

10 Configuring Management Processor Modules

The management processor module (MPM on the OmniSwitch and MPX on the Omni Switch/Router) coordinates control of the OmniSwitch by providing access to the User Interface (UI) software, maintaining user configuration information, downloading switching module software, managing basic bridge functions, maintaining basic routing functions, and managing the SNMP management agent. Switching modules are dependent on the MPM/MPX for downloading software and for receiving initialization and configuration information. In addition, the Network Management System (NMS) depends on the MPM/MPX to send and receive SNMP messages for managing the switch.

◆ Important Note ◆

All of the UI commands described in this chapter also work with the Omni Switch/Router MPX.

The OmniSwitch and Omni Switch/Router also support two MPMs/MPXs with one acting as the primary and with one acting as the secondary. If the primary MPM/MPX fails, the secondary MPM/MPX can take over automatically. Operating with redundant MPMs/MPXs can also help avoid network downtime.

◆ Note ◆

When you have two MPMs in one chassis, they must be installed in slots 1 and 2, and only one will be active.

The primary MPM/MPX executes all the commands and, when needed, sends requests to the secondary MPM/MPX. The secondary MPM/MPX continuously monitors the primary MPM. For more information on MPMs, see Chapter 6, “The Management Processor Module (MPM).” For more information on MPXs, see Chapter 2, “The Omni Switch/Router MPX.”

The UI provides commands to configure the serial port, to configure the Ethernet management port (on the MPX and MPM-C only), and a set of commands to monitor and configure primary and secondary MPMs/MPXs. These commands are described in the pages that follow.

Changing Serial Port Communication Parameters

The serial communications parameters for the two MPM ports are set by default to the following:

- 9600 bits per second (bps)
- 8 data bits
- 1 stop bit
- no parity

To change the serial port configuration parameters, follow the steps below:

1. Log into the switch. For instructions on logging in, see your *Getting Started Guide*.
2. At the system prompt, type **ser**.
3. You will see the following message:

Port to configure? {(C)onsole,(M)odem} (Console) :

Press **C** if you want to configure the console port (female, DCE) parameters, or type **M** to configure the modem port (male, DTE) parameters. The default is the Console Port (**C**).

4. The current port values are shown, followed by a prompt to change the speed value.

Current Console (DCE) configuration:

9600 bps, 8 data bits, None parity, 1 stop bit, running Console (shell)
Speed (9600):

Enter the speed (in bits per second) at which you want the port to operate, or simply press **<Enter>** to accept the default in parentheses. Valid values are 1200, 9600, 19200, and 38400 bps.

5. The following prompt displays:

Data size {7/8} bits (8) :

Enter the data size in bits (7 or 8). The default is 8. Press **<Enter>** to accept the default in parentheses.

6. The following prompt displays:

Parity { (N)one/(E)ven/(O)dd } (None) :

Enter the parity (none, even, odd) and press **<Enter>**. The default is None.

7. The following prompt displays:

Stop bits {0/1/2} (1):

Enter the number of stop bits (0, 1, or 2) and press **<Enter>**. The default is 1.

8. The following prompt displays:

Mode {(D)own,(C)onsole,(A)uxConsole,(S)LIP} (C) :

Enter the port mode and press **<Enter>**. This option defaults to console for a console connection and down for a modem connection. You can also configure the port for SLIP. If you are configuring the modem port, you should plan the mode configuration carefully. See *Configuring the Modem Port* on page 10-3 for further information.

◆ Important Note ◆

You cannot configure the console port as an auxiliary port (**AuxConsole**).

9. The following prompt displays:

Set (and save) these settings {(S)ave/(Q)uit} (Save) :

Enter **save** to accept the parameters you entered and exit, or enter **quit** to exit this command without saving your changes.

Changing Port Speed When Communication With The Switch Lost

When you cannot communicate with the switch, there is an alternative method you can use to toggle through the various serial port speed options. The port defaults to 9600 bps. But if you send a Break signal (by pressing the **BREAK** key), the port speed will change to the next higher speed. When it reaches the highest speed (38400 bps), it toggles back to the lowest speed (1200 bps). You cycle through the port speeds in the following order: 9600–19200—38400–1200.

◆ Note ◆

On the MPX, MPM-C, and MPM-III, you must remove the default baud rate shunt (E1), which fixes the baud rate at 9600 bps, before you can change the baud rate. This shunt is located near the front end of the circuit board, just to the right of the Ethernet management port.

Configuring the Modem Port

If you plan to use the modem port as your main connection to User Interface software, then you need to make sure its mode and jumper settings are configured correctly.

Modem Port Mode

The **ser** command allows you to configure an active modem port to SLIP, console, or auxiliary console mode. When using a modem, it is recommended that you configure the two ports as follows:

```
modem port mode=SLIP
console port mode=console
```

This configuration allows you to use the modem port to access User Interface software through a SLIP connection. The console port is used as an optional way to access software.

◆ Please Note ◆

You need Release 3.2 or above to use the modem and console ports simultaneously.

Another valid configuration is as follows:

```
modem port mode=console
console port mode=down
```

This configuration does not allow you to use the console port as an optional access method since it is configured down. Using a cross-over cable, you could access the modem port through an attached PC. If you could not use the modem port for some reason, you would have to reboot the switch to get back, or—if the cable connection were the problem—use a cross-over cable to connect through a PC.

A third valid configuration that keeps both ports active is:

```
modem port mode=console  
console port mode=SLIP
```

This configuration allow you to use the modem port regularly and use a SLIP connection to access switch software through the console port.

A fourth valid configuration that keeps both ports active is:

```
modem port mode=auxiliary  
console port mode=console
```

This configuration allow you to use the console and modem ports simultaneously to access switch software.

Configuring SLIP

Before configuring SLIP on an MPM (but not an MPX or MPM-C) you should check to see that the jumper settings are correct for the modem port (refer to Chapter 6, “The Management Processor Module (MPM)”). To configure SLIP, enter the **slipc** command. If you enter the command and SLIP is not running on any ports, the system displays the following message:

Current SLIP configuration

SLIP not running on any ports, do you want to configure it?
Yes, No {Y/N} (Y) :

Enter **y** to display current information. Enter **n** to skip the display. To configure the required SLIP parameters, complete the following steps:

1. Type **slipc** at the prompt and press **<Return>**.
2. Enter a valid IP address.
3. Enter a valid remote IP address.

You can use the **ping** command to validate the connection's integrity.

Configuring the Ethernet Management Port

To configure the Ethernet management port on an Omni Switch/Router MPX, OmniSwitch MPM-C, or OmniSwitch MPM-III, you use the **ethernetc** command. To use this command, enter

ethernetc

at the system prompt. A screen similar to the following will be displayed.

```

                                Ethernet Port Configuration

1) Port Admin status UP : Yes
2) IP Address           : 198.206.184.175
3) Subnet Mask          : 255.255.255.0
4) Bcast Address        : 198.206.184.255
5) Gateway Address      : 198.206.184.254
6) RIP Mode             : Inactive

Command {Item=Value/?/Help/Quit/Redraw/Save} (Redraw) :
```

The question mark option (?) and the **Help** option provide reference and instructional information on using this command. The **Redraw** option refreshes the screen.

You make changes by entering the line number for the option you want to change, an equal sign (=), and then the value for the new parameter. When you are done entering all new values, type **save** at the colon prompt (:) and all new parameters will be saved. If you do not want to save the changes enter **quit** or **Ctrl-D**.

◆ Important Note ◆

On some revisions of the MPX, you *must* configure the Ethernet management port with the boot prompt before you can use the **ethernetc** command. See Appendix A, “The Boot Prompt,” for more information on configuring the Ethernet management port with the boot prompt.

The configurable options displayed by the **ethernetc** command are described below.

1) Port Admin status UP

Enter **1=Yes** (the default) to enable the Ethernet management port or **1=No** to disable it.

2) IP Address

Enter an IP address for the Ethernet management port in dotted decimal notation (the default is **192.168.11.1**). For example, to change the Ethernet management port's IP address to **198.206.184.170**, enter

2=198.206.184.170

at the prompt.

◆ Note ◆

This IP address *must* not be on the same subnet as any other IP router on the switch.

3) Subnet Mask

Enter an IP subnet mask in hexadecimal notation (the default is **255.255.255.0**). If no mask is provided, the switch will try to determine the mask using Internet Control Message Protocol (ICMP) requests. For example, to change the subnet mask to **255.255.255.254**, enter

3=255.255.255.254

at the prompt.

4) Bcast Address

The default broadcast address is automatically derived from the default VLAN IP address class (the default is 192.255.255.255). You can enter a new address in dotted decimal notation. For example, to change the broadcast address to **198.206.184.255**, enter

4=198.206.184.255

at the prompt.

5) Gateway Address

You can enter an IP address for the first hop router to a remote host (if the host is on a different IP net). The default is 192.168.1.1. For example, to change this address to **198.206.184.170**, enter

5=198.206.184.170

at the prompt.

6) RIP Mode

Enter **6=** followed by one of the following choices to set the Router Information Protocol (RIP) mode:

silent. RIP is active and it receives RIP updates but does not send them.

deaf. RIP is active and sends routing information but does not receive RIP updates.

active. RIP is active and both sends and receives RIP updates.

inactive. RIP is inactive and neither sends nor receives RIP updates.

For example, to set the RIP mode to **active**, enter

6=active

at the prompt.

◆ Note ◆

See Chapter 25, “Managing Groups and Ports,” for more information on RIP mode.

Ethernet Management Ports and Redundant Management Processor Modules

If redundant MPXs /MPM-Cs/MPM-IIIs both have Ethernet management ports (EMPs), both EMPs in the switch will have the same IP address if automatic file synchronization is enabled. If both EMPs are plugged into the same subnet, the UI will show that there are duplicate IP addresses on the network.

To get around this duplicate IP address problem, you must disable automatic file synchronization and then you must configure different IP addresses for the two EMPs. To do this, perform the following steps:

1. On the primary management module, enter

syncctl

at the system prompt. (See *Setting Automatic Config Synchronization* on page 10-15 for more information on the **syncctl** command.)

2. If automatic file synchronization is already disabled, simply press **<Enter>**. If it is enabled, enter **disable** at the prompt.

3. Enter

ethernetc

at the prompt. (See *Configuring the Ethernet Management Port* on page 10-5 for more information on the **ethernetc** command.)

4. Enter **2=** followed by the IP address for the EMP on the primary management module.

5. Enter

save

at the prompt to save the IP address.

6. Enter

renounce

at the prompt to make the primary management module the secondary module and the secondary module primary.

7. Log into the now primary management module.

8. On the now primary management module, enter

syncctl

at the system prompt.

9. If automatic file synchronization is already disabled, simply press **<Enter>**. If it is enabled, enter **disable** at the prompt.

10. Enter

ethernetc

at the prompt.

11. Enter **2=** followed by the IP address for the EMP on the management module.

12. Enter

save

at the prompt to save the IP address.

13. Enter

renounce

at the prompt to make the management module that was originally the primary one primary again.

The MPM Command/Menu

The **mpm** command has two functions: displaying the MPM redundancy configuration and entering the **mpm** menu. Displaying the MPM redundancy is described below and the mpm menu is described in *MPM Menu Commands* on page 10-9.

Displaying MPM Redundancy

You can display the number of MPMs, their location in the switch, and the MPM redundancy configuration of the switch by entering

mpm

at the system prompt. The following is a typical example of the message that displays when you enter **mpm** for a switch without a redundant MPM.

Currently this slot 1 holds the Primary MPM; there is no secondary MPM.

The following is a typical example of the message that displays when you enter **mpm** for a switch with redundant MPMs on the primary MPM.

Currently this slot 1 holds the Primary MPM and slot 2 holds the secondary.

The following is a typical example of the message that displays when you enter **mpm** for a switch with redundant MPMs on the secondary MPM.

Currently slot 1 holds the Primary MPM; this slot 2, holds the secondary MPM.

MPM Menu Commands

The **mpm** command also takes you to the **mpm** menu which contains the commands needed to configure single and redundant MPMs. With a serial or modem connection, you can communicate with either the primary or secondary MPM by connecting to the respective RS232 connectors. With a telnet connection, however, you can only communicate with the primary MPM.

Type a **?** to list the **mpm** commands. One set of commands will be displayed if you are connected to the primary MPM and another command will be displayed if you are connected to the secondary MPM. If you are connected to the primary MPM, you will see the following.

<u>Command</u>	<u>Redundancy Menu</u>
sls	List the contents of the Secondary /flash and /simmm directories
mpmstore	Store file to Secondary /flash or /simmm directory
mpmreplace	Replace file on Secondary /flash or /simmm directory
mpmload	Load file from Secondary MPM
mpmrm	Remove file from Secondary MPM
renounce	Give up control to Secondary
nisuf	Set load suffix for NI image files
syncctl	Enable/Disable synchronization of configuration data
configsync	Synchronize configuration data
imgsync	Synchronize Image (Executable) files
secreset	Reset Secondary MPM
swap	Change swap status of chassis

All of the **mpm** menu commands, except for the **nisuf** and **swap** commands, function only if you have redundant MPMs. If you are connected to the secondary MPM, type a **?** to list the **mpm** commands shown below.

<u>Command</u>	<u>Redundancy Menu</u>
mpmget	Get file from Primary MPM
takeover	Become Primary

All of the **mpm** commands are described in the sections that follow.

Using MPM Commands with Software Release 3.2 and Later

In Release 3.2 and later, the commands in the **mpm** menu support the use of more than one flash directory. If you install a 32 Mb SIMM memory module in an MPM, for example, you will have **/flash** and **/sim** flash memory directories. Since more than one flash directory can exist, you *must* indicate which flash directory you want to use when you access a secondary MPM from a primary MPM and when you access a primary MPM from a secondary MPM. All of these commands begin with the prefix **mpm** and are listed below.

mpmstore
mpmreplace
mpmload
mpmrm
mpmget

To indicate which flash directory you want to use, enter a slash (**/**), the name of the directory, and another slash (**/**) before the file name in all commands that begin with the prefix **mpm**. For example, to transfer the **asm.img** file from the **/sim** directory on the secondary MPM to the primary MPM when you have logged into the secondary MPM, enter

mpmget /sim/asm.img

at the system prompt.

◆ Important Note ◆

In the current release, you *must* indicate the name of the flash directory in commands that begin with the prefix **mpm** even if you have just one flash directory on both MPMs.

Listing the Secondary MPM Files

The **sls** command lists the files in the secondary MPM module. This is similar to the **ls** command; however, it lists files in the secondary MPM. To list files in the secondary MPM, enter

sls

at the system prompt. The following is a typical example.

```

/flash/esm.img          27204      7/14/99   11:39
/flash/mesm.img         27561      7/14/99   11:39
/flash/mpm.img          1790889    7/14/99   11:39
/flash/rav.img           83588      7/14/9    11:39
/flash/mpm.cnf           32768      1/ 1/70   00:00
/flash/mpm.log           18072      7/30/99   13:51
/flash/mpm.cfg           32768      7/30/99   14:40
/flash/mpm.cmd            32         1/ 1/70   00:00
/flash/gated.img         547041     8/27/9    16:01

/flash has          1071449 bytes free.
/simm Not present.
```

The **sls** command lists every file in the secondary MPM's flash memory followed by its size (in bytes), creation date, and creation time. The three-letter file name suffix indicates the type of file which includes configuration (**cnf** and **cfg**), command (**cmd**), and image (**img**). The image file suffix can be changed for both the primary and secondary MPMs with the **nisuf** command, which is described in *Setting the Load Suffix* on page 10-14.

Transferring a File to the Secondary MPM

The **mpmstore** command transfers a file in the flash memory of the primary MPM to the flash memory of the secondary MPM. To use this command, enter **mpmstore**, followed by a space, a slash (/), the name of the flash directory, another slash (/), and the name of the file you want to transfer.

For example, to transfer the file **mpm.log** from the **/flash** directory on the primary MPM to the secondary MPM, for example, you would enter

mpmstore /flash/mpm.log

at the system prompt. The following will be displayed.

Transferring...

If the file already exists on the target MPM, something similar to the following message will be displayed.

File mpm.log exists on slot 2

Use the **mpmreplace** command, which is described in *Replacing a File on the Secondary MPM* on page 10-12, to replace a file that already exists.

Replacing a File on the Secondary MPM

The **mpmreplace** command replaces a file on the secondary MPM. It works like a combination of **mpmrm**, which is described in *Removing a File from the Secondary MPM* on page 10-13, and **mpmstore**, which is described in *Transferring a File to the Secondary MPM* on page 10-11. To use this command, enter **mpmreplace**, followed by a space, a slash (/), the name of the flash directory, another slash (/), and the name of the file you want to replace.

For example, to replace the file **mpm.log** on the secondary MPM with the file **mpm.log** from the **/flash** directory on the primary MPM, for example, you would enter

```
mpmreplace /flash/mpm.log
```

at the system prompt. The following will be displayed.

```
Deleting.  
Transferring
```

If the file already exists on the target MPM and it is identical to the one you are transferring, something similar to the following message.

```
File mpm.log is identical on Primary and Secondary 2
```

If the files are identical, the **mpmreplace** command will terminate and the file will not be replaced.

Loading a File from the Secondary MPM

The **mpmload** command loads a file from the flash memory of the secondary MPM into the flash memory of the primary MPM. To use this command, enter **mpmload**, followed by a space, a slash (/), the name of the flash directory, another slash (/), and the name of the file you want to load.

For example, to load the file **mpm.log** from the **/flash** directory on the secondary MPM into the primary MPM, for example, you would enter

```
mpmload /flash/mpm.log
```

at the system prompt.

Removing a File from the Secondary MPM

The **mpmrm** command removes (deletes) a file from the flash memory of the secondary MPM. To use this command, enter **mpmrm**, followed by a space, a slash (/), the name of the flash directory, another slash (/), and the name of the file you want to remove.

◆ Note ◆

You can only remove a single file with the **mpmrm** command. You *cannot* use wildcards to remove multiple files.

For example, to remove the file **mpm.log** from the **/flash** directory on the secondary MPM in slot 2, for example, you would enter

mpmrm /flash/mpm.log

at the system prompt. Something similar to the following will be displayed.

Checking for /flash/mpm.log on slot 2

After a brief moment, the file will be deleted from the secondary MPM and something similar to the following will be displayed.

Deleting /flash/mpm.log on slot 2 . Done.

◆ Warning ◆

You *cannot* recover a file once it has been deleted with the **mpmrm** command.

Giving Up Control to the Secondary MPM

The **renounce** command tells the primary MPM to give up control and become the secondary MPM. It does this by issuing a request to the secondary MPM to take control. You *must* be logged into the primary MPM to use this command. If you are logged into the secondary MPM, use the **takeover** command, which is described in *Gaining Control from the Primary MPM* on page 10-18.

◆ Warning ◆

The **renounce** command should only be used during network down times since it could cause network interruptions.

To transfer control from primary MPM to the secondary MPM, enter

renounce

at the system prompt. The following prompt will display.

Confirm? (n):

Press **y** to transfer control to the secondary MPM or press **n** to cancel the command (the default is **n**). If you enter **y**, the switch will reset after displaying the following message.

System going down immediately...

The switch will reboot and the original secondary MPM will be the primary once the switch comes back up.

Setting the Load Suffix

The **nisuf** command sets the load suffix for the switch's executable image files. (The factory default suffix is **img**.)

◆ Warning ◆

The **nisuf** command should only be used when it is necessary to have two versions of the software on the switch at the same time and the user is directly connected to the console for reboot.

You can change it by typing the **nisuf** command followed by the new suffix. For example, to change the load suffix from **img** to **bin**, enter

nisuf bin

at the system prompt. The following message will then be displayed.

Changing load suffix from img to bin

You should create or load new image files with the new suffix as soon as possible because the switch will not recognize the files with the old suffix as image files. See Chapter 9, "Installing Switch Software," and Chapter 11, "Managing Files," for information on loading and creating files.

Setting Automatic Config Synchronization

The **syncctl** command sets the automatic configuration synchronization to Enabled or Disabled. If it is Enabled, then the MPM primary/secondary pair will continue to maintain synchronization automatically. This means that when the configuration file (**mpm.cfg**) is updated in the primary MPM, it will automatically be updated in the secondary MPM, keeping the two MPMs in sync.

Enabling Automatic Config Synchronization

To enable synchronization between the primary and secondary MPMs, enter

syncctl

at the system prompt. The following prompt will then be displayed if synchronization is not enabled.

Desired state (enable):

Press **<Enter>** to enable synchronization or enter **disable** to cancel. If you enabled synchronization, the following will be displayed.

Configuration synchronization is now Enabled

Note that automatic configuration synchronization is disabled unless all image (**img**) and Programmable Gate Array (PGA) files in the switch are synchronized first. See *Synchronizing Image Files* on page 10-16 for information on the **imgsync** command, which synchronizes image and PGA files.

The interval between updates is 5 minutes. The primary MPM will copy any changes to the secondary MPM after 5 minutes have elapsed since the last update.

Disabling Automatic Config Synchronization

To disable synchronization between the primary and secondary MPMs, enter

syncctl

at the system prompt. The following prompt will then be displayed if synchronization is enabled.

Desired state (disable):

Press **<Enter>** to disable synchronization or enter **enable** to cancel. If you disabled synchronization, the following will be displayed.

Configuration synchronization is now Disabled

If automatic config synchronization is Disabled, the configuration file in the secondary MPM will be unaffected if you change the configuration file in the primary MPM.

Synchronizing Configuration Data

The **configsync** command copies the configuration files (**mpm.cnf** and **mpm.cfg**) in the primary MPM to the secondary MPM. You can run this command whether or not automatic config synchronization is on. For example, to copy the configuration file from the primary MPM to the secondary MPM, you would enter

configsync

at the system prompt. Something similar to the following will be displayed.

Syncing Config file
Config files are currently synchronized.

See *Setting Automatic Config Synchronization* on page 10-15 for information on setting automatic config synchronization.

Synchronizing Image Files

The **imgsync** command copies all of the image (executable) files in the primary MPM to the secondary MPM. When used in conjunction with the **configsync** command, it ensures that the two MPMs are running exactly the same versions of software and are in sync (i.e., have the same configuration). To synchronize all the image files, enter

imgsync

at the system prompt. When you run **imgsync** you will be asked if you want to synchronize the **cmd** file and/or PGA files if they are found to be different.

◆ Note ◆

If any PGA file is being used by a Token Ring module and you choose to sync the cmd file, then the PGA file that is in use will be synced even if you do not choose to synchronize PGA files.

Something similar to the following prompt will be displayed.

Sync cmd file (y) :

Press **y** to sync the **cmd** file or press **n** to skip this file (the default is **y**). If you have any PGA files, you will be asked if you want to sync those files. In addition, if the secondary MPM has any additional image, then the following prompt will be displayed.

Remove Additional images from Secondary (n) :

Press **y** to remove any extra image on the secondary MPM or press **n** to keep these files (the default is **n**). After you answer all the prompts, something similar to the following will be displayed.

8 files to be synchronized
1 file to be synchronized
Syncing
Deleting /flash/mpm.cmd.....
Replacing /flash/mpm.cmd.....

Loading a File From the Primary MPM

The **mpmget** command loads a file from the primary MPM and copies it into the secondary MPM. This command is only available and can only be run from a secondary MPM. To use this command, enter **mpmget**, followed by a space, a slash (/), the name of the flash directory, another slash (/), and the name of the file you want to transfer.

For example, to load the file **mpm.log** from the **/flash** directory on the primary MPM to the secondary MPM you would enter

```
mpmget /flash/mpm.log
```

at the system prompt. After a brief moment, the file will be transferred into the secondary MPM. The following would then be displayed.

```
Transferring .. Complete
```

Gaining Control from the Primary MPM

The **takeover** command tells the secondary MPM to take control and become the primary MPM. It does this by issuing a request to the primary MPM to relinquish control. You *must* be logged into the secondary MPM to use this command. If you are logged into the primary MPM, use the **renounce** command, which is described in *Giving Up Control to the Secondary MPM* on page 10-14.

◆ Warning ◆

The **takeover** command should only be used during network down times since it could cause network interruptions.

To transfer control from primary MPM to the secondary MPM, enter

takeover

at the system prompt. The following prompt will display.

Confirm? (n):

Press **y** to transfer control to the secondary MPM or press **n** to cancel the command (the default is **n**). If you enter **y**, the switch will reset after displaying the messages similar to the following.

System going down immediately...

**Please standby, chassis configuration changing (Hit ^C to abort).....Taking over
as Primary**

... Alcatel SNMP Agent Operational.

The switch will reboot and the original secondary MPM will be the primary once the switch comes back up.

Resetting a Secondary MPM

The **secreset** command initiates a soft reset on the secondary MPM. Conceptually, resetting a secondary MPM with this command is similar to switching off power to the module; the MPM will be in the same state after a reset as it is after a power on.

To reset a secondary MPM, enter

secreset

at the system prompt. Message similar to the following displays:

Module 1 changed while Swap OFF

Syncing configuration data with secondary 1 .. complete

◆ Note ◆

To reset a switching module, use the **reset** command, which is described in Chapter 58, “Running Hardware Diagnostics.”

Displaying and Setting the Swap State

The **swap** command displays or alters the swap state of the chassis. The swap state must be on in order to hot swap modules. If not, the system may halt or restart. While the swap state is on, performance may decrease. Therefore, the swap state should only be turned on when you want to hot swap modules. See Chapter 7, “OmniSwitch Switching Modules,” for instructions on hot swapping a switching module.

Displaying the Swap State

To display the current swap state of the chassis, enter

swap

at the system prompt. If the swap mode is **OFF** (the default for the switch), something similar to the following will be displayed.

Swap is OFF, timeout is 5 minutes
usage swap { ON [minutes] | OFF [minutes] }

If the swap mode is **ON**, something similar to the following will be displayed.

Swap is ON, expires in 4 minutes
usage swap { ON [minutes] | OFF [minutes] }

The swap mode *must* be enabled (**ON**) to hot swap a switching module. If not, the system may halt or restart. See the subsection below for instructions on enabling the swap mode.

Enabling the Swap Mode

To turn the swap mode **ON**, enter

swap on

at the system prompt. (The default for swap mode is 5 minutes). Something similar to the following will be displayed.

Swap is ON for 5 minutes

When you turn the swap state on, you set a timer which determines how long the system will remain in swap state. After the timer expires, the system will automatically turn off the swap state.

If you want to vary the amount of time that the swap mode is enabled, enter **swap on** followed by the number of minutes you want the swap mode enabled. You can set the swap state from 1 to 227,055 minutes. To set the swap mode on for 10 minutes, for example, enter

swap on 10

at the system prompt. The following will then be displayed.

Swap is ON for 10 minutes
Save minutes value {Y/N}? (N) :

Press **y** and then press **<Enter>** to save the new value. If you don't want save, just press **<Enter>** and the default value will not change. You can also turn off the swap immediately as shown in *Disabling the Swap Mode* on page 10-21.

Disabling the Swap Mode

Normally, the swap mode will timeout and no user intervention is required. However, you can manually turn the swap mode off. This function is particularly useful since the performance of the switch can be adversely affected if the swap mode is enabled. To turn the swap mode off immediately, enter

swap off

at the system prompt. The swap mode will be disabled and something similar to the following will be displayed.

Swap is OFF, timeout is 5 minutes

