can display the device names contained in a group by double-clicking the group name. Device names are indicated by blank page icons.

You can select single devices or groups of devices to back up, restore or recover by clicking on the device or group names. Selected entries are shaded. You can change an entry from selected to unselected by clicking on it.

Command buttons

The Passport/SNMP Devices Backup window contains the following command buttons:

- Backup
  The Backup button opens the Passport/SNMP Backup window. For more information, see "Basic service data backup" (page 47).

- Restore
  The Restore button opens the Passport/SNMP Restore window. For more information, see "Basic service data restore" (page 69).

- Node Recover
  The Node Recover button opens the Passport Devices Node Recovery window. For more information, see "Current Configuration Recovery" (page 99).

- Exit
  The Exit button exits the Passport/SNMP Devices Backup and Restore tool.

Passport/SNMP Devices Backup and Restore startup dialogs

There are three dialogs that allow you to edit default information before performing backup and restore operations. These dialogs are

- "Open File dialog" (page 136)

- "Change Backup Options dialog" (page 138)

- "Change Restore Options dialog" (page 139)

Open File dialog

The *Open File* dialog (from the File menu) enables you to select the device information file used by Passport/SNMP Devices Backup and Restore. You can enter the absolute path and file name or select the file from the display panel.

The *Open File* dialog opens at the default directory /opt/MagellanNMS/data/nst.

To save your changes for future sessions, from the Passport/SNMP Devices Backup and Restore menu, select **Options**->**Save Options**.

The **Open File** dialog consists of six areas:

- the **Look in** pull-down box displays the directory hierarchy for the current disk. You can change directories using this pull-down box by

  — clicking on the down arrow to open the box

  — proceed up the directory hierarchy by clicking on any directory above the current directory

  — proceed down the directory on any filled folder icon in the display panel

- five buttons that change the display

  — the button with an up-arrow through a folder proceeds up the directory hierarchy one level

  — the button with the house moves the display to your home directory

  — the button with a folder, only, creates new sub-directories.

  — the four icon button lists files in the current directory

  — the two icon button displays file details for the current directory

- Use the central display to select a device information file by clicking on the file. The central display panel shows

  — sub-directories of the current directory using filled folder icons

  — files in the current directory using blank page icons

- a data entry box where you enter the absolute path and device file name. If you select a file using the display panel, the selected file name is indicated in this data entry box.

- a pull-down box to specify the type of files to display. The default is all files in the current directory are displayed.

- two buttons to open or close (cancel) the **Open File** dialog

  — **Open** loads the selected file and returns to the Passport/SNMP Devices Backup and Restore main window.

  — **Cancel** closes the **Open File** dialog without loading a file.

The figure "Open File dialog" (page 138) shows an example of the **Open File** dialog.

Figure 14
Open File dialog
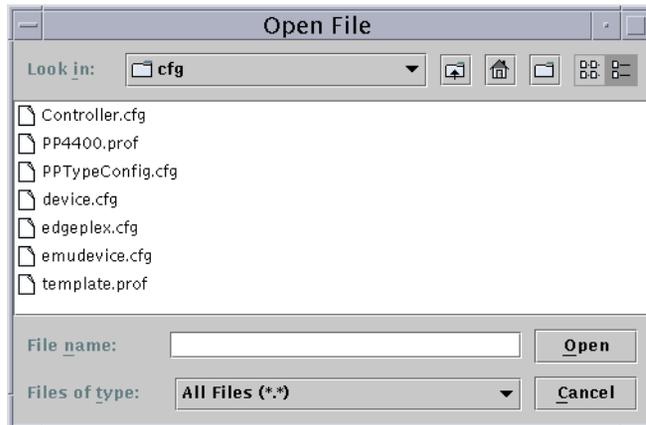
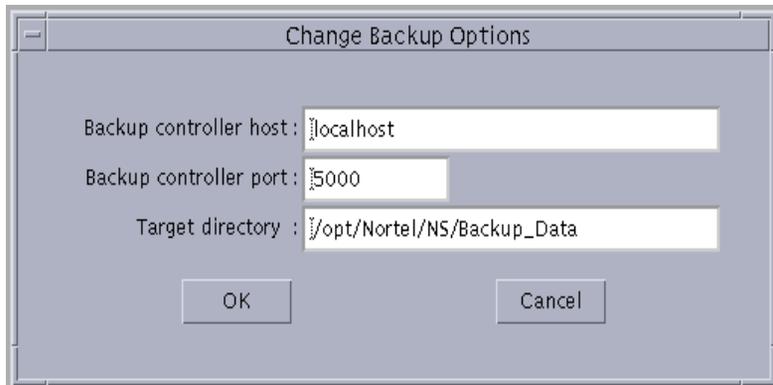### Change Backup Options dialog
The **Change Backup Options** dialog enables you to select

- the Controller that Passport/SNMP Devices Backup and Restore accesses when backing up service data

- the Controller port that Passport/SNMP Devices Backup and Restore uses when backing up service data

- the target directory where the backed up service data is stored

The **OK** button closes the **Change Backup Options** dialog. To save your changes for future sessions, click **OK**, and from the **Options** menu on the menu bar, select **Save Options**.

The figure "Change Backup Options dialog" (page 139) shows an example of the Change Backup Options dialog.

Figure 15
Change Backup Options dialog


Change Restore Options dialog
The **Change Restore Options** dialog enables you to select

• the Controller that Passport/SNMP Devices Backup and Restore accesses when restoring service data

• the Controller port that Passport/SNMP Devices Backup and Restore uses when restoring service data

• the source directory for the service data to be restored

The **OK** button closes the **Change Restore Options** dialog. To save your changes for future sessions, click **OK**, and from the **Options** menu on the menu bar, select **Save Options**.

The figure "Change Restore Options dialog" (page 140) shows an example of the **Change Restore Options** dialog.

Figure 16
Change Restore Options dialog
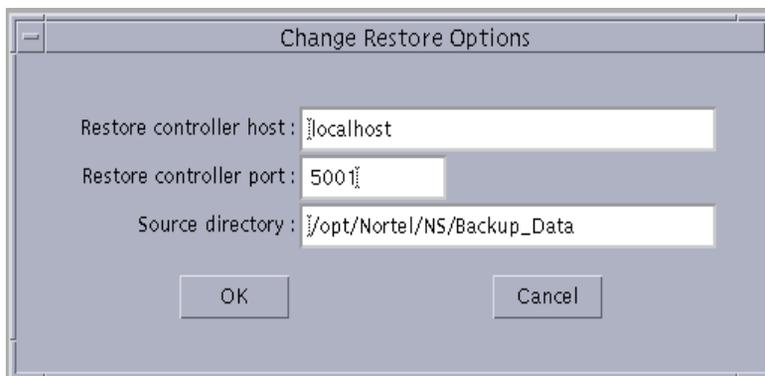
Passport/SNMP Devices Backup window

The Passport/SNMP Devices Backup window displays relevant backup information and provides fields that let you select the devices to backup and level of backup. The window also contains a message area that displays status information while the backup process executes.

The figure "Passport/SNMP Devices Backup window" (page 141) shows a sample backup window.

Figure 17
Passport/SNMP Devices Backup window

The Passport/SNMP Devices Backup window consists of the following components:

- "Default Backup Information area" (page 142)

- "Controller Information area" (page 142)

- "Backup Information area" (page 143)

- "Backup Mode Selection area" (page 144)

- "Message area" (page 144)

- "Command buttons" (page 144)

Default Backup Information area

The Default Backup Information area contains connection information. There is an entry for each different device type in the device information file. Each device type that is listed in this area can have the following entries:

- *DevType* is the device type.

- *id (rd community)* is the userID for a Passport and the READ community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

- *pw (wr community)* is the user password for a Passport and the WRITE community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

- *Port* is the port number of the device.

You can edit any line in this area by double-clicking on it. This action opens the Change Default Information dialog.

Controller Information area

The *Controller Information* area displays the information from the *Change Backup* Options dialog.

Backup Information area

The *Backup Information* area contains details about each device available for back up. Click on a line in this area to edit it. Make your changes by editing other fields on the main window.

Each device has the following entries:

- *DevName* is the device name.

- *id (rd community)* is the userID for a Passport and the READ community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

  When present, this field overrides the corresponding field in the *Default Backup Information* area. You can edit this field in the *id (rd community)* data entry field immediately below the *Backup Information* area. A backup fails when the device has no *id (rd community)*.

- *pw (wr community)* is the user password for a Passport and the WRITE community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

  When present, this field overrides the corresponding field in the *Default Backup Information* area. You can edit this field in the *pw (wr community)* data entry field immediately below the *Backup Information* area. A backup fails when the device has no *pw (wr community)*.

- A check mark in the *Bck* field indicates that this device is to be backed up. You can select and deselect any device by double-clicking the line containing the device name.

- *Mode* indicates the type of backup (full, incremental, or selective). You can change this field by clicking the appropriate button in the Backup Mode Selection area.

- *View* is the view being backed up by a selective backup. Clicking the *sel* button in the *Backup Mode Selection* area activates the *View* and *List Views* fields. You can choose a view file from *List Views* by double-clicking on an entry or you can enter a view file name in the *View* data entry field and press Return.

Backup Mode Selection area

The *Backup Mode Selection* area contains information about the types of backups you can perform. When you edit the fields in this area, you change the *Mode* and *View* fields of the device that is highlighted in the *Backup Information* area.

This area contains the following fields:

- *incr* indicates an incremental backup.

- *full* indicates a full backup.

- *sel* indicates a selective backup.

- *the sel* data entry field is where you enter the name of the view file that you want to back up. The file entered in this field updates the *View* field in the *Backup Information* area.

- *List Views* button lists the view files that are available for selective backup. You select a file in this list by double-clicking on an entry. Selection of a view from the *List Views* window updates the contents of the *View* data entry field and the *View* field in the *Backup Information* area. The *List Views* button is enabled only when you select the *sel* button.

- the *Filter* data entry field specifies a search criteria for view files. You can match any string of any length by using the wildcard character (*).

  Note: The question mark (?) does not function as a wildcard in the *Filter* field. For example, *MM?[ab]* returns only the view *MM?[ab],* if it exists.

Message area

The *Message* area displays messages generated by Passport/SNMP Devices Backup during execution.

Command buttons

The Passport/SNMP Devices Backup window contains the following command buttons:

- Backup
  The Backup button starts the backup process.

- Cancel
  The Cancel button terminates an executing backup. Completed backups are kept; backups in progress, or not started, are cancelled.

- Exit
  The Exit button closes the Passport/SNMP Devices Backup window.

- Help
  The Help button displays online documentation describing the Passport/ SNMP Devices Backup window.

Passport/SNMP Devices Restore window

The Passport/SNMP Devices Restore window displays relevant restore information and provides fields that let you select the type of information to restore. The window also contains a message area that displays status information while the restore process executes.

The figure "Passport/SNMP Devices Restore window" (page 146) shows sample restore window.

Figure 18
Passport/SNMP Devices Restore window

The Passport/SNMP Devices Restore window consists of the following components:

- "Default Restore Information area" (page 147)

- "Controller Information area" (page 142)

- "Backup Information area" (page 143)

- "Backup Mode Selection area" (page 144)

- "Message area" (page 144)

- "Command buttons" (page 144)

Default Restore Information area

The *Default Restore Information* area contains connection information. There is an entry for each different device type in the device information file. Each device type that is listed in this area can have the following entries:

- *DevType* is the device type.

- *id (rd community)* is the userID for a Passport and the READ community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

- *pw (wr community)* is the user password for a Passport and the WRITE community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

- *Port* is the port number of the device.

You can edit any line in this area by double-clicking on it. This action opens the *Change Default Information* dialog.

Controller Information area

The C*ontroller Information* area displays the information from the *Change Restore Options* dialog.

Restore Information area

The *Restore Information* area contains details on each device available for restore. Click on a line in this area to edit it. Make your changes by editing other fields on the main window.

Each device has the following entries:

- *DevName* is the device name.

- *id (rd community)* is the userID for a Passport and the READ community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

  When present, this field overrides the corresponding field in the *Default Restore Information* area. You can edit this field in the *id (rd community)* data entry field immediately below the *Restore Information* area. A restore fails when the device has no *id (rd community)*.

- *pw (wr community)* is the user password for a Passport and the WRITE community string for a Passport 4400/4460.

  This field is displayed as a series of asterisks (*).

  When present, this field overrides the corresponding field in the *Default Restore Information* area. You can edit this field in the *pw (wr community)* data entry field immediately below the *Restore Information* area. A restore fails when the device has no *pw (wr community)*.

- *A check mark* in the *Rst* field indicates that this device is to have service data restored. You can select and deselect any device by double-clicking the line containing the device name.

- *Mode* indicates the type of restore (full, incremental, or selective). You can change this field by clicking the appropriate button in the *Restore Mode Selection* area.

- *View* is the view being restored by a selective backup. Clicking the *sel* button in the *Restore Mode Selection* area activates the *View* and *List Views* fields. You can choose a view file from *List Views* by double-clicking on an entry or you can enter a view file name in the *View* data entry field and press *Return*.

Restore Mode Selection area

The *Restore Mode Selection* area contains information about the types of restores you can perform. When you edit the fields in this area, you change the *Mode* and *View* fields of the device that is highlighted in the *Restore Information* area.

This area contains the following fields:

- *incr* indicates an incremental restore.

- *the Date* data entry field is an option for an incremental restore. You enter a date with the format yyyymmdd to have Passport/SNMP Devices Restore restore the service data backed up on that date. You can specify the time with format yyyymmddhhmmss.

  When there are no backups for the date specified, Passport/SNMP Devices Restore restores the service data backed up on the date closest to, but not exceeding, the specified date. If there is more than one backup for the specified date and you have not specified the time, Passport/SNMP Devices Restore restores the latest backup on the specified date. If you do not use this field, the incremental restore is the same as a full restore.

- *full* indicates a full restore.

- *sel* indicates a selective restore.

- the *sel* data entry field is where you enter the name of the view file that you want to restore. The file entered in this field updates the *View* field in the *Restore Information* area.

- *List Views* button lists the view files that are available for selective restore. You select a file in this list by double-clicking on an entry. Selection of a view from the *List Views* window updates the contents of the *View* data entry field and the *View* field in the *Restore Information* area. The *List Views* button is enabled only when you select the *sel* button.

- *the Filter* data entry field specifies a search criteria for view files. You can match any string of any length by using the wildcard character (*).

  Note: The question mark (?) does not function as a wildcard in the *Filter* field. For example, *MM?[ab]* returns only the view *MM?[ab],* if it exists.

Message area

The *Message* area displays messages generated by Passport/SNMP Devices Restore during execution.

Command buttons

The Passport/SNMP Devices Restore window contains the following command buttons:

- Restore
  The Restore button starts the restore process.

- Cancel
  The Cancel button terminates an executing restore. Completed restores are kept; restores in progress, or not started, are cancelled.

- Exit
  The Exit button closes the Passport/SNMP Devices Restore window.

- Help
  The Help button displays online documentation describing the Passport/SNMP Devices Restore window.

Change Default Information dialog

The *Change Default Information* dialog is the only Passport/SNMP Devices Restore dialog other than the main window. You can use this dialog to change the information contained in the *Default Restore Information* area of the main window. For more information about the *Default Restore Information* area, see "Backup Information area" (page 143).

The figure "Change Default Information dialog" (page 150) shows an example of the Change Default Information dialog.

Figure 19
Change Default Information dialog
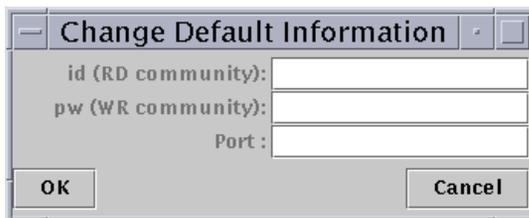
Preside Multiservice Data Manager
Network Backup and Restore
User Guide

R15.1

**NORTEL
NETWORKS**