Upgrading to Ethernet Routing Switch 8300 Software Release 2.3

NORTEL

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Contents

Introduction

This document describes the upgrade procedures for the Nortel* Ethernet Routing Switch 8300 Software Release 2.3 from previous versions of the software. The 8300 Series switch supports two Command Line Interface (CLI) modes: the Ethernet Routing Switch 8300 CLI and the Nortel Command Line Interface (NNCLI). Commands listed in this guide can be used in either CLI mode. Where exceptions exist, they are noted.

This document contains the following topics:

Software filenames

Table 1 describes the Ethernet Routing Switch 8300 Software Release 2.3 files and the hardware they support.

Table 1   Release 2.3 software files and associated hardware

Module or file type	Filename	Location
Boot monitor image	*p83b2300.img*	Flash, PCMCIA, or TFTP
Run-time image	*p83a2300.img*	Flash, PCMCIA, or TFTP
Pre-boot monitor image	*p83f2300.img**	Flash or PCMCIA
MIB (private)	*p83a2300.mib*	
MIB zip file	*p83a2300.mib.zip*	
md5 checksum file	*p83a2300.md5*	Flash or PCMCIA
Input/output modules download (DLD) file	*p83r2300.dld*	Flash or PCMCIA
SNMP encryption file (required for SNMPv3) **Note**: Available only on the Nortel web site (www.nortel.com/support).	*p83c2300.des*	Flash or PCMCIA
3DES encryption file (required for SSH) **Note**: Available only on the Nortel web site (www.nortel.com/support).	*p83c2300.img*	Flash or PCMCIA
*The pre-boot file (*p83f2300.img*) is only required when upgrading from software release 2.0.0.1 to release 2.0.1, 2.1.x, 2.1.1.x, 2,2,x or 2.3.x. If you have previously booted your 8393SF with any p83fxxx image, it is not necessary to repeat the process. The p83fxxxx image is the same for all releases.		

Flash/PCMCIA file system

The files that determine how an 8300 Series switch boots and operates are contained in onboard flash memory. The switch can also download files from an ATA-compatible PCMCIA flash memory card. This section describes the flash/PCMCIA file system in the switch. The flash file system holds executable images and the switch configuration. The *p83a2300.img* and *p83b2300.img* files can also be loaded from a TFTP server.

Each 8300 Series switch has two onboard flash memory devices, the boot flash and the system flash.

The boot flash memory is 2 megabytes (MB) and contains the boot-monitor image file. The boot-monitor image is not directly user-accessible. It is updated using a special boot-monitor update mechanism that writes to the area reserved for the boot image.

The system flash memory is 30 MB and is used primarily for run-time images, configuration files, the system log, and other general storage.

→	**Note:** Before upgrading to the Ethernet Routing Switch 8300 Software Release 2.3, ensure that you have adequate memory space available on the 8300 Series switch flash. Otherwise, you will be unable to copy all the relevant files. Use the **dir** command to check for memory availability.

You can use a PCMCIA card for general storage for all file types. The PCMCIA card provides a convenient way of moving files between switches because they are portable. You can use one PCMCIA card to update the configuration and image file on several switches. An 8300 Series switch accepts an ATA-type, SanDisk-compatible flash memory card.

The 8300 Series switch file system allows you to use the maximum number of characters for file names such as those used with Microsoft Windows 95, Windows 98, and Windows NT operating systems. The file naming convention for system flash files is /flash/<filename>. The file naming convention for PCMCIA files is /pcmcia/<filename>.

To verify file names, you can use the **dir** command in the Command Line Interface (CLI) or, in Device Manager, choose **Edit > File System** and select **Flash Files** or **PCMCIA Files**. The CLI and Device Manager also provide commands or options that allow you to copy files.

The default interface when you first power up the Ethernet Routing Switch 8300 is the CLI. Use the commands referenced in the *CLI Command Line Reference for the Ethernet Routing Switch 8300* (317360-D) and the *NNCLI Command Line Reference for the Ethernet Routing Switch 8300* (316810-D) to switch from the CLI to the NNCLI and back to the CLI.

> **Note:** The Nortel Command Line Interface (NNCLI) has four command modes: User EXEC, Privileged EXEC, Global configuration, and Interface configuration, in order of increasing privilege.

Configuration files

This section provides information about the config.cfg configuration file.

> **Note:** You must have the TFTP boot flags option enabled to use this protocol to copy configuration files. To check if the TFTP boot flag is enabled, use the following command:
>
> ```
> show bootconfig flags
> ```
>
> If the TFTP boot flag is false (disabled), enter the following command to enable the option:
>
> ```
> config bootconfig flags tftpd true
> ```
> (CLI)
> ```
> boot flags tftp
> ```
> (NNCLI)
>
> If you must enable the option, you must also save the bootconfig configuration file and reboot the switch:
>
> ```
> save bootconfig
> boot -y
> ```

config.cfg

Prior to backing up the configuration file, verify the configuration file name using the following command:

```
show bootconfig choice
```

By default, the configuration file name is *config.cfg*. The *config.cfg* file stores the configuration of the Ethernet Routing Switch 8300 software and modules in text-readable format.

Before upgrading the software

Before upgrading to the Ethernet Routing Switch 8300 Software Release 2.3, you must do the following:

- Consult *Important Security Information for the 8300 Series Switch* (216512-C) for security-related issues.
- Read the entire upgrade procedure before attempting to upgrade the software on the switch. The upgrade procedure causes interruption of normal switch operation.
- Take special note of the following cautionary messages:
  - The configuration file generated with software release 2.3 contains options that are not backward-compatible with software release 2.1.1 or 2.1.0. Loading a 2.3.0.0 configuration file on a 2.1.1.x or earlier run-time image generates errors and causes the image to abort loading the configuration file.
  - Before executing any **copy** command (that uses the TFTP protocol), be aware that if there is any failure (including TFTP server not available, or TFTP Time Out), then the file on the flash (or the PCMCIA) is deleted if the name of this file is the same as the one that you specified in the **copy** command. For example:

    ```
    copy 111.111.1.11:p83a2300.img /flash/p83a2300.img
    ```

    If the server is not available, or if the file on the server does not exist, the *p83a2300.img* file is deleted on the flash (if previously existing). To preserve the original file, you can either rename or make a backup copy of this file on the PCMCIA or flash before you begin the copy process.

— When installing files on the onboard flash or PCMCIA, ensure that you verify flash capacity before downloading the files.

➡️ **Note:** As a precaution, before you upgrade or downgrade your switch software, make a copy of the switch configuration file specified in the boot.cfg file using the following CLI command:

copy /<*device***>/<***config filename***> <***tftpServerIPAddr***>:<***config filename.old***>**

where *device* can be PCMCIA or flash.

Before upgrading the boot flash, Nortel recommends that you copy the the boot image and the software image to the flash file system of the switch using the following CLI commands:

copy /<*device***>/p83b2300.img /flash/p83b2300.img**

copy /<*device***>/p83a2300.img /flash/p83a2300.img**

where *device* is PCMCIA.

Copy the files from the TFTP server to the flash using the CLI commands:

copy <*tftpServerIPAddr***>:p83b2300.img /flash/ p83b2300.img**

copy <*tftpServerIPAddr***>:p83a2300.img /flash/ p83a2300.img**

— Nortel recommends that you have a copy of the boot.cfg file in the /flash directory. During bootup, if the /flash/boot.cfg file is not present, and if there is a PCMCIA card present, the 8300 Series switch searches for the file /pcmcia/boot.cfg. If a PCMCIA card is not present, or if the file /pcmcia/boot.cfg is not present, then the 8300 Series switch boots using the default boot-configuration settings.

🛑 **Caution:** If you are using a PCMCIA card manufactured by SanDisk, the 8300 Series switch may be unable to access the /pcmcia/boot.cfg file during bootup. This limitation has only been observed during bootup. No limitation has been observed when accessing the SanDisk device after bootup.

Upgrading the software

This section discusses upgrading the software on an 8300 Series switch in different configurations, and contains steps to upgrade the pre-boot image for users who are upgrading from software image 2.0.0.1 to a later version.

This section includes the following topics:

Topic	Page number
Upgrading the software image on an 8300 Series switch without a redundant CPU	14
Upgrading the software image on an 8300 Series switch with a redundant CPU	16
Upgrading the pre-boot image	20

Caution: Prior to starting the upgrade, see "Software filenames" on page 8.

Note: When the boot configuration is saved in runtime, the current bootp DLD images are saved in the *boot.cfg* file. If you load a new image without removing the bootp DLD entries from the *boot.cfg*, then the new version of the file will not be downloaded to the I/O boards.

On boot up, if a DLD file is not configured in *boot.cfg*, the CP code will search for a DLD file with the following file name:

p83r<stream>.dld

The stream specified in the filename must match the CP image being initialized. If this file is found, then its checksum is verified and it is downloaded to the I/O boards. If the boot configuration is saved, this is the DLD file name saved in *boot.cfg*.

To force the system to boot from the default DLD files, enter **bootp image-name default** in the boot monitor. This command rewrites the DLD file entries in *boot.cfg,* so that the new version of *p83r<stream>.dld* is loaded.

Upgrading the software image on an 8300 Series switch without a redundant CPU

Before upgrading your 8300 Series switch CPU:

- Connect to the switch and save the current run-time and bootconfig configuration files on the flash of both CPUs using the following commands:

  save config
  save bootconfig

  The system displays the config file location after saving any changes.

- Create a backup of the run-time and bootconfig configuration files.
  — To create a backup using a TFTP server, enter the following commands:

    copy /flash/<*config file name***>**
    <*tftpServerIPAddr***>:<***backup config file name***>**

    copy /flash/<*bootconfig file name***>**
    <*tftpServerIPAddr***>:<***backup bootconfig file name***>**

  — To create a backup using a PCMCIA card, enter the following commands:

    copy /flash/<*config file name***> /pcmcia/<***backup
    config.cfg file name***>**

    copy /flash/<*bootconfig file name***> /pcmcia/<***backup
    boot.cfg file name***>**

> **Caution:** The configuration file generated with software release 2.3 contains options that are not backward-compatible with software release 2.2.1 or 2.1.0. Loading a 2.3.0.0 configuration file on a 2.2.1.x or earlier run-time image will generate errors and cause the image to abort loading the configuration file.

To upgrade the 8300 Series CPU with the version 2.3 software image, complete the following steps:

1 Connect to the switch using a telnet session or the console connection.

2 Download all required files to a TFTP server or PCMCIA card.

For a list of required files, see "Software filenames" on page 8.

---

3 Copy the image and boot files from the TFTP server or PCMCIA to flash using one of the following commands:

copy <*tftpServerIPAddr***>:<***filename***> /flash/<***filename***>**

copy /pcmcia/<*filename***> /flash/<***filename***>**

For example, you use the following commands to copy the run-time image and boot files from TFTP server 111.111.111.111 to flash:

copy 111.111.111.111:p83a2300.img /flash/p83a2300.img
copy 111.111.111.111:p83b2300.img /flash/p83b2300.img
copy 111.111.111.111:p83r2300.dld /flash/p83r2300.dld

4 Verify that the software has been copied to flash by entering the command:

dir

5 If the *p83a2300.md5* sum file was downloaded, then use the **md5** command to perform a checksum, verifying that the file has been copied successfully.

See "The MD5 command" on page 22 for more information.

6 Change the primary run-time image for the Ethernet Routing Switch 8300 using the following command:

config bootconfig choice primary image-file /<*location***>/
<***filename***>**

For example, use the following command to change the primary image file to *p83a2300.img*:

**config bootconfig choice primary image-file /flash/
p83a2300.img**

7 Clear the DLD file entries for the Ethernet Routing Switch 8300 using the following command:

config bootconfig bootp image-name default

→ **Note:** You must enter the command from Step 7 *exactly* as shown to clear the DLD file entries correctly. Using other options with the config bootconfig bootp image-name command can lead to erroneous results.

8 Save the bootconfig configuration settings using the following command:

save bootconfig

9 Boot the 8300 Series switch with the boot-monitor image you loaded on the switch in Step 3. After the boot monitor upgrade is completed, the switch boots with the run-time image.

```
boot [<tftpServerIPAddr>:]<absolute path of boot monitor
image>
```

For example, enter the following command to boot the *p83b2300.img* file from flash:

```
boot /flash/p83b2300.img -y
```

10 Check to confirm that the pre-boot monitor software has been upgraded to release 3.7, as described in "Upgrading the pre-boot image" on page 20.

Upgrading the software image on an 8300 Series switch with a redundant CPU

Before upgrading your 8300 Series switch CPUs:

• Connect to the switch and save the current run-time and bootconfig configuration files on the flash of both CPUs using the following commands:

```
save config standby config.cfg
save bootconfig standby boot.cfg
```

• Create a backup of the run-time and bootconfig configuration files.
— To create a backup using a TFTP server, enter the following commands:

```
copy /flash/<config file name>
<tftpServerIPAddr>:<backup config file name>
```

```
copy /flash/<bootconfig file name>
<tftpServerIPAddr>:<backup bootconfig file name>
```

— To create a backup using a PCMCIA card, enter the following commands:

```
copy /flash/<config file name> /pcmcia/<backup
config.cfg file name>
```

```
copy /flash/<bootconfig file name> /pcmcia/<backup
boot.cfg file name>
```

> **Caution:** The configuration file generated with software release 2.3
> contains options that are not backward-compatible with software release
> 2.2.1 or 2.1.0. Loading a 2.3.0.0 configuration file on a 2.2.1.x or earlier
> run-time image will generate errors and cause the image to abort loading
> the configuration file.

To upgrade the 8300 Series CPUs with the version 2.3 software image:

1 Connect to the master CPU using a telnet session or the console connection.

2 Download all required files to a TFTP server or PCMCIA card.

For a list of required files, see "Software filenames" on page 8.

3 Copy the image and boot files from the TFTP server or PCMCIA card to flash
of the master CPU using one of the following commands:

copy <*tftpServerIPAddr***>:<***filename***> /flash/<***filename***>**

copy /pcmcia/<*filename***> /flash/<***filename***>**

For example, you use the following commands to copy the run-time image
and boot files from TFTP server **111.111.111.111** to flash:

```
copy 111.111.111.111:/p83b2300.img /flash/p83b2300.img
copy 111.111.111.111:/p83a2300.img /flash/p83a2300.img
copy 111.111.111.111:/p83r2300.dld /flash/p83r2300.dld
```

4 Verify that the software has been copied to flash by entering the command:

dir

5 If the *p83a2300.md5* sum file was downloaded, then use the **md5** command to
perform a checksum, verifying that the file has been copied successfully.

See "The MD5 command" on page 22 for more information.

6 Copy the new software to the standby CPU using the following command:

copy /flash/<*filename***> peer:/flash/<***filename***>**

For example, use the following commands to copy the run-time image and
boot files to the standby CPU:

```
copy /flash/p83a2300.img peer:/flash/p83a2300.img
copy /flash/p83b2300.img peer:/flash/p83b2300.img
copy /flash/p83r2300.dld peer:/flash/p83r2300.dld
```

7 Verify that the software has been copied properly to the standby CPU.

    a Establish a telnet session to the standby CPU by entering the following command at the master CPU prompt:

        peer telnet

    b Log in to the standby CPU.

    c Display a list of files on the standby CPU by entering the CLI command:

        dir

    d Exit the telnet session to the standby CPU, by entering the CLI command:

        exit

8 Change the primary run-time image for the Ethernet Routing Switch 8300.

For example, to change the primary image file to *p83a2300.img* use the following command:

**config bootconfig choice primary image-file /flash/
p83a2300.img**

9 Change the boot flag setting so it does not check for software server version using the following command:

config bootconfig flags nocheck-sw-version true

10 Clear the DLD file entries for the Ethernet Routing Switch 8300 using the following command:

config bootconfig bootp image-name default

> ➡ **Note:** You must enter the command from Step 10 *exactly* as shown to clear the DLD file entries correctly. Using other options with the config bootconfig bootp image-name command can lead to erroneous results.

11 Save the bootconfig to both the master and standby CPU using the following command.

save bootconfig standby boot.cfg

12 Upgrade the standby CPU with the new boot image.

   a Establish a telnet session to the standby CPU by entering the following command at the master CPU prompt:

   peer telnet

   b Log in to the standby CPU.

   c Use the following CLI command:

   boot /flash/p83b2300.img -y

> **Note:** While the standby CPU is rebooting, the telnet session established from the master CPU will not respond. Wait for the telnet to timeout and return to the master CPU prompt before continuing.

13 Ensure that the standby CPU Admin Status is up by entering the following command:

show sys info card

14 After the standby CPU is back online, upgrade the master CPU with the new boot image using the following command:

boot /flash/p83b2300.img -y

15 Once the master CPU is back online and you are in the run-time CLI, change the boot flag setting nocheck-sw-version to false using the following commands:

config bootconfig flags nocheck-sw-version false

save bootconfig standby boot.cfg

16 Check to confirm that the pre-boot monitor software has been upgraded to release 3.7, as described in "Upgrading the pre-boot image" on page 20.

Upgrading the pre-boot image

The pre-boot image file (*p83f2300.img*) is only required when upgrading from software release 2.0.0.1 to release 2.0.1, 2.1.x, 2.1.1.x, 2.2.0, 2.2.1 or 2.3.x. If you have previously booted your 8393SF with any p83fxxxx image, it is not necessary to repeat the process. The p83fxxxx image is the same for all releases.

To check if your system has the pre-boot image installed, enter the following command in the CLI:

```
show sys sw
```

If the pre-boot monitor software has been previously upgraded (and does **not** require additional updates) then the switch displays:

```
Pre-Boot Monitor Software : Rel3.7
```

If the pre-boot software version displayed is not release 3.7, then you must upgrade the pre-boot image using one of the following procedures:

- "Upgrading the pre-boot image on an 8300 Series switch without a redundant CPU
- "Upgrading the pre-boot image on an 8300 Series switch with a redundant CPU" on page 21

Upgrading the pre-boot image on an 8300 Series switch without a redundant CPU

To upgrade an 8300 Series CPU with version 3.7 of the pre-boot software image, complete the following steps:

1 Copy the pre-boot image from the TFTP server or PCMCIA card to flash of the master CPU using one of the following commands:

```
copy <tftpServerIPAddr>:p83f2300.img /flash/p83f2300.img
```

```
copy /pcmcia/p83f2300.img /flash/p83f2300.img
```

2 Reboot the switch using the new pre-boot image, by entering the following command:

```
boot /flash/p83f2300.img -y
```

Upgrading the pre-boot image on an 8300 Series switch with a redundant CPU

To upgrade the 8300 Series CPUs with version 3.7 pre-boot software image, complete the following steps:

1 Copy the pre-boot image from the TFTP server or PCMCIA card to flash of the master CPU using one of the following commands:

`copy <`*`tftpServerIPAddr`*`>:p83f2300.img /flash/p83f2300.img`

`copy /pcmcia/p83f2300.img /flash/p83f2300.img`

2 Copy the new software to the standby CPU using the commands:

`copy /flash/p83f2300.img peer:/flash/p83f2300.img`

3 Upgrade the standby CPU with the new pre-boot image.

a Establish a telnet session to the standby CPU by entering the following command at the master CPU prompt:

`peer telnet`

b Log in to the standby CPU.

c Use the following CLI command:

`boot /flash/p83f2300.img -y`

→ **Note:** While the standby CPU is rebooting, the telnet session established from the master CPU will not respond. Wait for the telnet to timeout and return to the master CPU prompt before continuing.

---

4 Ensure that the standby CPU Admin Status is up by entering the following command:

`show sys info card`

5 After the standby CPU is back online, upgrade the master CPU with the new pre-boot image using the following command:

`boot /flash/p83b2300.img -y`

The MD5 command

The MD5 command calculates the MD5 digest for files on the switch's flash or PCMCIA, and displays the output on screen or stores the same in a file specified by the user. This command has an option to compare the MD5 digest calculated with that present in a checksum file on flash or PCMCIA and display the compared output to the screen. By verifying the MD5 checksum, administrators can check if the file has been transferred properly to the switch. This command is available from both the boot monitor and run-time CLI.

The MD5 file, *p83a2300.md5*, is provided with the Release 2.3 software. This contains the MD5 checksums of all Release 2.3 software files.

The MD5 command can be used with reserved files (for example, password file) only if the user access level has sufficient permissions to access these files.

A checksum file is provided with the images for download. Transfer your image files to the switch and use the MD5 command to ensure that the checksum of the images on the switch is the same as the checksum file.

Using the MD5 enhancement to calculate MD5 digest

To calculate the MD5 digest for files on the switch's flash or PCMCIA, and display the output on screen or store the same in a file, enter the following command:

```
md5 <filename>
```

This command includes the following options:

md5 <filename> followed by:	
`wildcard (*)`	Calculates the md5 checksum of all files.

`-f <checksum-file-name>`	Stores the result of md5 checksum to a file on flash or PCMCIA.
	If the output file specified with the -f option is one of the:
	• reserved filenames on the switch, the command fails with the error message `Error: Invalid operation.`
	• files for which md5 checksum is to be computed, the command will fail with the error message:
	
	`Passport-8300:5# md5 *.cfg -f config.cfg`
	
	`Error: Invalid operation on file <filename>`
	If the checksum filename specified by the -f option already exists on the switch (and is not one of the reserved filenames), the user receives the prompt to overwrite the file. The following message displays on the switch:
	`File exists. Do you wish to overwrite? (y/n)`

`-r`	Reverses the output, and can be used with the -f option to store the output to a file. The -r option cannot be used with the -c option.

md5 <*filename*> (continued) followed by:	
-a	Adds data to the output file instead of overwriting it.
	The -a option cannot be used with the -c option.
-c	Compares the checksum of the file specified by *filename* with the md5 checksum present in the checksum file name. The checksum file name can be specified using the -f option. When the checksum file name is not specified, the file /flash/checksum.md5 is used for comparison.
	If the checksum file name supplied, or the default file, is not available on flash, the following error message displays:
	`Error : Checksum file <filename> not present.`
	The -c option also:
	• calculates the checksum of files specified by the filename
	• compares the checksum with all keys in the checksum file, even if filenames do not match
	• displays the output of the comparison

shows examples of output files used with the MD5 command options.

→ **Note:** There is no MIB support for the MD5 command.

Figure 1   MD5 command sample output

```
Passport-8610:5# md5 *.img
MD5 (bootmon.img) = dca5427c9be8f928498a04f9db893573
MD5 (p83a.img) = 6f1d60189f0be7ec30ba751c01da10cd
MD5 (p83a2300scb004.img) = 5c7988882490e069b6b9f93727ad38b8

Passport-8610:5# md5 -f checksum.md5 *.img
Passport-8610:5# more checksum.md5
MD5 (bootmon.img) = dca5427c9be8f928498a04f9db893573
MD5 (p83a.img) = 6f1d60189f0be7ec30ba751c01da10cd
MD5 (p83a2300scb004.img) = 5c7988882490e069b6b9f93727ad38b8

Passport-8610:5# md5 -r *.img
dca5427c9be8f928498a04f9db893573 bootmon.img
6f1d60189f0be7ec30ba751c01da10cd p83a.img
5c7988882490e069b6b9f93727ad38b8 p83a2300scb004.img

Passport-8610:5# md5 -c -f checksum.md5 *.img
bootmon.img          Match dca5427c9be8f928498a04f9db893573
bootmon.img
p83a.img             Match 6f1d60189f0be7ec30ba751c01da10cd
p83a.img
p83a2300scb004.img Match 5c7988882490e069b6b9f93727ad38b8
p83a2300scb004.img
```

Hot swapping the CPU module or I/O modules

When hot swapping the active CPU module in an 8300 Series switch with redundant CPU modules, wait until the redundant CPU module is stabilized before inserting any other modules. When stable, the redundant CPU module displays a login prompt on the console screen. If no console connection is available, wait at least 30 seconds before inserting the replacement CPU module or before reinserting the removed CPU module.

In addition, during a CPU fail over, do not hot swap I/O modules until the new CPU becomes the master CPU.

> **Caution:** Do not hot swap or insert modules in an 8300 Series switch chassis while the switch is booting. Doing so can cause the module not to be recognized and can cause module initialization failure.

Securing your network

For additional security-related information, consult *Important Security Information for the 8300 Series Switch* (216512-C), *Configuring and Managing Security using the NNCLI and CLI* (316804-C), and *Configuring and Managing Security using Device Manager* (317346-C). A list of the documents contained in the 2.3 documentation set is included in the section that follows.

Reading path

This section lists the documentation specific to the Ethernet Routing Switch 8300 platform. You can download current versions of technical documentation for your Ethernet Routing Switch 8300 from the Nortel customer support web site at www.nortel.com/support.

If, for any reason, you cannot find a specific document, use the **Search** function:

1 Click **Search** at the top right-hand side of the web page.

   The **Search** page opens.

2 Ensure the **Support** tab is selected.

3 Enter the title or part number of the document in the **Search** field.

4 Click **Search**.

You can print the technical manuals and release notes free, directly from the Internet. Download and install a free copy of Adobe* Acrobat Reader* from www.adobe.com to open the manuals and release notes, search for the sections you need, and print them on most standard printers.

Important information

- *Important Information for the 8300 Series Switch Modules* (216511-C)
- *Read Me First for the Ethernet Routing Switch 8310 Chassis* (318192-C)
- *Important Security Information for the 8300 Series Switch* (216512-C)
- *Important Notice for the 8000 Series Switch PCMCIA Card* (318844-A)

Chassis and module installation

- *Installing a Fan Tray in an Ethernet Routing Switch 8300 Series Chassis* (316798-B)
- *Installing the Ethernet Routing Switch 8300 AC Power Supply* (316797-C)
- *Installing and Maintaining the Ethernet Routing Switch 8306 and 8310 Chassis* (316795-D)
- *Installing Ethernet Routing Switch 8300 Series Modules* (316796-D)
- *Installing GBIC and Gigabit SFP Transceivers* (318034-A)

Related publications

This section describes common documentation related to the Ethernet Routing Switch 8300 switch.

Installation and User Guides

These guides provide instructions for installing the chassis and its components, installing and getting started with the Device Manager software, and configuring various protocols on the Ethernet Routing Switch 8300.

- *Adding MAC Addresses to the Passport 8000 Series Chassis* (212486-B)
- *Configuring Power over Ethernet* (317337-C)
- *Getting Started* (316799-C)
- *Installing a Fan Tray in an Ethernet Routing Switch 8300 Series Chassis* (316798-B)
- *Installing the Ethernet Routing Switch 8300 AC Power Supply* (316797-C)
- *Installing and Maintaining the Ethernet Routing Switch 8306 and 8310 Chassis* (316795-D)
- *Installing and Using Device Manager* (316808-C)
- *Installing Ethernet Routing Switch 8300 Series Modules* (316796-D)
- *Installing GBIC and Gigabit SFP Transceivers* (318034-A)
- *Ethernet Routing Switch 8300 Power Considerations* (317223-C)
- *Upgrading to Ethernet Routing Switch 8300 Software Release 2.3* (318769-E)
- *Using Device Manager Diagnostic Tools* (317359-C)

Reference and Configuration Guides

These guides provide reference and configuration information for the Ethernet Routing Switch 8300 switch.

- *CLI Command Line Reference for the Ethernet Routing Switch 8300* (317360-D)
- *Configuring and Managing Security using Device Manager* (317346-C)
- *Configuring and Managing Security using the NNCLI and CLI* (316804-C)
- *Configuring IP Routing and Multicast Operations using Device Manager* (317338-B)

- *Configuring IP Routing and Multicast Operations using the NNCLI and CLI* (316800-B)
- *Configuring Network Management using the NNCLI, CLI, and Device Manager* (316803-C)
- *Configuring QoS and Filters using the CLI* (317339-B)
- *Configuring QoS and Filters using Device Manager* (317340-B)
- *Configuring QoS and Filters using the NNCLI* (316801-B)
- *Configuring VLANs, Spanning Tree, and Static Link Aggregation using the CLI* (317347-C)
- *Configuring VLANs, Spanning Tree, and Static Link Aggregation using Device Manager* (317348-C)
- *Configuring VLANs, Spanning Tree, and Static Link Aggregation using the NNCLI* (316805-C)
- *Managing Platform Operations* (317350-C)
- *Network Design Guidelines* (316809-C)
- *NNCLI Command Line Reference for the Ethernet Routing Switch 8300* (316810-D)
- *System Messaging Platform Reference Guide* (316806-C)
- *Using NNCLI and CLI Diagnostic Tools* (317222-B)