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EZSwitchSetup

Administrator's Guide

Supporting Brocade 300, 4100, 4900, 5000, 5100, 5300, 6505, 6510, 6520, 7800, 8000, and VA-40FC

BROCADE

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| <i>EZSwitchSetup Administrator's Guide</i> | 53-1001344-02 | Added support for the Brocade VA-40FC. | August 2009 |
| EZSwitchSetup Administrator's Guide | 53-1001344-03 | Removed software support statement from title page, as this document supports multiple Fabric OS versions. | February 2010 |
| EZSwitchSetup Administrator's Guide | 53-1002157-01 | Added support for Brocade 6510. | April 2011 |
| EZSwitchSetup Administrator's Guide | 53-1002511-01 | Added support for Brocade 6505. | December 2011 |
| EZSwitchSetup Administrator's Guide | 53-1002744-01 | Added support for Brocade 6520. | December 2012 |

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How this document is organized

This document contains the following components:

- [Chapter 1, “Introducing EZSwitchSetup”](#), provides basic information about the EZSwitchSetup interface, including system requirements and installation instructions.
- [Chapter 2, “Setting Up Your Switch”](#), describes how to set up your switch for the first time.
- [Chapter 3, “Managing Your Switch”](#), describes how to monitor and manage your switch using the EZSwitchSetup Switch Manager.
- [Appendix A, “EZSwitchSetup Limitations”](#), discusses the limitations of and provides workarounds for using EZSwitchSetup.

Supported hardware and software

In those instances in which procedures or parts of procedures documented here apply to some switches but not to others, this guide identifies exactly which switches are supported and which are not.

Although many different software and hardware configurations are tested and supported by Brocade Communications Systems, Inc., documenting all possible configurations and scenarios is beyond the scope of this document.

The following platforms are supported by this release of EZSwitchSetup:

- Brocade 300 switch
- Brocade 4100 switch
- Brocade 4900 switch

- Brocade 5000 switch
- Brocade 5100 switch
- Brocade 5300 switch
- Brocade 6505 switch
- Brocade 6510 switch
- Brocade 6520 switch
- Brocade 7800 Extension Switch
- Brocade 8000 FCoE Switch
- Brocade VA-40FC switch

What's new in this document

The following change has been made since this document was last released:

- Added support for the Brocade 6520 switch.

Document conventions

This section describes text formatting conventions and important notice formats used in this document.

Text formatting

The narrative-text formatting conventions that are used in this document are as follows:

| | |
|------------------------|---|
| bold text | Identifies command names Identifies the names of user-manipulated GUI elements Identifies keywords and operands Identifies text to enter at the GUI or CLI |
| <i>italic text</i> | Provides emphasis Identifies variables Identifies paths and Internet addresses Identifies document titles |
| <code>code text</code> | Identifies CLI output Identifies syntax examples |

For readability, command names in the narrative portions of this guide are presented in mixed lettercase: for example, **switchShow**. In actual examples, command lettercase is all lowercase.

Notes, Cautions, and Warnings

The following notices and statements are used in this manual. They are listed below in order of increasing severity of potential hazards.

NOTE

A note provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

ATTENTION

An Attention statement indicates potential damage to hardware or data.

**CAUTION**

A Caution statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.

**DANGER**

A Danger statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations.

Key terms

For definitions specific to Brocade and Fibre Channel, see the technical glossaries on MyBrocade. See “[Brocade resources](#)” on page viii for instructions on accessing MyBrocade.

For definitions of SAN-specific terms, visit the Storage Networking Industry Association online dictionary at:

<http://www.snia.org/education/dictionary>

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| Corporation | Referenced Trademarks and Products |
|-------------------------------------|---|
| Microsoft Corporation | Windows, Windows NT, Internet Explorer |
| Oracle Corporation | Java |
| Netscape Communications Corporation | Netscape |
| Red Hat, Inc. | Red Hat, Red Hat Network, Maximum RPM, Linux Undercover |

Additional information

This section lists additional Brocade and industry-specific documentation that you might find helpful.

Brocade resources

To get up-to-the-minute information, go to <http://my.brocade.com> to register at no cost for a user ID and password.

White papers, online demonstrations, and data sheets are available through the Brocade website at:

<http://www.brocade.com/products-solutions/products/index.page>

For additional Brocade documentation, visit the Brocade website:

<http://www.brocade.com>

Release notes are available on the MyBrocade website and are also bundled with the Fabric OS firmware.

Other industry resources

For additional resource information, visit the Technical Committee T11 website. This website provides interface standards for high-performance and mass storage applications for Fibre Channel, storage management, and other applications:

<http://www.t11.org>

For information about the Fibre Channel industry, visit the Fibre Channel Industry Association website:

<http://www.fibrechannel.org>

Getting technical help

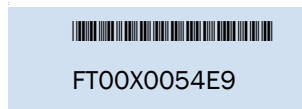
Contact your switch support supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information available:

1. General Information
 - Switch model
 - Switch operating system version
 - Browser version
 - JRE version installed on host
 - Error numbers and messages received
 - Java console window messages
 - Screen shots
 - **supportSave** command output

- Detailed description of the problem, switch or fabric behavior immediately following the problem, and specific questions
- Description of any troubleshooting steps already performed and results

2. Switch Serial Number

The switch serial number and corresponding bar code are provided on the serial number label, as shown here:



The serial number label is located as follows:

- *Brocade 300, 4100, 4900, 5000, 5100, 5300, 7800, 8000, and VA-40FC switches:* On the switch ID pull-out tab located on the bottom of the port side of the switch.
- *Brocade 6505, 6510, and 6520 switches:* On the switch ID pull-out tab located inside the chassis on the port side on the left.

3. World Wide Name (WWN)

- The WWN is in the same place as the serial number.

Document Feedback

Quality is our first concern at Brocade and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you. Forward your feedback to:

documentation@brocade.com

Provide the title and version number of the document and as much detail as possible about your comment, including the topic heading and page number and your suggestions for improvement.

Introducing EZSwitchSetup

In this chapter

- Overview of EZSwitchSetup 1
- EZSwitchSetup software and hardware requirements 2
- Supported switches 3
- Language support for EZSwitchSetup 4

Overview of EZSwitchSetup

EZSwitchSetup is an easy-to-use graphical user interface application for setting up and managing your switch. It has the following components:

- EZSwitchSetup wizard (on the installation CD)
- EZSwitchSetup switch configuration wizard
- EZSwitchSetup Switch Manager

Figure 1 illustrates the high-level workflow of EZSwitchSetup.

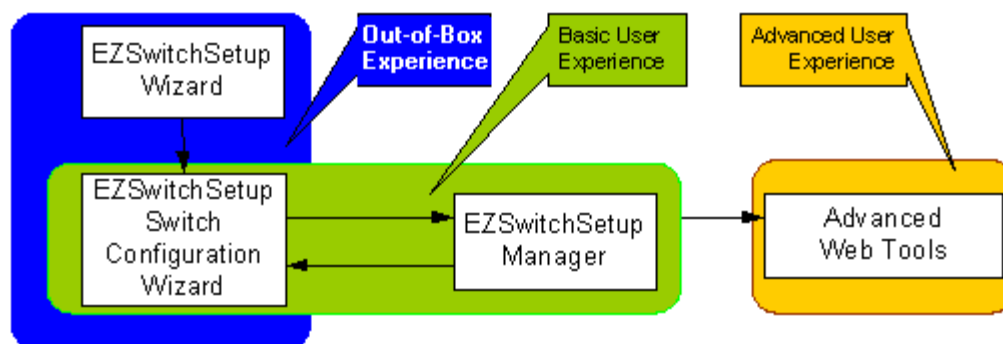


FIGURE 1 EZSwitchSetup components

Chapter 2, “Setting Up Your Switch,” describes how to use the EZSwitchSetup wizard and Switch Configuration to set up and configure your switch for the first time. For additional information about your switch, see the hardware reference manual included on the Brocade Documentation CD, which ships with the switch.

Chapter 3, “Managing Your Switch,” describes how to use the Switch Manager to monitor and manage your switch.

1 EZSwitchSetup software and hardware requirements

NOTE

Although your switch may have advanced capabilities, EZSwitchSetup is for a single-switch fabric with FC ports only. To configure and manage other features on your switch, use the command line interface, Web Tools, or Brocade Network Advisor.

EZSwitchSetup software and hardware requirements

You can run EZSwitchSetup on a SAN host computer or you can use a different computer that is not part of the SAN, such as a laptop.

EZSwitchSetup requires a browser that conforms to HTML version 4.0 and JavaScript version 1.0. The EZSwitchSetup installation CD automatically installs the correct Java Runtime Environment (JRE) for the disk-based installation wizard. This does not affect any pre-installed JREs, but other program components launched from the switch require Oracle JRE 1.7.0_9 or higher installed on the host.

EZSwitchSetup is supported on the platforms shown in [Table 1](#).

TABLE 1 Supported platforms

| Operating system | Browser | JRE version |
|------------------------------|--|--------------------|
| SUSE Linux Enterprise 11 | Firefox 12 | Oracle JRE 1.7.0_9 |
| Linux Red Hat 9 | Mozilla | Oracle JRE 1.7.0_9 |
| Windows 7 Professional (x86) | Internet Explorer 9.0 Internet Explorer 8.0 Firefox 12 | Oracle JRE 1.7.0_9 |
| Windows Server 2008 Standard | Internet Explorer 9.0 Internet Explorer 8.0 Firefox 12 | Oracle JRE 1.7.0_9 |
| Windows 2003 Server, SP2 | Internet Explorer 9.0 Internet Explorer 8.0 Firefox 12 | Oracle JRE 1.7.0_9 |
| Windows XP, SP3 | Internet Explorer 9.0 Internet Explorer 8.0 Firefox 12 | Oracle JRE 1.7.0_9 |

The minimum hardware requirements for a Windows system are as follows:

- 90 MB of hard drive space for the EZSwitchSetup installation directory.
- 512 MB or more RAM for fabrics containing up to 15 switches.
- A minimum of 8 MB of video RAM is also recommended.
- An Ethernet port.
- A serial (COM) port if you plan to connect to the serial port on the switch.

Configuring Internet Explorer

Correct operation of EZSwitchSetup Switch Manager with Internet Explorer requires specifying the appropriate settings for browser refresh frequency and process model. Browser pages should be refreshed frequently to ensure the correct operation of Switch Manager.

1. Select **Tools > Internet Options**.
2. Select the **General** tab.
3. Click the **Settings** button under “Browsing history.”
4. Click **Every time I visit the webpage** under “Check for newer versions of stored pages,” as shown in [Figure 2](#).
5. Click **OK** to save the changes.

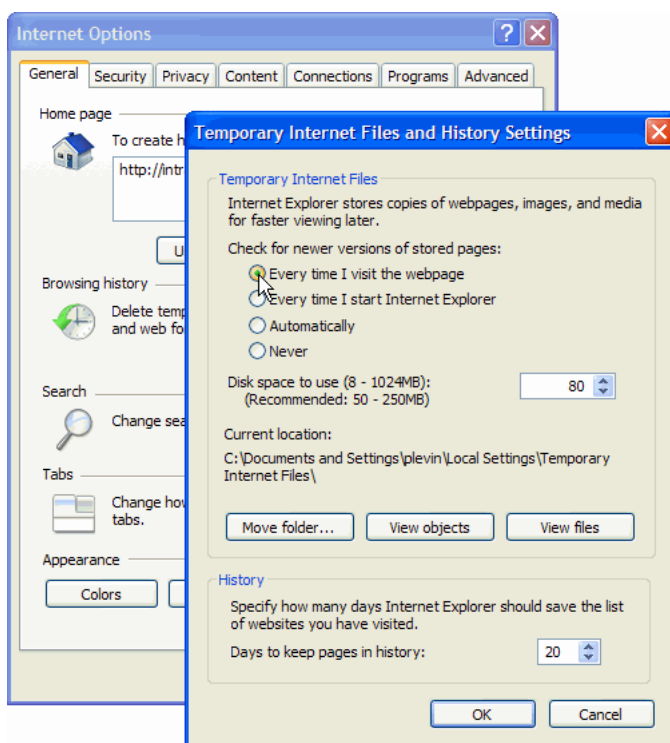


FIGURE 2 Configuring Internet Explorer

Supported switches

You can use EZSwitchSetup with the switches listed in “[Supported hardware and software](#)” on page v.

Your switch must meet the following requirements:

- It must be connected to an Ethernet LAN that is accessible by the host. If it is not, the system issues the message “Page not Found.”
- It must have licensed FC ports. If the switch has no licensed FC ports, you must first install a POD license and then enable the affected ports. For more information, refer to “[Adding a port license](#)” on page 38

1 Language support for EZSwitchSetup

- It must be in a single-switch fabric. If your switch connects to another switch (if there is an E_Port on the switch), you cannot manage the switch using EZSwitchSetup until you disconnect the switch connection.

NOTE

If there is an E_Port on the switch and if there is a zone conflict, then the fabric is segmented; in this case, the switch is in a fabric by itself and EZSwitchSetup treats it as a single-switch fabric.

You cannot use EZSwitchSetup to manage a switch that has any of the following features enabled:

- Virtual Fabrics with non-default logical switches
- Access Gateway
- User-defined Admin Domains

You can, however, use the EZSwitchSetup wizard to discover these switches and set their IP addresses. The Brocade VA-40FC switch comes pre-configured in Access Gateway mode. If you use the EZSwitchSetup wizard to discover the Brocade VA-40FC switch and set the IP address, Web Tools will launch automatically for you to manage the Access Gateway features.

Language support for EZSwitchSetup

The EZSwitchSetup wizard and the Switch Manager interface display the following languages:

- English (default)
- Brazilian Portuguese
- French
- German
- Italian
- Japanese
- Korean
- Simplified Chinese
- Spanish
- Traditional Chinese

When you launch EZSwitchSetup, the interface detects the operating system and language environment and installs and displays the appropriate language. For example, if you set up the switch using a German operating system, EZSwitchSetup installs the German language interface and displays text, messages, and labels in that language.

If localization resources are not fully available in the user host environment, EZSwitchSetup uses the default language, English.

Regardless of the local language, the following is displayed in English:

- User input, which must consist of printable ASCII characters
- Switch-based information (such as firmware version and switch name)
- Some globally accepted industry terms (such as SAN and HBA)
- The End User License Agreement (EULA)

- System files (such as the summary file, setting file, and log file)

1 Language support for EZSwitchSetup

Setting Up Your Switch

In this chapter

- Installing and running the EZSwitchSetup wizard..... 7
- Configuring the switch..... 17
- Zoning selection options..... 19
- Connecting devices and completing the setup..... 21

Installing and running the EZSwitchSetup wizard

You can run EZSwitchSetup from a computer you are currently using for SAN administration, or you can use a different computer that is not part of the SAN, such as a laptop. In this chapter, the computer running EZSwitchSetup is called the *setup computer*.

The first step in setting up your switch is to install the EZSwitchSetup wizard, which is located on the EZSwitchSetup installation CD.

1. Insert the EZSwitchSetup CD into the CD-ROM drive of your setup computer.
 - On Windows: The installer will autostart in about a minute.
 - On Linux: Navigate to the following path location on the CD-ROM:
`CDROM_Path/CDROM_Installers/Linux/Disk1/InstData/VM/install.bin`
2. Install EZSwitchSetup following the onscreen directions.
Installation will take a few minutes after you click **OK**.
3. Click **Done** on the last screen (shown in [Figure 3](#)) to exit the installer.

2 Installing and running the EZSwitchSetup wizard

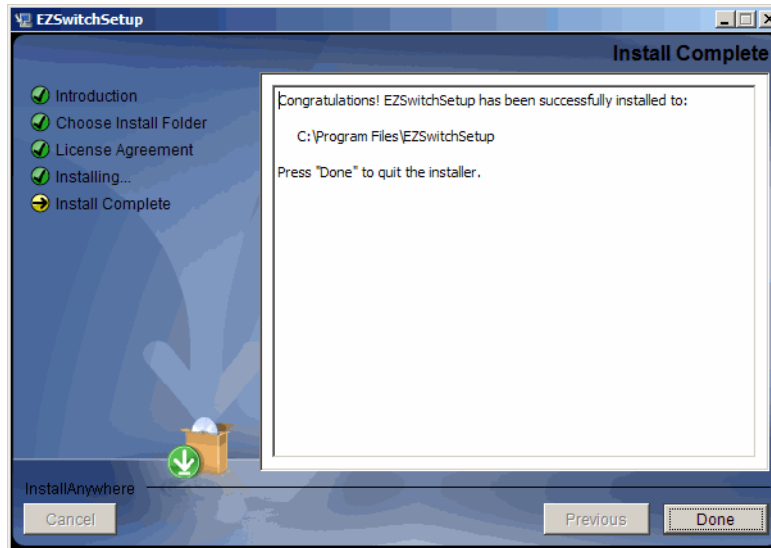


FIGURE 3 EZSwitchSetup Installer

On Windows, EZSwitchSetup starts automatically after it is installed. If it does not, see [“Launching the EZSwitchSetup wizard”](#) to launch the wizard manually.

On Linux, follow the procedure in [“Launching the EZSwitchSetup wizard”](#) to launch the wizard.

Launching the EZSwitchSetup wizard

Perform the following, depending on your operating system:

- On Windows: EZSwitchSetup starts automatically after it is installed. If it does not, then from the **Start** menu, select **Programs > EZSwitchSetup > EZSwitchSetup**
- On Linux: EZSwitchSetup does not start automatically, so you must start it manually.

NOTE

The Linux installation requires root access.

The EZSwitchSetup wizard starts, as shown in [Figure 4](#).

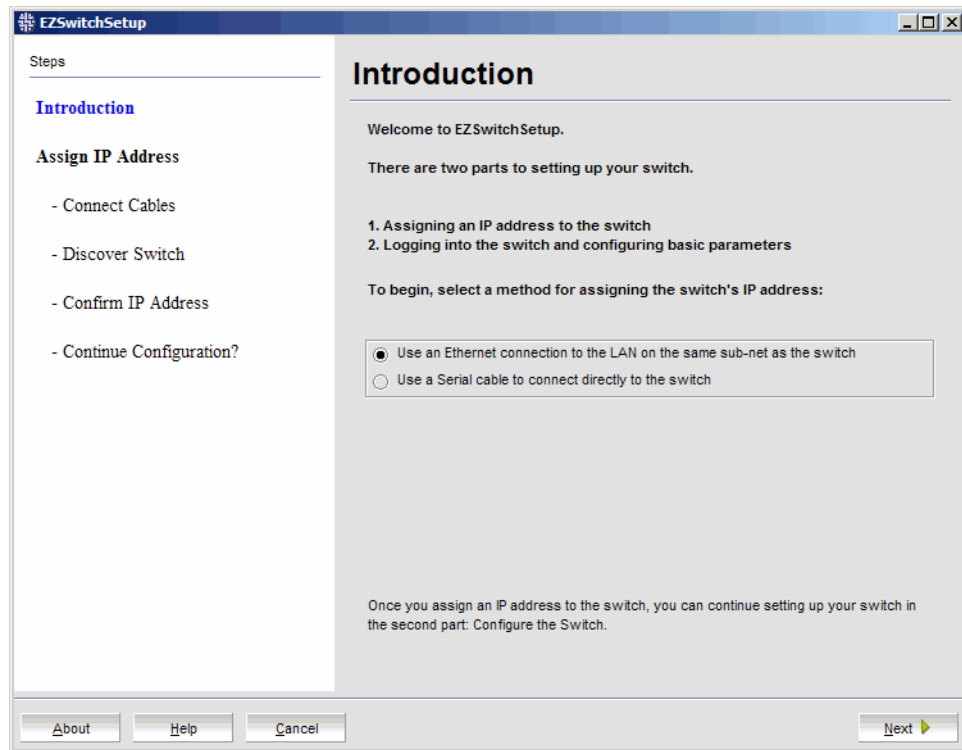


FIGURE 4 EZSwitchSetup introduction window

Connecting cables

1. Choose the method of connecting to your LAN.

You have the choice of using a serial connection or an Ethernet connection to your LAN to set the IP address for the switch. The Ethernet connection is generally more convenient and preferred. Use the serial connection if it is not possible or not convenient to connect the host on the same subnet as the switch.

2. Click **Next**.

The **Connect Cables** window is displayed ([Figure 5](#)).

2 Installing and running the EZSwitchSetup wizard

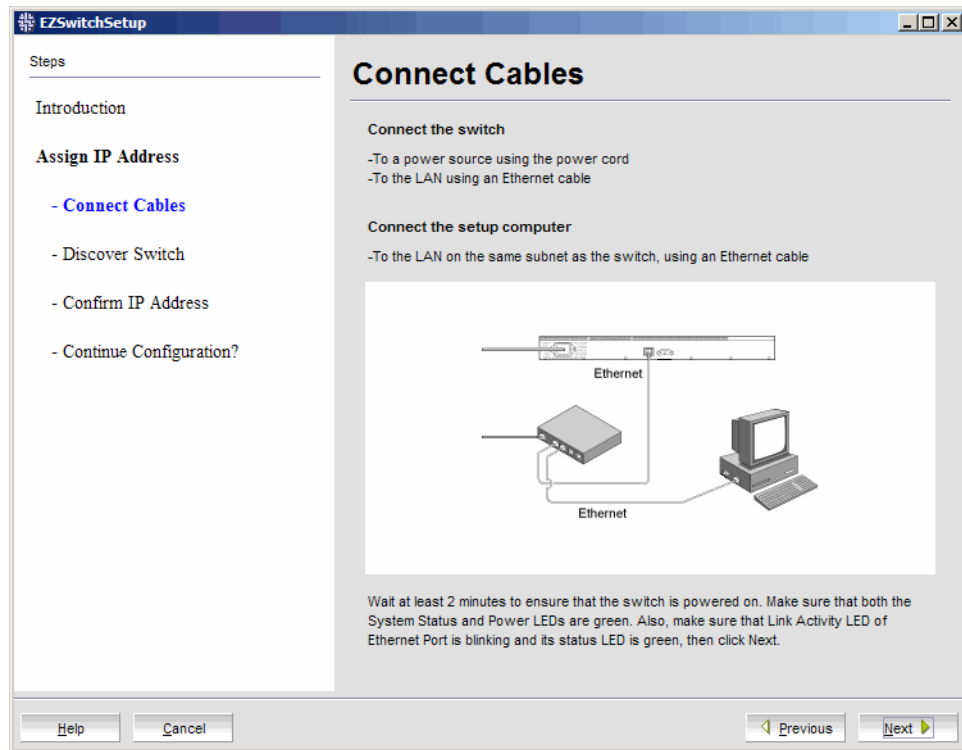
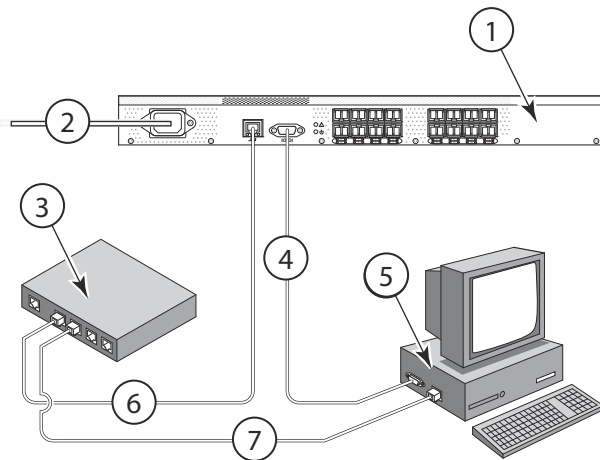


FIGURE 5 Connect Cables window (Ethernet version, without serial cable)

Figure 6 on page 11 shows the cables connecting to the Brocade Fibre Channel switch, setup computer, Ethernet hub or switch, and network.

NOTE

Not all switches have their serial and Ethernet connectors in the same place as in Figure 6. Refer to the hardware documentation to determine the correct placement of the serial and Ethernet connections.



- | | | | |
|---|------------------------|---|--|
| 1 | Brocade switch | 5 | Setup computer |
| 2 | Power cable | 6 | Ethernet cable from hub to Brocade switch |
| 3 | Ethernet hub or switch | 7 | Ethernet cable from setup computer to Ethernet hub or switch |
| 4 | Serial cable | | |

FIGURE 6 Cable connections

3. Connect the power cord to the switch and plug in to a power source.
The switch power and status LEDs display amber and then change to green, which usually takes from one to three minutes. See your switch hardware manual for the location of the LEDs.
4. Connect an Ethernet cable from the Brocade switch to the LAN you want to use for your management connection through an Ethernet hub or switch. If you chose to use your Ethernet connection for setup in step 1, this is the connection you will use. If you chose the serial cable connection in step 1, you should still connect the Ethernet cable so the Ethernet connection will be available when you start the EZSwitchSetup Manager.
5. If you are using a serial connection for setup, connect your setup computer to the serial port on the switch, using the serial cable shipped with the switch. If you cannot locate the serial cable that came with the switch, you will need to find one that has the appropriate connectors. Do not use a null-modem cable. The serial connection settings are as follows:
 - Bits per second: 9600
 - Databits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None
6. Click **Next**.
EZSwitchSetup attempts to discover the switch. If your switch discovery fails, see [Table 2](#) on page 17 for details on how to recover your switch.

If you are using the serial connection, the **Set Switch IP Address** window is displayed, and you can go to [step 5](#). You can now remove the serial cable from the switch, but keep it available in case you lose your network connection and need to revise any of the information you entered.

2 Installing and running the EZSwitchSetup wizard

If you are using an Ethernet LAN connection, a **Discover Switch** window is displayed (Figure 7). Proceed to “[Discovering the switch.](#)”

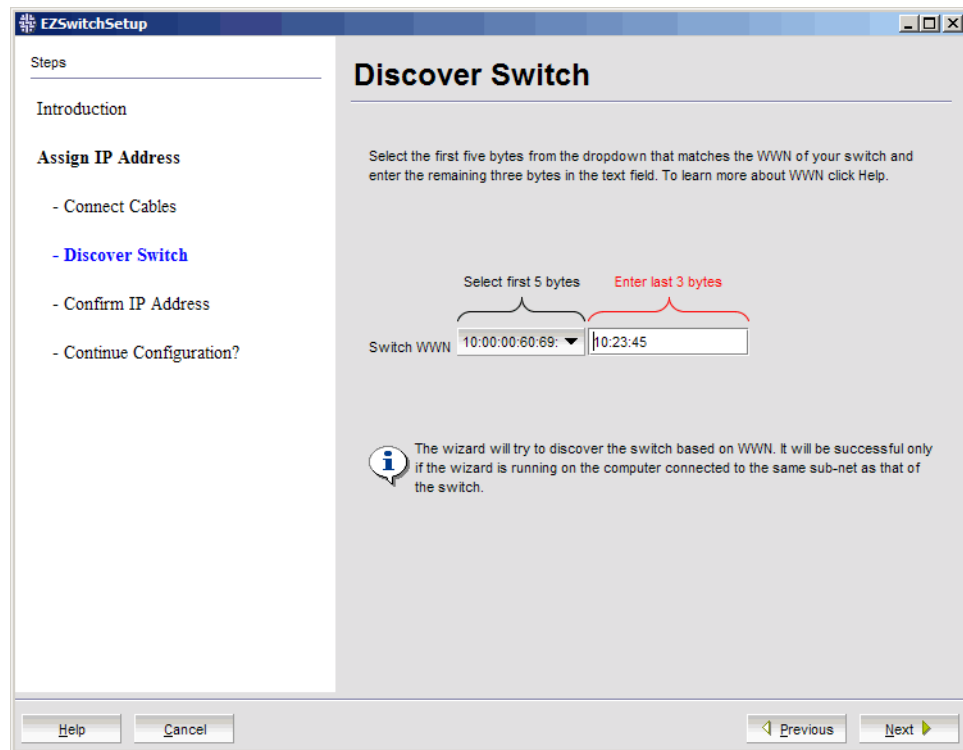


FIGURE 7 First Discover Switch window

Discovering the switch

1. Locate the WWN for your switch on the switch ID pull-out tab located on the bottom of the port side of the switch.
2. From the **Switch WWN** list (Figure 7), choose the switch’s WWN prefix numbers and then enter the last six alphanumeric digits of your switch’s WWN. Each two alphanumeric digits must be separated by a colon.
3. Click **Next**.

When EZSwitchSetup discovers the switch, it displays the discovered IP addresses (IPv4 and IPv6), as shown in [Figure 8](#).

If you are setting up the switch for the first time, the IP addresses are placeholder addresses that were assigned at the factory and you must provide valid addresses.

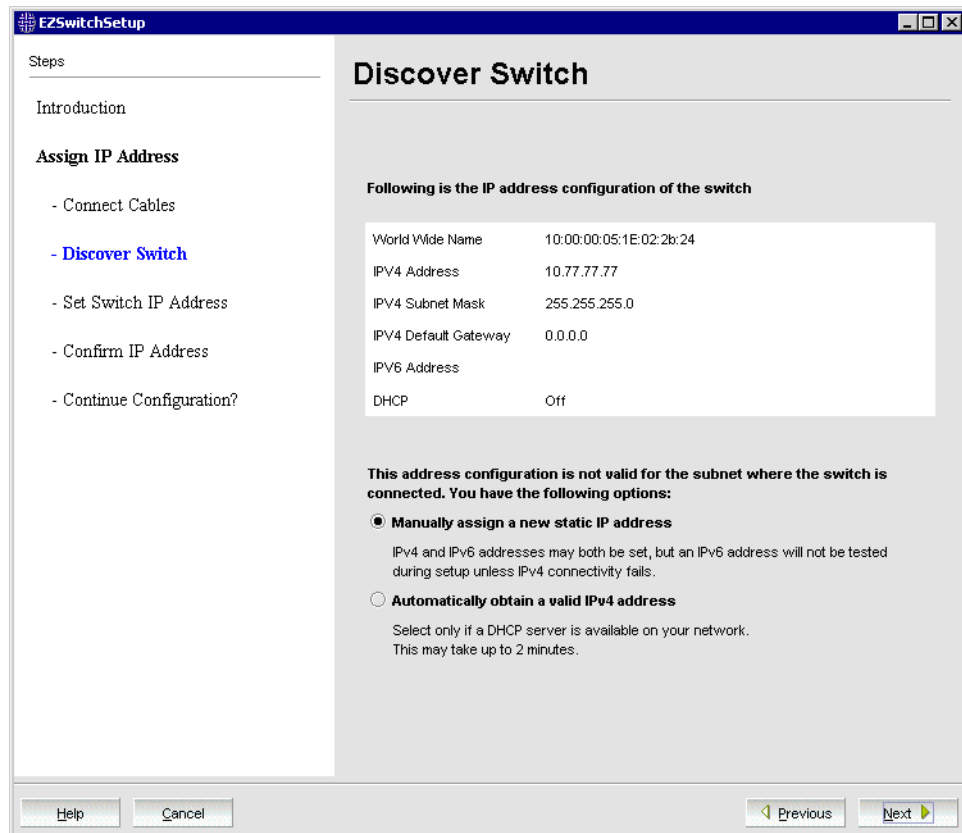


FIGURE 8 Second Discover Switch window

4. Select an option for assigning the IP address and click **Next**. The options vary depending on the configuration of your switch:
 - **Keep the current switch IP configuration**
This option is available only if EZSwitchSetup detected a valid IP address. Skip to [“Confirming IP addresses”](#) on page 14.
 - **Manually assign a new static IP address**
If you select this option and click **Next**, the **Set Switch IP Address** window is displayed ([Figure 9](#)). Continue with [step 5](#) to enter the IP address.
 - **Automatically obtain a valid IPv4 address**
Select this option only if a DHCP server is available on your network. When you click **Next**, an IP address is automatically obtained from the DHCP server and the **Confirm IP Address** window is displayed. Skip to [“Confirming IP addresses”](#) on page 14.

2 Installing and running the EZSwitchSetup wizard

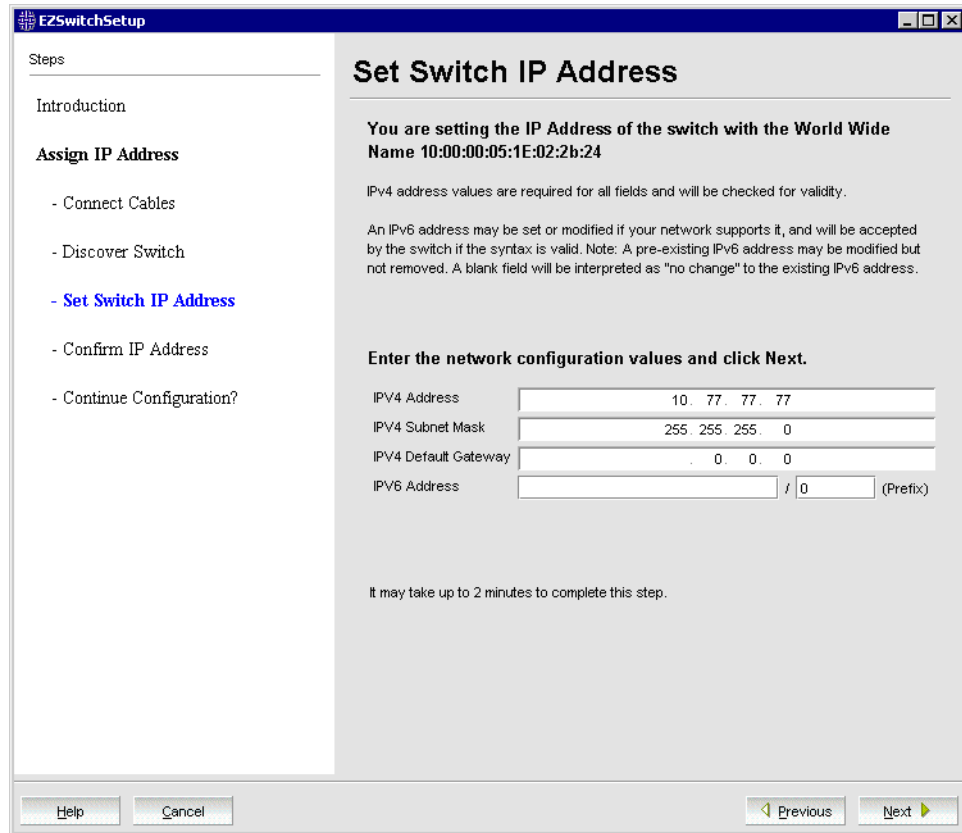


FIGURE 9 Set Switch IP Address window

NOTE

Beginning at [step 5](#), the steps are the same for both serial and Ethernet connections.

5. If you are setting up the switch for the first time, the addresses shown are not valid. If you click **Next** with these addresses in place, EZSwitchSetup returns an error window.

To set up IPv4 addresses, edit the address information on the **Set Switch IP Address** window to create static addresses appropriate for your LAN connection.

To set up IPv6 addresses, enter the IPv6 address and prefix in the spaces provided.

6. Click **Next**.

EZSwitchSetup attempts to log in using default credentials. If you have already changed your admin password, you will be prompted to enter your new password.

Proceed to [“Confirming IP addresses”](#) on page 14.

Confirming IP addresses

The **Confirm IP Address** window ([Figure 10](#)) is displayed after you have assigned IP addresses, using either a serial connection or an Ethernet connection.



FIGURE 10 EZSwitchSetup Confirm IP Address window

1. Check the displayed addresses carefully to be sure they are correct, then click **Next**. The **Continue Configuration?** window is displayed (Figure 11).
2. Select one of the following continuation options:
 - Continue setting up your target switch with EZManager
Select this option if you intend to use EZSwitchSetup Manager as your primary management program for this switch.
 - Discover another switch on the same subnet for IP assignment only
Select this option to discover another switch and set the IP address.

If you select this option, EZSwitchSetup Manager will not be the default management tool for this current target switch. To set up EZSwitchSetup Manager as the management tool for this switch, you must discover it again with EZSwitchSetup and select the first continuation option.
 - Exit EZSwitchSetup
Select this option if you want to use EZSwitchSetup as an IP configuration tool, but do not want to use EZSwitchSetup Manager as a management tool for the switch.

2 Installing and running the EZSwitchSetup wizard

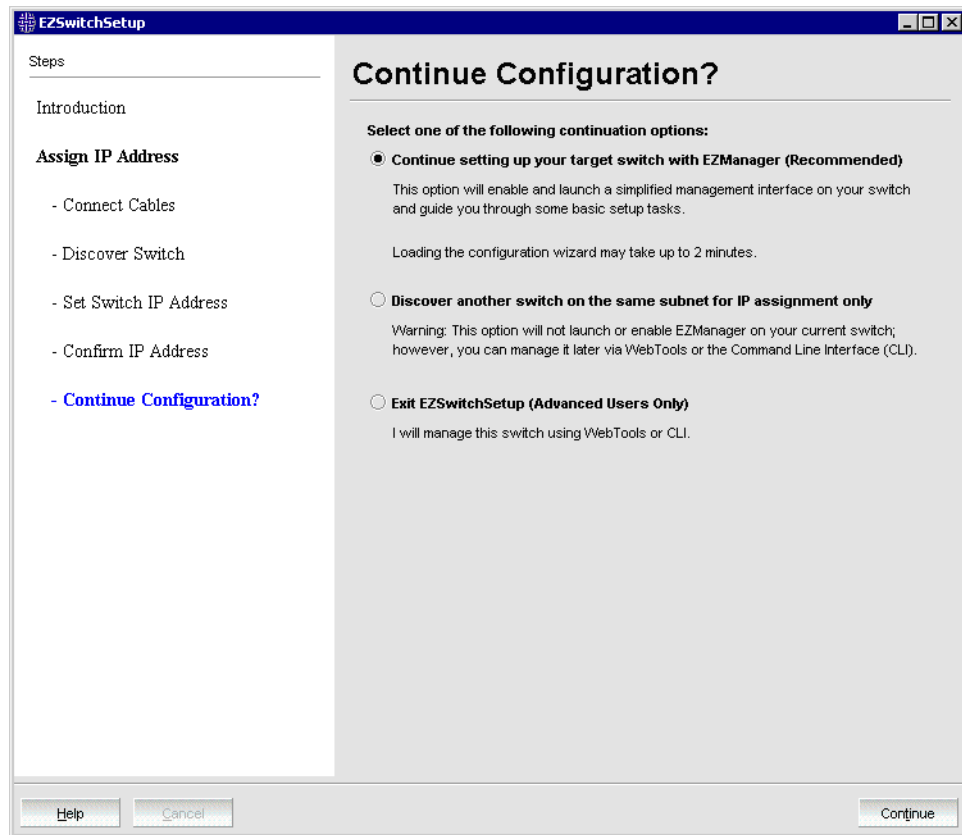


FIGURE 11 Continue Configuration window

3. Click **Continue**.

Depending on the option selected, one of the following outcomes occurs:

- If you selected **Continue setting up your target switch with EZManager**, a dialog box displays warning you that EZSwitchSetup supports only single switch fabrics. Click **OK** to start the EZSwitchSetup Manager.

A browser window opens, and the **Switch Configuration Welcome** window is displayed (Figure 12). This may take a few minutes.

If the configuration wizard does not launch, you must launch it manually by specifying the URL in a browser:

```
http://switch-ip-address
```

If the switch discovery fails, see “[Switch discovery failure](#)” on page 17 for details on how to recover your switch.

- If you selected **Discover another switch on the same subnet for IP assignment only**, the Discover Switch window displays (Figure 7 on page 12). Go to “[Discovering the switch](#)” on page 12 and provide the WWN for the next switch.
- If you selected **Exit EZSwitchSetup**, the wizard closes.

Switch discovery failure

During the setup of your switch, the switch discovery may fail. There may be several reasons why switch discovery fails. [Table 2](#) lists symptoms and related suggestions to recover the switch.

TABLE 2 Discovery recovery

| Symptom | Correction |
|---|---|
| For serial connections: | |
| The setup computer COM port is busy. | The port is being controlled by another communications program. Stop all other third-party communications programs. The port settings are in conflict with another device. Check your IRQ settings. On Windows systems: By default, COM1 and COM3 use IRQ4, while COM2 and COM4 use IRQ3. If another device is sharing the IRQ of the port, you must change the IRQ of the conflicting device. Hardware conflicts can also occur with the I/O address of the COM port. The 8514a video chip or its clones (S3 chip set) on some video cards create a conflict with COM4 because they use the same address of 02E8. |
| The switch does not respond to commands during a serial connection. | The serial cable may not be connected properly between the setup computer and the switch. Check the serial cable to ensure it is secured. |
| The switch does not power up. | Verify that the switch's power cable is securely plugged into a proper outlet and that the switch's power button is turned on. |
| The switch's serial adapter does not work. | Verify that the cable is good by replacing the cable or trying it on another known working device. If the cable is good, then call your support provider for further instructions. |
| For Ethernet connections: | |
| The WWN is not entered correctly. | Verify that the WWN is correct. |
| The target switch is not on the same subnet as the host. | Connect the host to the same subnet as the target switch. If it is not possible or convenient to do so, use the serial connection to set the IP address. |
| The target switch has no IP address instead of the factory default 10.77.77.77. | Use the serial connection to set the IP address. |
| You have requested automatic address assignment in an environment where a DHCP server is not available. | Use the serial connection to set a reachable address. |

Configuring the switch

The configuration wizard steps you through the process of changing your administrative password and zoning. You begin at the **Welcome to Switch Configuration** window ([Figure 12](#)).

2 Configuring the switch

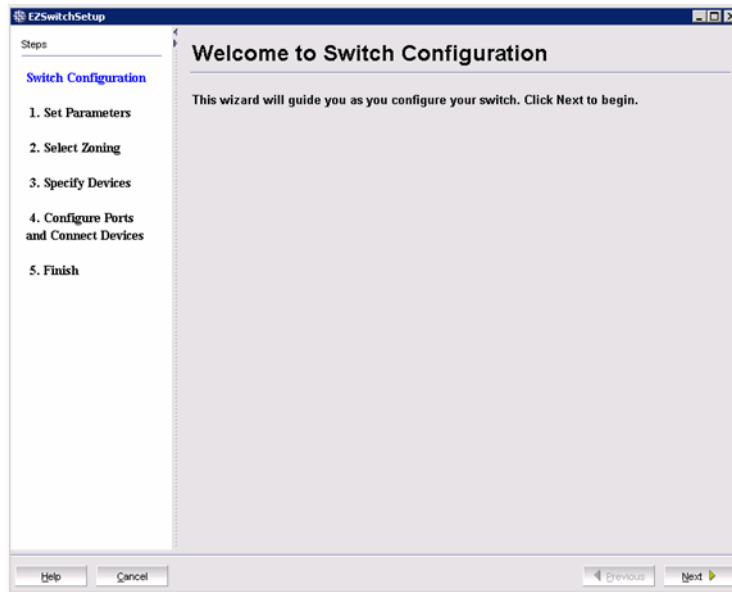


FIGURE 12 Switch configuration welcome window

1. Click **Next** to begin.

The **Set Parameters** window is displayed.

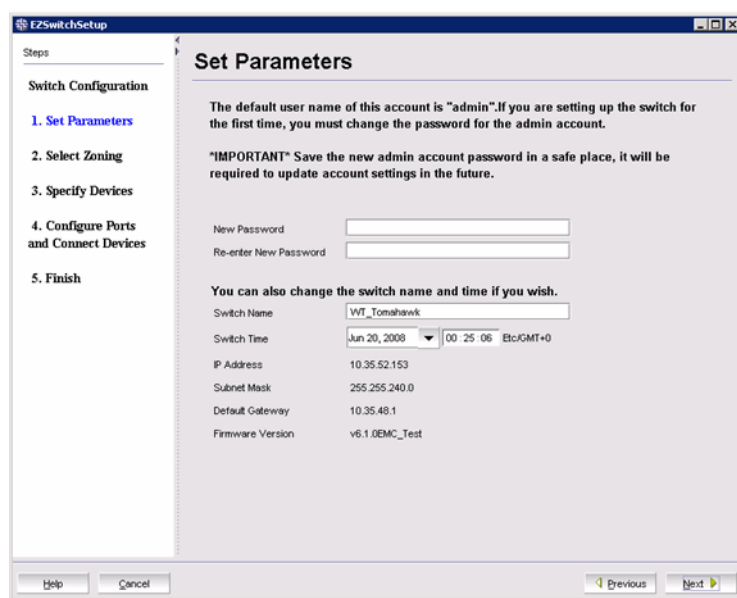


FIGURE 13 EZSwitchSetup Setup Parameters window

Setting switch parameters

1. Follow the onscreen directions to set a new admin password for the switch. Make sure to record your password and keep it in a secure location for future reference.
2. *Optional:* Enter a new name for the switch and set the correct date and time.

3. Click **Next**. The **Select Zoning** window is displayed.

NOTE

For the Brocade 8000, if you do not have a Ports on Demand license, none of the ports are usable, so the wizard displays a message and exits. You must add the Ports on Demand license using the EZSwitchSetup Switch Manager or the command line interface. For more information, refer to [“Adding a port license”](#) on page 38.

Zoning selection options

The next step in configuring your switch is to select zoning. There are three choices:

- **Typical Zoning** creates a port-based zoning scheme based on the connections made on the **Configure Ports and Connect Devices** window ([Figure 16](#)). This zoning scheme creates a two-member zone for every possible pairing of HBA (H) and storage (S) ports connected on the **Configure Ports and Connect Devices** window. This ensures that any host device connected to an H port is able to communicate with any storage device connected to an S port.

NOTE

You can use Typical Zoning for dual-capable devices (devices that are configured to function both as initiators and targets), but in Typical Zoning mode, these devices are recognized as targets by EZSwitchSetup and are rejected if attached to a host port.

- **Custom Zoning** allows you to customize which initiators access which targets, and creates a device-based zoning scheme based on your choices. The HBAs and storage devices should already be connected to the switch. Custom Zoning provides a device accessibility matrix for you to modify; it then automatically creates zones based on that matrix. Custom Zoning supports only single-switch fabrics. If you select this option, when you click **Next**, the wizard closes and the EZSwitchSetup Switch Manager application opens.
- **Advanced Zoning** allows you complete customization of your zoning and should be used if you are familiar with zoning and zoning practices. If you select this option, when you click **Next**, the wizard closes and the Advanced Management application (Web Tools) opens. For specific information about using Web Tools for zoning, refer to the *Web Tools Administrator's Guide*.

2 Zoning selection options

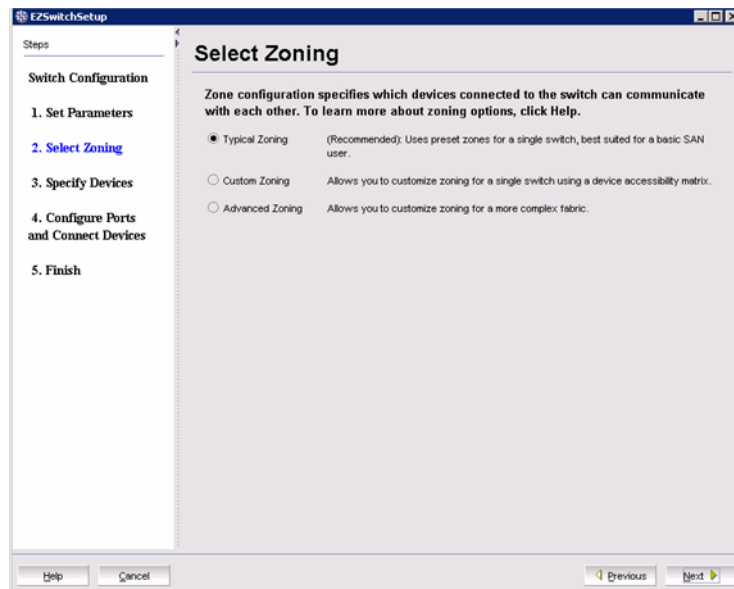


FIGURE 14 Select Zoning wizard window

Typical Zoning is the default and the following procedure directs you to select **Typical Zoning**. When you select **Typical Zoning**, the wizard automatically configures the zones for you and shows you how to connect the devices to the switch. You can change the zoning configuration later, as described in “Zoning management” on page 43.

Configuring zones on the switch

1. On the Select Zoning wizard, select **Typical Zoning**.
If you want to use one of the other zone settings, refer to “Editing the zoning configuration” on page 45 for instructions on configuring Custom Zoning; refer to the *Web Tools Administrator’s Guide* for information on Advanced Zoning.
2. Click **Next**.
The **Specify Devices** window is displayed.

Specifying devices

On the **Specify Devices** window (Figure 15), complete the following steps.

1. Enter the number of HBA connections that you want to attach to the switch. Be sure to include existing HBA connections, and any additional HBA connections you plan to make in the current setup session. You can change this setting later if you want to add or remove HBA connections.
2. Enter the number of storage connections you want to attach to the switch. Be sure to include existing storage connections, and any additional storage connections you plan to make in the current setup session. You can change this setting later if you want to add or remove storage connections.

EZSwitchSetup uses these values to verify that all your current and planned devices are properly connected for the zoning scheme that will be created. Note that Typical Zoning ensures that every connected host device will be able to communicate with every connected storage device.

3. Click **Next**. The **Configure Ports and Connect Devices** window is displayed (Figure 16 on page 22).



FIGURE 15 Specify Devices window

Connecting devices and completing the setup

The final step in the switch configuration is to connect your devices to the switch in a way that matches a configured array of connection reservations (HBA or storage) on the ports. In the interactive switch graphic that is displayed on the **Configure Ports and Connect Devices** window, these connection reservations are shown by the letters **H** or **S** against a blue or green background on the ports, and will automatically match the types of the devices that have already been connected, with existing connections shown as green lines that connect the ports with icons representing the devices. If you have indicated on the previous screen that you intend to connect more devices, connection reservations of matching types will also have been made for your planned devices, with dotted blue lines to show you where these devices should be attached. Finally, as you attach the new devices, the dotted blue lines will change to solid green (for correctly attached devices) or to solid red (when devices are attached at ports with non-matching reservations). When a red line appears, the mismatch may be corrected either by moving the device to a different port as suggested by a dotted blue line for a device of that type, or by changing the reservation type of the port where the device is currently connected by clicking on the port icon. In either case, the solid red and dotted blue lines should both disappear, and be replaced by a single solid green line to indicate the correct connection. For connected devices, you can also view details of the device by pausing on the host or storage icon.

The **Next** button for this screen is not enabled until all non-matching or missing connection issues (indicated by solid red and dotted blue lines) have been resolved.

2 Connecting devices and completing the setup

If you change your mind about the number of devices you want to connect, you can click the **Previous** button and adjust the values you have selected in the device type lists on the **Specify Devices** window. You must always select at least as many devices of each type as have been connected, and you must also connect as many devices of each type as you have selected. On the **Configure Ports and Connect Devices** window, you can also pre-reserve some additional currently unoccupied ports for future HBA or storage connections. These additional reservations are also reflected in the zoning scheme, and are shown on the **Display Devices** window in the EZManager application to remind you where these additional devices can be connected. The default reservation type is HBA.

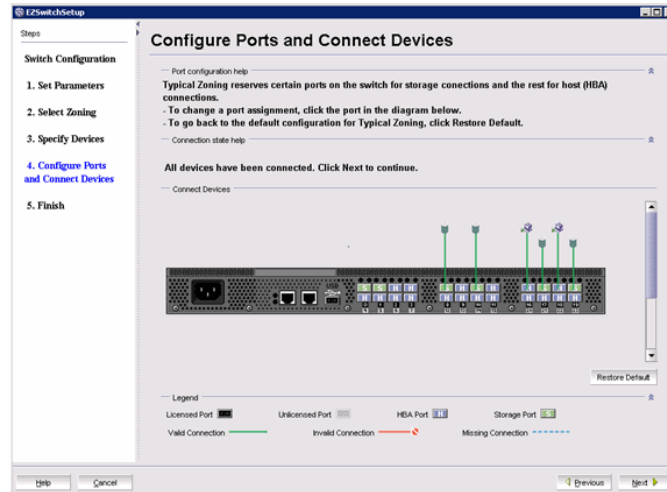
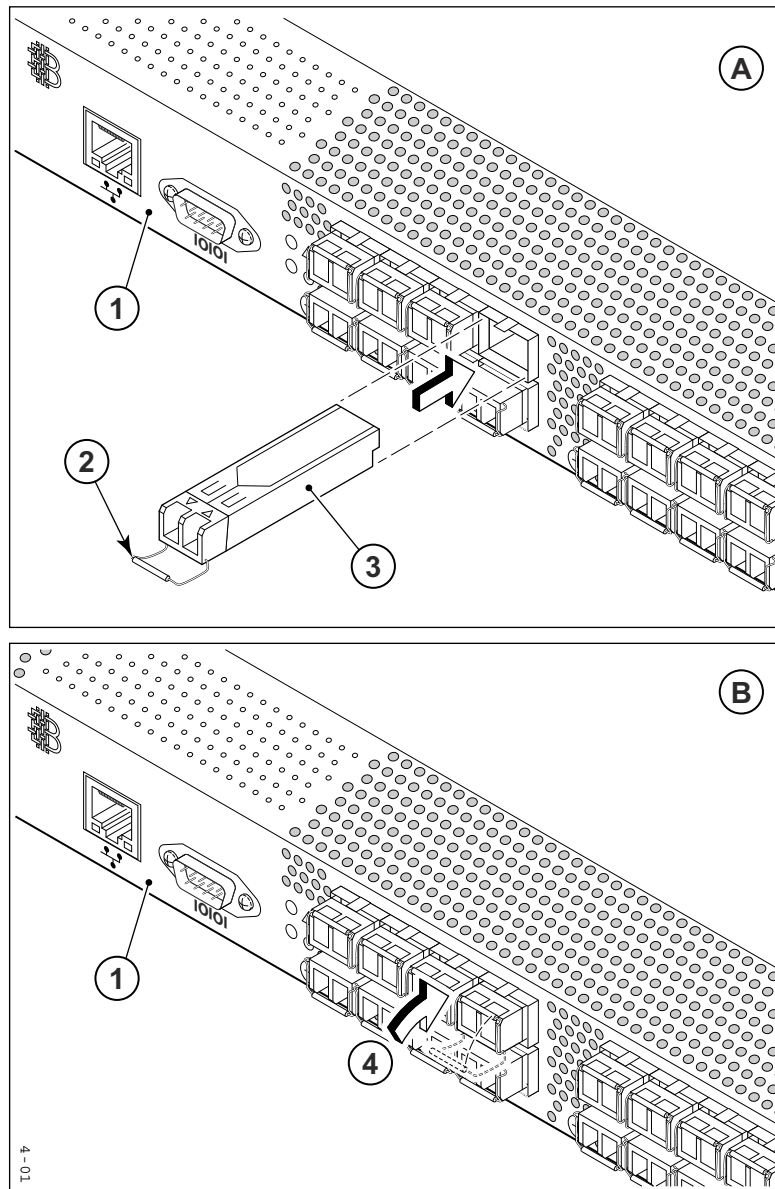


FIGURE 16 Configure Ports and Connect Devices window

When you click **Next** on the **Configure Ports and Connect Devices** window, if Typical Zoning is used, the final set of connection reservations shown on the screen is translated internally into a zoning scheme that ensures that every correctly connected host device can communicate separately with every correctly connected storage device. If this is not what you want (for example, if you want to partition your devices so that each HBA can communicate with some storage devices but not others), then you should re-run the Setup wizard and select **Custom Zoning** or **Advanced Zoning** instead of **Typical Zoning**.

Use the following procedure to make the physical connections.

1. Install the small form-factor pluggable (SFP) transceivers in the Fibre Channel ports shown onscreen. (See [Figure 17](#) on page 23.)
 - a. Remove any protector plugs from the SFP transceivers to be used.
 - b. Position and insert each SFP transceiver as required (right side up in the top row of ports and upside down in the bottom row of ports) until it is firmly seated.
 - c. Close the latching bale.



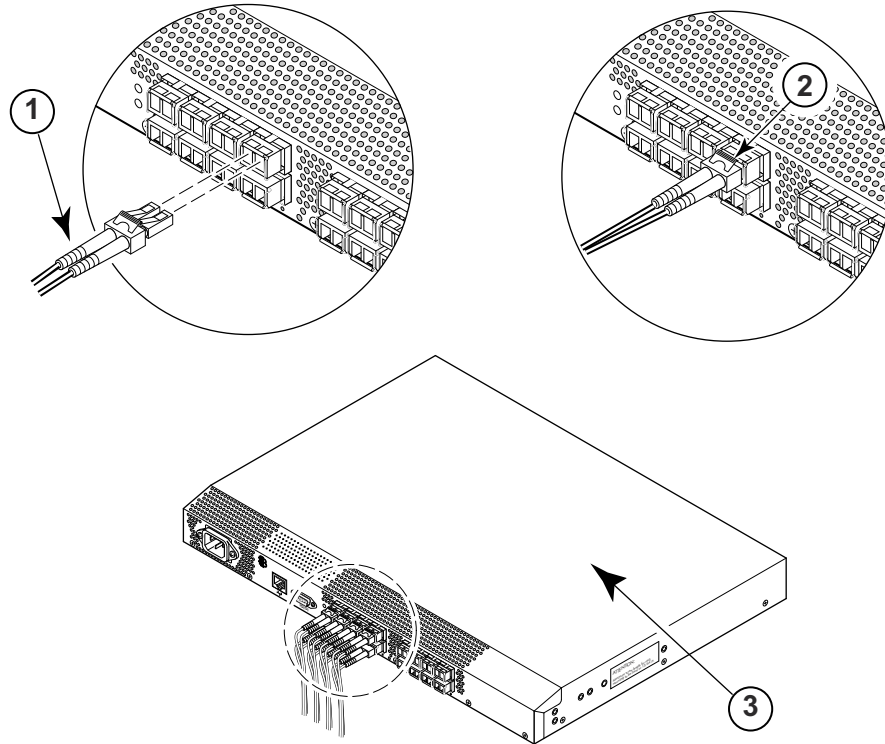
- | | | | |
|---|----------------------------|---|---|
| 1 | Brocade switch | 3 | Position SFP and insert until firmly seated |
| 2 | Open the SFP latching bale | 4 | Close the latching bale |

FIGURE 17 Installing SFPs

2. Connect Fibre Channel cables from the switch to your host and storage devices. Ensure that the physical connections are exactly as indicated on the **Configure Ports and Connect Devices** window.
 - a. Remove any plastic protectors from the Fibre Channel cable ends, and position the cable connector so that it is oriented correctly.
 - b. Insert the cable connector into the SFP until it is firmly seated and the latching mechanism clicks, as shown in [Figure 18](#) on page 24.

2 Connecting devices and completing the setup

The **Configure Ports and Connect Devices** window provides visual feedback as you cable the switch. A green line indicates that the connection is correct, a red line indicates an invalid connection, and a blue line indicates a missing connection.



- 1 Position the Fibre Channel cable
- 2 Install the Fibre Channel cable
- 3 Brocade switch

FIGURE 18 Installing Fibre Channel cable into an SFP transceiver

3. Verify that the connections displayed on the **Configure Ports and Connect Devices** window are all green.
4. Click **Next**.

The **EZSwitchSetup Configuration Finish** window is displayed ([Figure 19](#)).

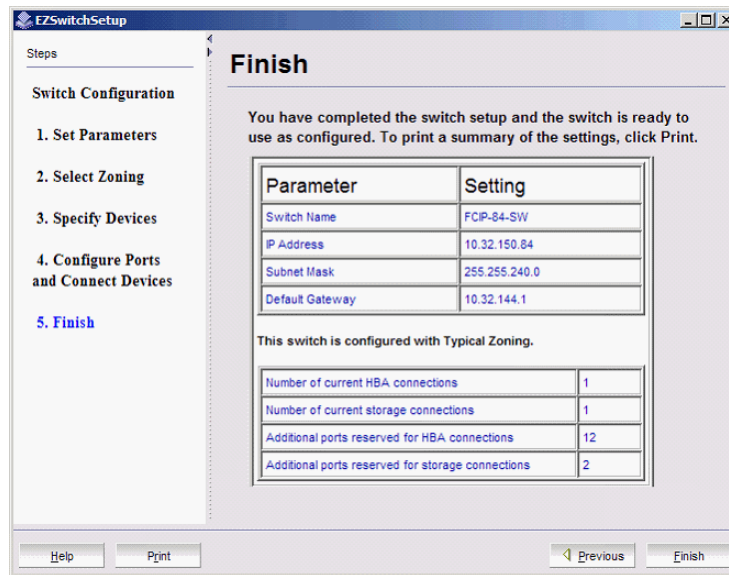


FIGURE 19 EZSwitchSetup Configuration Finish window

5. Click **Finish** to complete the switch setup.

You are now ready to configure the storage component of the SAN using the documentation that came with the storage server.

If you want to monitor the switch, then you need to launch the EZSwitchSetup Switch Manager. Refer to [Chapter 3, "Managing Your Switch"](#) for instructions on using this interface.

2 Connecting devices and completing the setup

Managing Your Switch

In this chapter

- [Switch Manager overview](#) 27
- [Launching the EZSwitchSetup Switch Manager](#) 30
- [Viewing switch information](#) 32
- [Changing switch information](#) 37
- [Adding a port license](#) 38
- [Managing devices](#) 38
- [Zoning management](#) 43
- [Accessing Web Tools for advanced management](#) 48

Switch Manager overview

The EZSwitchSetup Switch Manager is a simplified version of Web Tools. It streamlines switch management by providing an easy-to-use subset of basic switch management tasks.

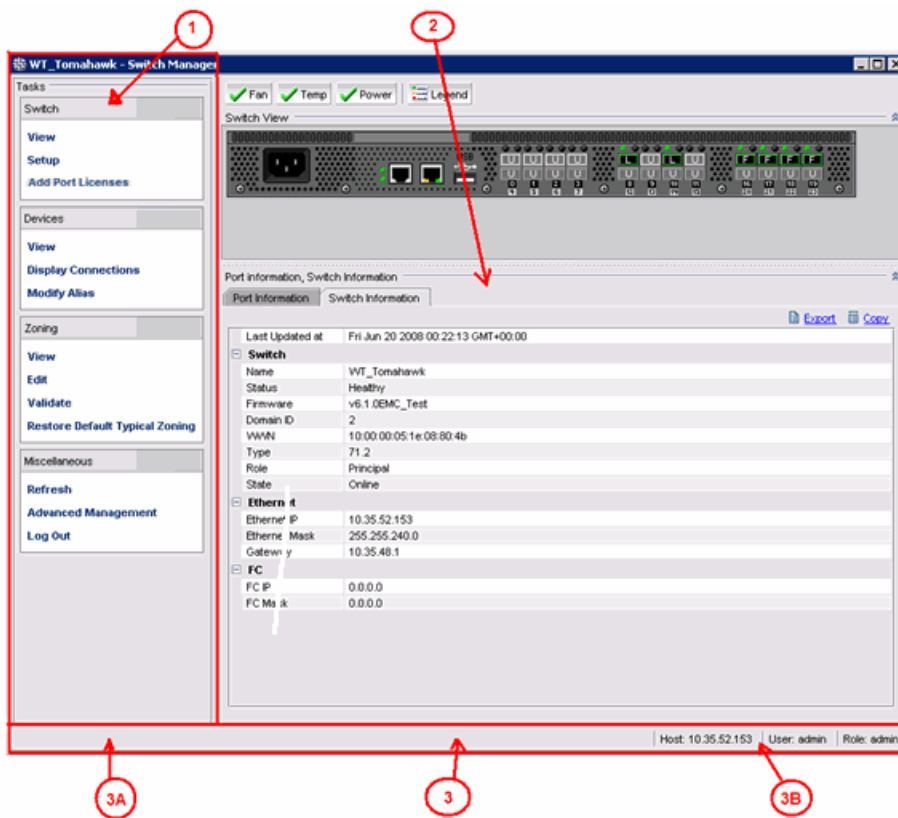
You can use the EZSwitchSetup Switch Manager to do the following:

- Monitor the switch, including port and field-replacable unit (FRU) status
- Manage custom zoning
- Perform basic switch configurations
- Add Ports On Demand (POD)

The Switch Manager works for a single-switch fabric only. It displays only the switch and associated tasks, without fabric information.

[Figure 20](#) on page 28 shows an example of the initial Switch Manager screen. The appearance may vary depending on the switch model. The following sections describe the components of the screen.

3 Switch Manager overview



- 1 Task panel
- 2 Content Page
- 3 Status bar
- 3A Progress indicator
- 3B User name, IP address, and user role

FIGURE 20 EZSwitchSetup Switch Manager components

Task panel

The left pane of the Switch Manager is the task panel, which displays all tasks. The tasks are categorized by Switch, Devices, Zoning, and Miscellaneous.

The **Switch** tasks enable you to view the port information or switch information, enter into switch setup, or add enable port licenses.

The **Devices** tasks enable you to view the devices attached to the switch, display the device connections, and modify a device alias.

The **Zoning** tasks enable you to view the zoning on the device, edit the zoning, validate the zoning, or restore the default fixed zoning.

The **Miscellaneous** tasks include refreshing the onscreen data, advanced management of the switch, and logging out.

The switch's **Port Information** page is shown by default when Switch Manager launches.

Switch View

The **Switch View** displays the switch and status buttons across the top. The status buttons enable access to each element listed.

Click the refresh icon under the **Miscellaneous Tasks** to update the information on the screen with the current switch information. The display refreshes automatically each time you click a different task in the task panel.

Content page

When you click an item in the task panel, the content for that item displays in the right pane of the window. A content page may contain tabs, display information, launch a wizard, or display a dialog. [Figure 21](#) shows the information displayed from the **Port Information** tab, and shows a shortcut menu that provides copy and export functions.

| Number | Name | State | Type | Health | Licensed |
|--------|------|-----------|--------|-------------|----------|
| 0 | | No_Sync | U-Port | Unmonitored | Yes |
| 1 | | No_Module | U-Port | Unmonitored | Yes |
| 2 | | No_Light | U-Port | Unmonitored | Yes |
| 3 | | Online | F-Port | Unmonitored | Yes |
| 4 | | Online | L-Port | Unmonitored | Yes |
| 5 | | No_Module | U-Port | Unmonitored | Yes |
| 6 | | Online | L-Port | Unmonitored | Yes |
| 7 | | No_Light | U-Port | Unmonitored | Yes |
| 8 | | Online | F-Port | Unmonitored | Yes |
| 9 | | No_Module | U-Port | Unmonitored | Yes |
| 10 | | No_Module | U-Port | Unmonitored | Yes |
| 11 | | No_Module | U-Port | Unmonitored | Yes |
| 12 | | No_Module | U-Port | Unmonitored | Yes |
| 13 | | No_Module | U-Port | Unmonitored | Yes |
| 14 | | No_Module | U-Port | Unmonitored | Yes |
| 15 | | No_Module | U-Port | Unmonitored | Yes |

FIGURE 21 Content page, Port Information tab

NOTE

You must accept the Brocade Certificate at the beginning of the login to EZSwitch Manager to enable the functionality of Export and Copy.

- Click **Export Row** or **Export Table** to save the information to a tab-delimited text file.
- Click **Copy 'text'**, **Copy Row** or **Copy Table** to copy the contents of the table in tab-delimited text format that can be pasted into a spreadsheet. **Copy 'text'** copies only the contents of the cell where the mouse is clicked, **Copy Row** copies the entire row, and **Copy Table** copies the entire table.
- Click **Search** to search for a specific text string in the table.

Type a text string in the box that displays on the table, and press **Enter**. This is an incremental search and allows 24 maximum characters including the wildcard characters: question mark (?) and asterisk (*). The first row containing the text string is highlighted. To find the next match, press the down arrow. To find the previous match, press the up arrow.

If the text is not found in the table, the text turns red.

3 Launching the EZSwitchSetup Switch Manager

Status bar

The status bar, at the bottom of the window, is divided into the following sections:

- Progress indicator
This is on the left side of the status bar. When Switch Manager is sending data to or retrieving data from the switch, this indicator is animated.
- User name and IP address
The right side of the status bar displays your user name, role, and the IP address of the switch to which you are connected.

Launching the EZSwitchSetup Switch Manager

You can launch Switch Manager on any workstation with a compatible Web browser installed. For a list of compatible web browsers, see [Table 1](#) on page 2. Switch Manager also supports the HTTPS protocol, if that protocol is enabled for the switch. For more information on enabling the HTTPS protocol on your switch, see the *Fabric OS Administrator's Guide*.

1. Launch a Web browser and type the IP address of the switch in the **Address** field:

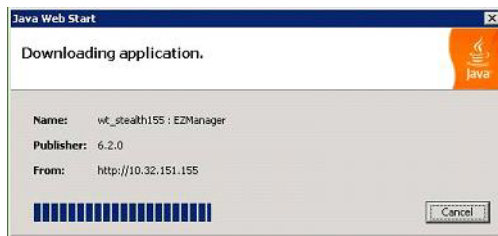
```
http://10.77.77.77
```

or

```
https://10.77.77.77
```

2. Press **Enter**.

A **Java Web Start** dialog box is displayed, showing the download progress.

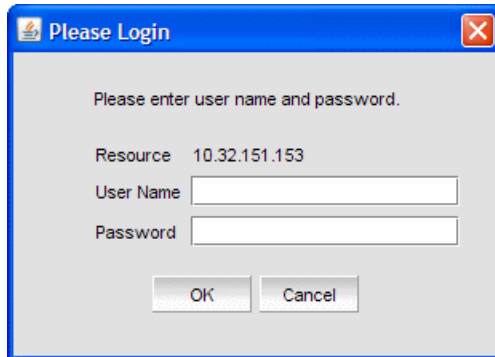


If this is the first time the application has been started, a **Warning - Security** dialog box is also displayed.



3. If the **Warning - Security** dialog box is displayed, select **Always trust content from this publisher** and click **Run**.

The Login dialog box is displayed. If there are other applications open when EZSwitchSetup manager launches, the login dialog may be hidden. To view the login dialog, press Alt+Tab.



Logging in

When you log in, the EZSwitchSetup Switch Manager interface is launched if the switch is set up and configured with EZSwitchSetup. If not, Web Tools is launched.

Switch Manager supports only single-switch fabrics. If your switch is connected to another switch, Switch Manager displays a message and exits. You must disconnect the switch from all other switches and relaunch EZSwitchSetup Switch Manager.

1. Type your user name.
2. Type the password.
3. Click **OK**.

A Switch Manager session is established, and the **Switch View** is displayed ([Figure 22](#)).

Switch Manager sessions

A *session* is defined as the connection between the Switch Manager client and its managed switch. A session is established when you log in to a switch through EZSwitchSetup. A session remains in effect until one of the following happens:

- You log out.
- The session times out due to inactivity.

Logging out

You can end your Switch Manager session either by selecting **Log Out** in the **Miscellaneous** area of the task panel, or by closing the browser window. All windows belonging to the session are invalidated (after a short delay they become greyed out and unusable, but you must close them manually), and the session is terminated.

Viewing switch information

Using EZSwitchSetup Switch Manager, you can view the following:

- Switch status, including port status.
- Temperature, fan, and power supply status.
- HBA and storage connections to the switch.
- Information about devices connected to the switch.
- Accessibility between HBAs and storage.

1. Click **View** in the task panel under **Switch**.
2. Click the **Switch Information** tab to display the Switch View.

Figure 22 displays the Switch View for a Brocade 6520 switch.

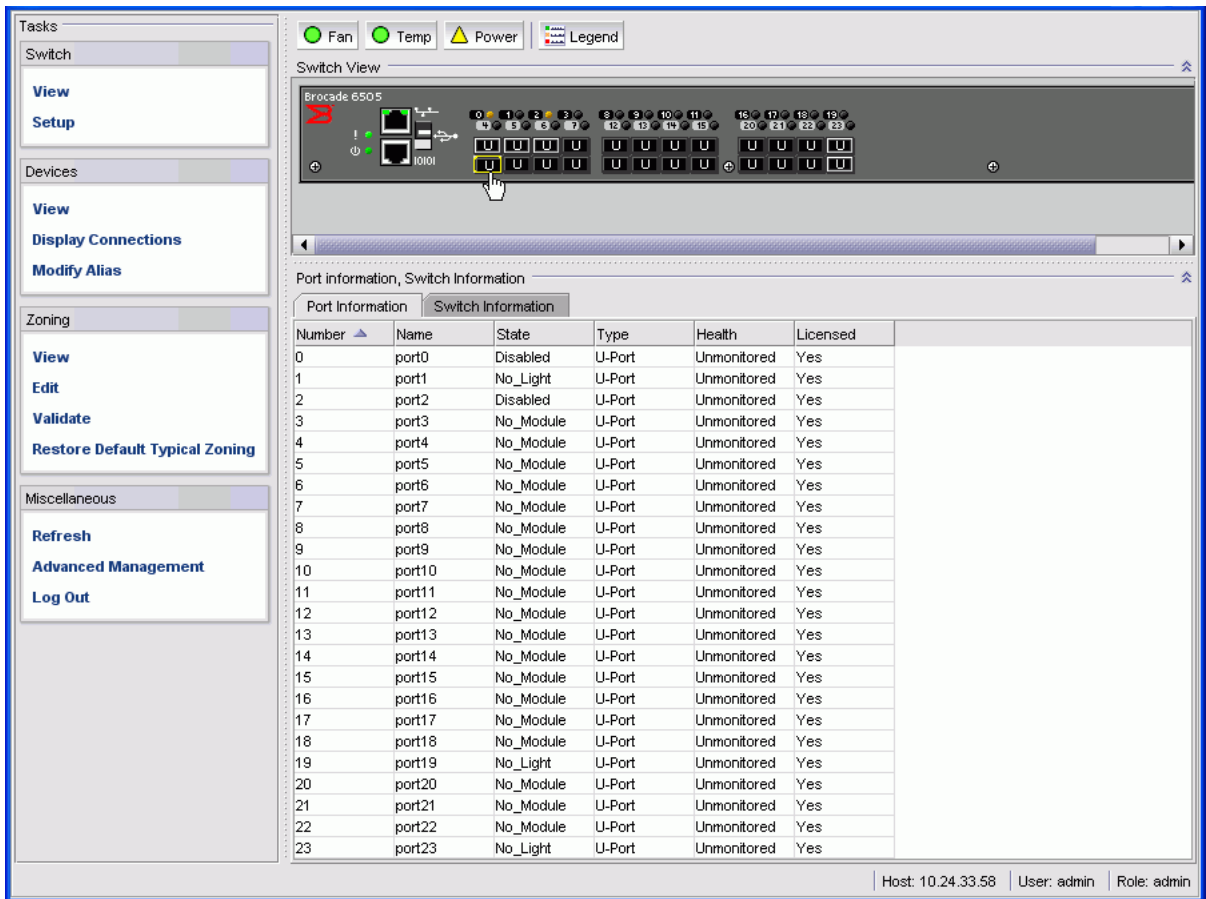


FIGURE 22 Graphical view of switch

The Switch View is a real-time view of switch and port status. The display is updated approximately once every 15 seconds. From the display you can determine the following:

- Fan status
- Temperature status
- Power supply status

- Status and type of each port

The Fan, Temp, and Power buttons indicate overall status as follows:

- Green circle (healthy)
- Yellow triangle (marginal)
- Red diamond (critical)
- Black and yellow striped square (unmonitored)

Viewing the status indicator legend

To view the legend for the status indicators, click the **Legend** button.

The legend view opens. [Figure 23](#) shows the status indicators that can appear on the fan, temperature, or power supply button.

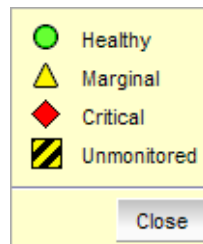
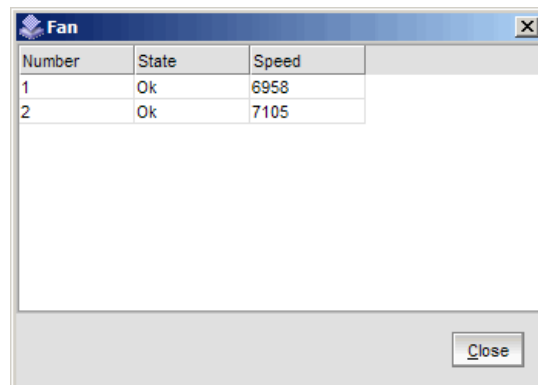


FIGURE 23 Fan, temperature, and power supply legend

Viewing fan, temperature, and power supply status

To view fan, temperature, or power supply status, click the **Fan**, **Temp**, or **Power** button.

[Figure 24](#) shows the **Fan** view. The fan view shows the number of Fans and their operating state.

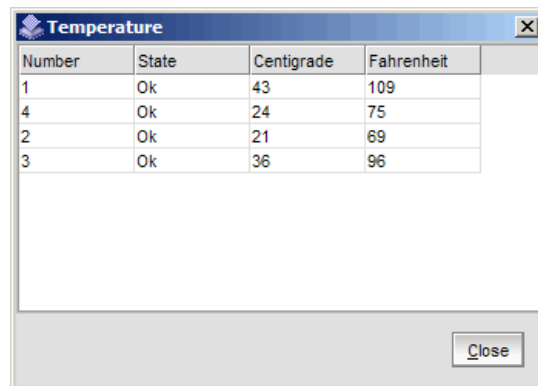
A window titled 'Fan' with a blue header bar and a close button (X) in the top right corner. It contains a table with three columns: 'Number', 'State', and 'Speed'. The table has two rows of data. Below the table is a 'Close' button.

| Number | State | Speed |
|--------|-------|-------|
| 1 | Ok | 6958 |
| 2 | Ok | 7105 |

FIGURE 24 Fan status

3 Viewing switch information

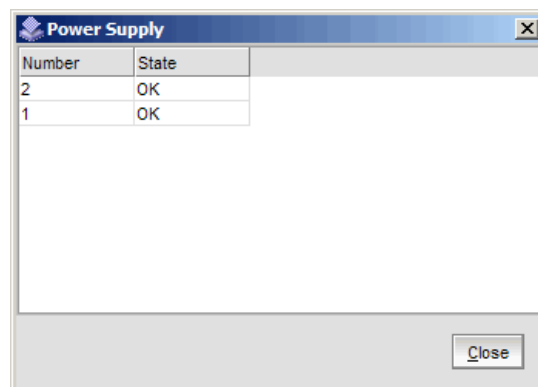
Figure 25 shows the **Temperature** view. The temperature view displays the number of temperature sensors, their status, and the temperature in both Celsius and Fahrenheit.



| Number | State | Centigrade | Fahrenheit |
|--------|-------|------------|------------|
| 1 | Ok | 43 | 109 |
| 4 | Ok | 24 | 75 |
| 2 | Ok | 21 | 69 |
| 3 | Ok | 36 | 96 |

FIGURE 25 Temperature status

Figure 26 shows the **Power Supply** view. The power supply view displays the number of power supplies in the switch and their status.



| Number | State |
|--------|-------|
| 2 | OK |
| 1 | OK |

FIGURE 26 Power supply status

Port status

The Switch View displays port graphics with blinking LEDs, simulating the physical appearance of the ports. One or two LEDs are associated with each port, depending on the switch model: one of the LEDs indicates port status; the other indicates port speed. For LED information, see the hardware documentation for the switch you are viewing.

NOTE

All of the 8G and 16G Brocade switches do not have port speed LEDs, but only port status LEDs.

The background color of the port icon indicates the port status, as follows:

- Green (healthy)
- Yellow (marginal)
- Red (critical)
- Gray (unmonitored)

If the entire port icon is blue, the port is buffer-limited. (A port is operating in *buffer-limited* mode when the number of buffers allocated to the port is less than the number of buffers needed by the port to utilize the port at full bandwidth.)

If a group of port icons is gray (unavailable), those ports are not licensed.

Figure 27 shows port icons and associated LEDs from a Brocade 6520 switch. The layout is similar for all switches, but varies according to switch type.

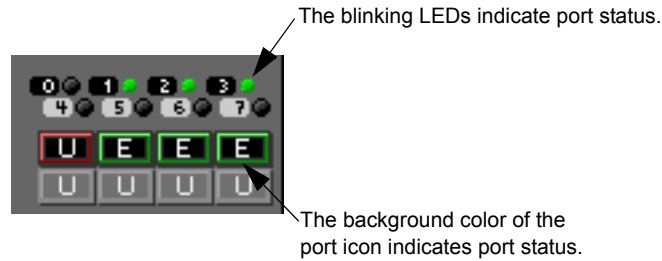


FIGURE 27 Port and LED status color-coded information in the port icon in Switch View

Hover the cursor over the port icon to view the port number, port type, and port status, as shown in Figure 28.

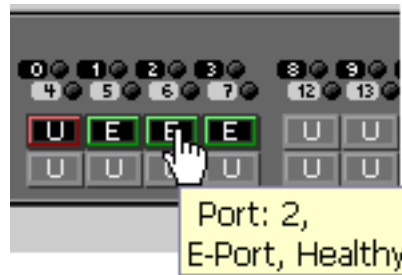


FIGURE 28 Displaying port information

Hover the cursor over the LEDs to view details about the port state, as shown in Figure 29.

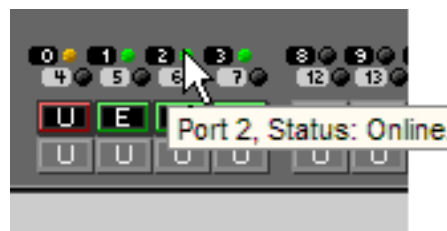


FIGURE 29 Port State LEDs

Figure 30 shows the port icon toggling effect. When you hover the cursor over a port icon, the icon is highlighted with a yellow border.

3 Viewing switch information



FIGURE 30 Port icon toggling

Switch Information tab

The **Switch Information** tab is the default information tab under **Port Information, Switch Information** on the Switch View (Figure 31 on page 36). Detailed switch information is displayed as a list of properties, which may be viewed, copied, or exported by category.

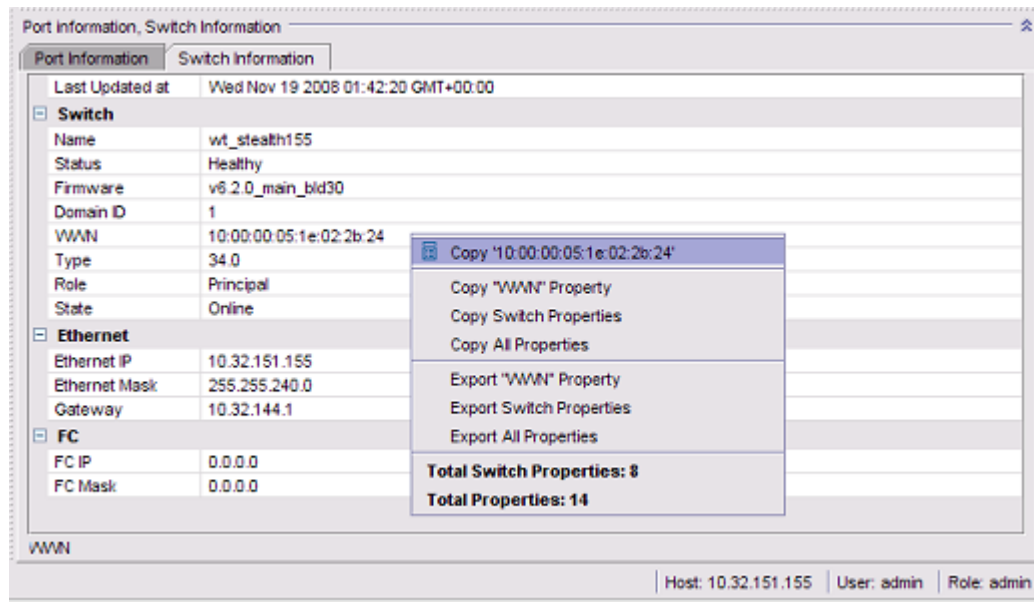


FIGURE 31 Switch Information tab

Port Information tab

Select the **Port Information** tab to view the port information (Figure 32). Detailed port information is displayed as a categorized list of properties, which may be viewed, copied, or exported by category.

| Number | Name | State | Type | Health | Licensed |
|--------|------|-----------|--------|-------------|----------|
| 0 | | No_Sync | U-Port | Unmonitored | Yes |
| 1 | | No_Module | U-Port | Unmonitored | Yes |
| 2 | | No_Light | U-Port | Unmonitored | Yes |
| 3 | | Online | F-Port | Unmonitored | Yes |
| 4 | | Online | L-Port | Unmonitored | Yes |
| 5 | | No_Module | U-Port | Unmonitored | Yes |
| 6 | | Online | L-Port | Unmonitored | Yes |
| 7 | | No_Light | U-Port | Unmonitored | Yes |
| 8 | | Online | F-Port | Unmonitored | Yes |
| 9 | | No_Module | U-Port | Unmonitored | Yes |
| 10 | | No_Module | U-Port | Unmonitored | Yes |
| 11 | | No_Module | U-Port | Unmonitored | Yes |
| 12 | | No_Module | U-Port | Unmonitored | Yes |
| 13 | | No_Module | U-Port | Unmonitored | Yes |
| 14 | | No_Module | U-Port | Unmonitored | Yes |
| 15 | | No_Module | U-Port | Unmonitored | Yes |

FIGURE 32 Port Information tab

The information page displays the following for each port:

- Port number.
- Port name.
- State of the port.
- Port type.
- Status (health) of the port.
- Indication of whether the port is licensed.

Changing switch information

From the Switch Manager, you can relaunch the EZSwitchSetup Switch Configuration to perform the following tasks:

- Change the switch name.
- Change the switch time.
- Change the admin password.
- Change the zoning configuration type.

This is the same wizard that was launched the first time you set up the switch.

1. Click **Setup** under Switch in the task panel.

The Switch Configuration launches.

2. Follow the instructions in the wizard.

You can optionally change the switch name, switch time, and admin password. When prompted, you must select a zoning configuration.

Adding a port license

EZSwitchSetup Switch Manager allows you to enable Ports On Demand (POD) if you have a license available. For the Brocade 7800, you can add the 7800 Upgrade License to activate ports 4–25. This option is not available if all ports are already licensed.

1. Click **Add Port License** under Switch in the task panel.

A dialog box is displayed.

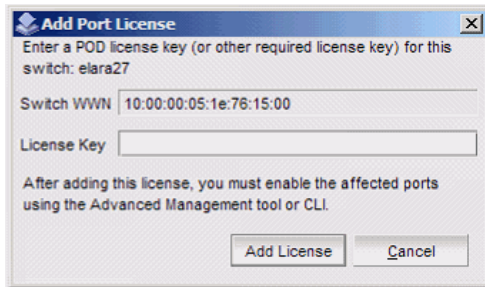


FIGURE 33 Add Port License dialog box

2. Enter the license key to add the additional ports.
3. Click **Add License**.

The ports can now be enabled.

4. Enable the ports using one of the following methods:

- Reboot or power cycle the switch

When the switch is rebooted, the newly licensed ports come up as enabled.

- Use the Advanced Management tool

See [“Accessing Web Tools for advanced management”](#) on page 48 for information on launching Web Tools.

- Use the command line interface

See the *Fabric OS Administrator’s Guide* for information on using the command line interface.

Managing devices

The **Devices** page displays the following information:

- Whether the device is an HBA, an HBA plus storage, or a storage only device.
- Device alias name, if one exists.
- Vendor name.
- Device name.
- WWN of the device port.
- Switch and port to which the device is connected.

1. Click **View** under **Devices** in the task panel to display a table of information for all of the connected devices (Figure 34).

The entries in the table are based on the device WWNs, so a single physical device can have more than one entry in the table. The device information can be viewed, copied, or exported.

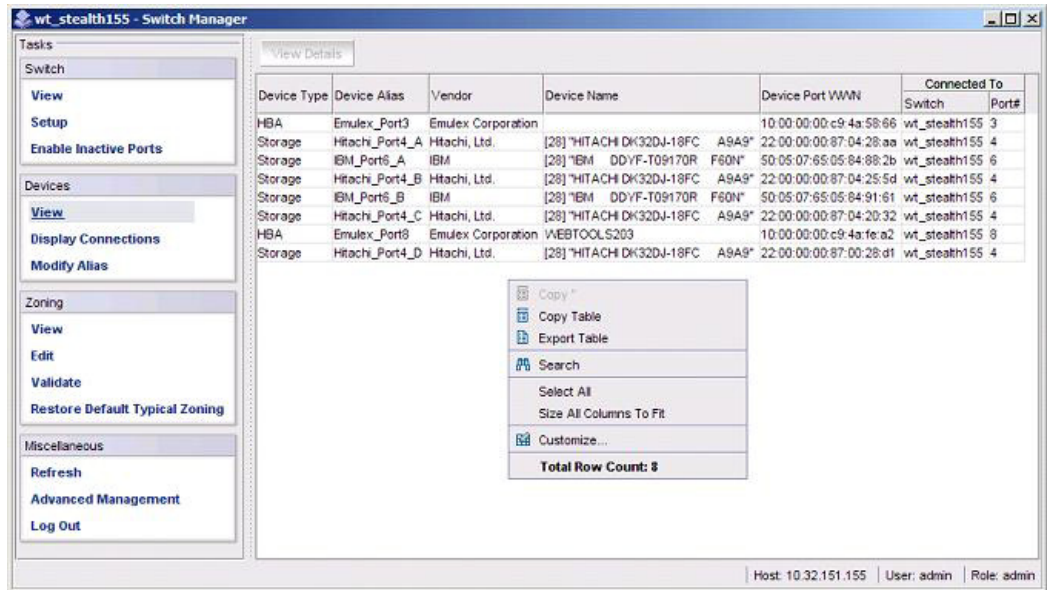


FIGURE 34 Devices view

The table can be sorted by device type, port number, or vendor. You can refine sorting by using the Ctrl key while selecting column headers. For example, if hold down the Ctrl key and select Device Type and Port# shows port numbers associated with device types (Figure 35).

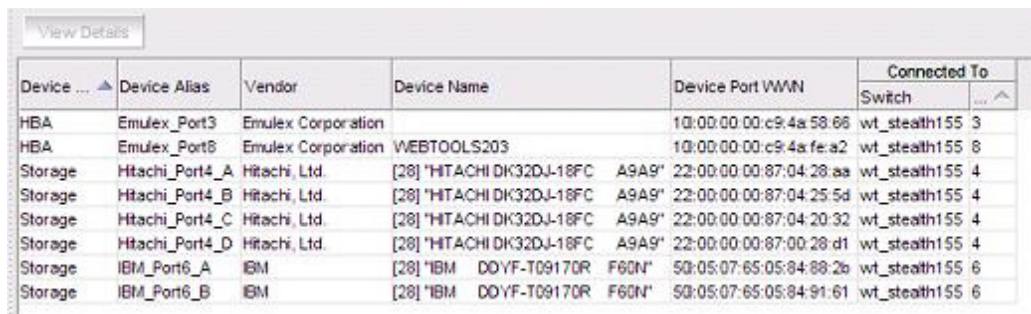


FIGURE 35 Device table sorting example

2. Select a row in the table to display additional information about the device.
3. Click **View Details** located at the top of the page. Figure 36 shows a **Device Details** example.

3 Managing devices

The screenshot shows a 'View Details' window with a table of device information. The table has columns for Device, Device Alias, Vendor, Device Name, Device Port WWN, and Connected To. Below the table is a 'Device Details' pop-up window showing specific information for the selected device.

| Device ... | Device Alias | Vendor | Device Name | Device Port WWN | Connected To |
|------------|-----------------|--------------------|---------------------------------|-------------------------|----------------|
| HBA | Emulex_Port3 | Emulex Corporation | WEBTOOLS203 | 10:00:00:00:c9:4a:58:66 | wt_steath155 3 |
| HBA | Emulex_Port8 | Emulex Corporation | WEBTOOLS203 | 10:00:00:00:c9:4a:fe:a2 | wt_steath155 8 |
| Storage | Hitachi_Port4_A | Hitachi, Ltd. | [28] "HITACHI DK32DJ-18FC A9A9" | 22:00:00:00:87:04:28:aa | wt_steath155 4 |
| Storage | Hitachi_Port4_B | Hitachi, Ltd. | [28] "HITACHI DK32DJ-18FC A9A9" | 22:00:00:00:87:04:25:5d | wt_steath155 4 |
| Storage | Hitachi_Port4_C | Hitachi, Ltd. | [28] "HITACHI DK32DJ-18FC A9A9" | 22:00:00:00:87:04:20:32 | wt_steath155 4 |
| Storage | Hitachi_Port4_D | Hitachi, Ltd. | [28] "HITACHI DK32DJ-18FC A9A9" | 22:00:00:00:87:00:28:d1 | wt_steath155 4 |
| Storage | IBM_Port6_A | IBM | [28] "IBM DDYF-T09170R F60N" | 50:05:07:65:05:84:88:2b | wt_steath155 6 |
| Storage | IBM_Port6_B | IBM | [28] "IBM DDYF-T09170R F60N" | 50:05:07:65:05:84:91:61 | wt_steath155 6 |

| Device Details | |
|---------------------|------------------------------|
| Vendor | |
| Port WWN | 50:05:07:65:05:84:91:61 |
| Port Type | NL |
| Device Type | Physical Storage |
| Transport Type | FCP |
| Node WWN | 50:05:07:65:05:04:91:61 |
| Device Name | [28] "IBM DDYF-T09170R F60N" |
| Class of Service | 3 |
| Fabric Port WWN | 20:06:00:05:1e:02:2b:24 |
| Connected To | |
| Switch | wt_steath155 |
| Domain ID | 1 |
| Port ID | 0106ef |
| Slot/Port | 6 |

FIGURE 36 Detailed Device information

Device connections

EZSwitchSetup Switch Manager displays a graphical representation of the switch and the devices that are connected to each port.

Click **Display Connections** under Devices in the task panel.

A graphical representation of the switch and connections displays, as shown in [Figure 37](#). This is a real-time display; the connections are updated automatically as you connect and disconnect HBAs and storage.

If Typical Zoning is set on the switch, Switch Manager validates the connections and displays whether the connections are valid or invalid. Switch Manager also shows what currently unoccupied ports are available for host and storage connections.

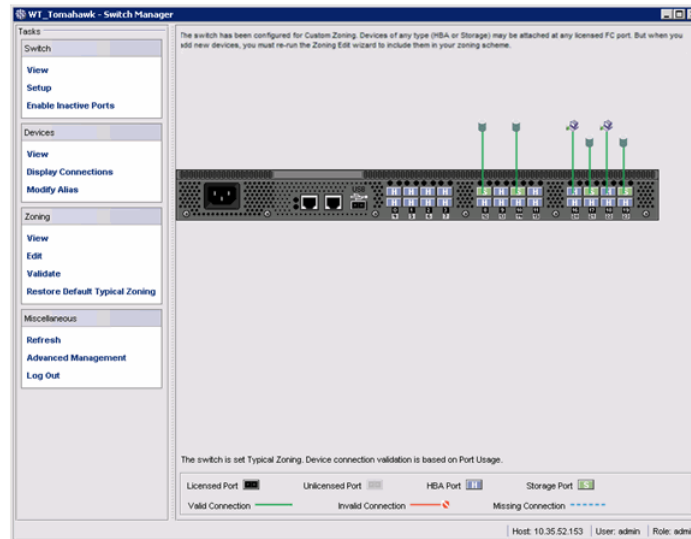


FIGURE 37 Display Connections window

Assigning and renaming device aliases

Every device has a device name and an alias name. Alias names make it easier to reference the devices. Alias names are displayed in the zone access map on the **Zoning** page. You can assign or rename the alias names using the following procedure.

1. Select **Modify Alias** under **Devices** in the task panel.

The **Define Device Aliases** wizard is displayed (Figure 38). The first time the **Define Device Aliases** wizard is started, the **New Alias** column is pre-populated with default aliases. You can click **OK** to accept the default aliases, or click **Cancel** if you do not want to assign aliases. Note that if an alias is not assigned, the devices are identified only by WWN. A good alias name makes it much easier to identify devices.

If you want to edit the alias, go on to step 2.

3 Managing devices

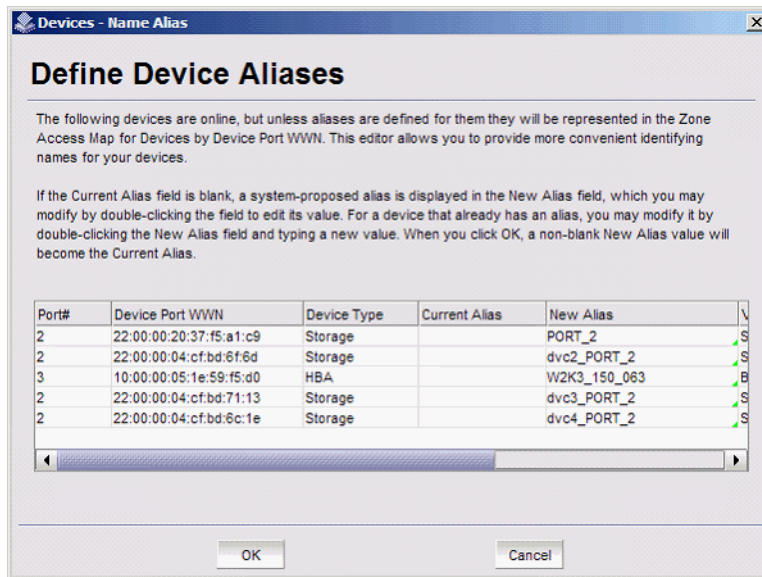


FIGURE 38 Define Device Aliases wizard window

2. Double-click a field in the **New Alias** column to edit that alias.
3. Click **OK** when you are done.

A “Zone commit succeeded” message is displayed. This message confirms that the device alias changes have been saved to the zoning database. The wizard also prompts you to delete the aliases of any offline devices. Follow the instructions in the wizard.

The next time you select **Modify Alias**, the **Current Alias** column is populated with the **New Alias** names (Figure 39).

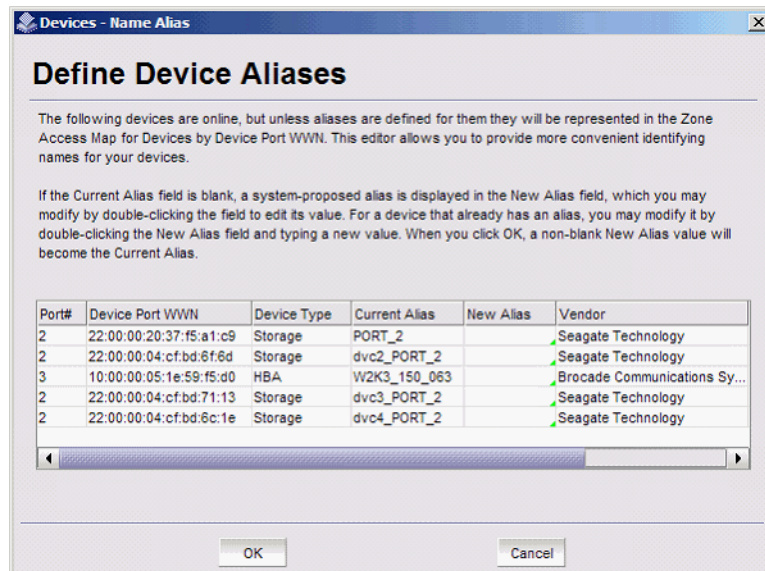


FIGURE 39 Device aliases moved under Current Aliases

After you have defined the device aliases, the aliases are displayed under **Device Alias** when you select **View** under **Devices** (as in Figure 34). The device aliases are also displayed in the **Zone Access Map for Devices** when you select **View** under **Zoning** (Figure 40).

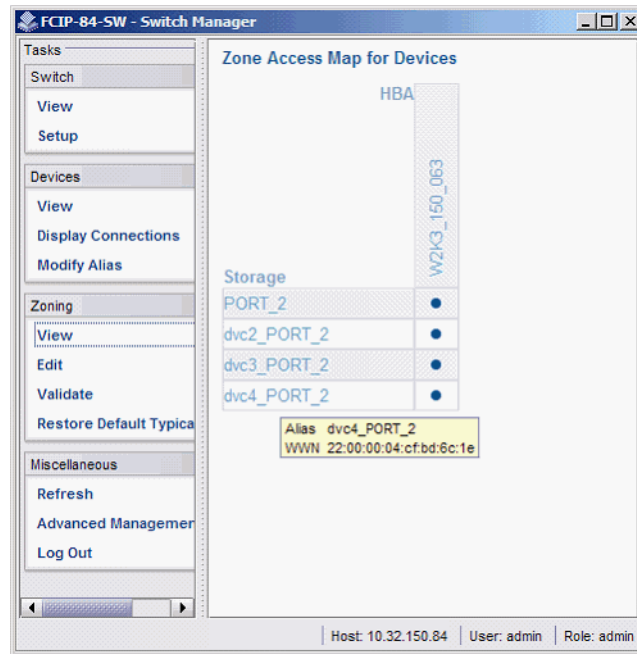


FIGURE 40 Device alias in Zone Access Map

Zoning management

Zoning enables you to partition your fabric into logical groups of devices that can access each other. For example, you can partition your fabric into two zones, *winzone* and *unixzone*, so that your Windows servers and storage do not interact with your UNIX servers and storage.

Zones can be configured dynamically. They can vary in size, depending on the number of fabric-connected devices, and devices can belong to more than one zone. Because zone members can access only other members of the same zone, a device not included in a zone is not available to members of that zone.

Zone members may be specified by fabric location (domain, port index) *only*, or by device name (node name or port WWN). Zones whose members are specified by fabric location are port-based, and zones whose members are directly specified by device WWN are device-based. In port-based zoning, all devices that are connected to ports that are in the same zone can communicate with each other, and a device can join a zone simply by being connected to a member port. In device-based zoning, devices are explicitly specified as members of the same zone. These devices can communicate with each other regardless of where they are located in the fabric.

3 Zoning management

EZSwitchSetup creates zones for you automatically, based on your configuration choices in Setup.

- If you chose **Typical Zoning**, a port-based zoning scheme was created. This zoning scheme creates a two member zone for every possible pairing of H and S ports connected on the **Configure Ports and Connect Devices** screen. This ensures that any host device connected to an H port is able to communicate with any storage device connected to an S port. This remains true even if you move a device, assuming you connect the device to the correct type of port (H or S).
- If you chose **Custom Zoning**, you created a device accessibility matrix during setup. The device accessibility matrix creates a device-based zoning scheme. By default, every connected host device can communicate with every connected storage device, as in typical zoning. You can use the device accessibility matrix to selectively disallow communications between certain devices, creating a device partitioning scheme that is enforced by zoning. Because custom zoning is device-based, you may freely move your devices to different ports without affecting accessibility relationships. If you add or permanently remove devices, you should reconfigure the accessibility matrix.
- If you chose **Advanced Zoning**, you were given direct access to the zoning database through Web Tools, and you created a zoning scheme of your own. EZManager can validate and display accessibility relationships based on your scheme, and it can replace your scheme with Typical Zoning or Custom Zoning. If you want to edit your scheme, you must return to Setup and chose **Advanced Management** to start Web Tools. For specific information about using Web Tools for zoning, see the *Web Tools Administrator's Guide*.

Viewing the zone access map

Click **View** under **Zoning** in the task panel to view the **Zone Access Map for Devices** (Figure 41). If you have no devices or if you have only one device, the zoning map does not display.

The HBA and storage device names displayed in the matrix are the alias names of the devices (see “[Assigning and renaming device aliases](#)” on page 41 for additional information). If no aliases are assigned, devices are identified by WWN. When aliases are assigned, you can see the WWN in a tool tip by hovering the mouse cursor over the alias.

| | PORT_18 | PORT_19 | PORT_17 | PORT_16 |
|---------------|---------|---------|---------|---------|
| Storage | | | | |
| PORT_8 | • | • | • | • |
| dev2_PORT_8 | • | • | • | • |
| dev3_PORT_8 | • | • | • | • |
| PORT_10 | • | • | • | • |
| dev4_PORT_8 | • | • | • | • |
| dev5_PORT_8 | • | • | • | • |
| dev2_PORT_10 | • | • | • | • |
| dev3_PORT_10 | • | • | • | • |
| dev4_PORT_10 | • | • | • | • |
| dev6_PORT_8 | • | • | • | • |
| PORT_19 | • | • | • | • |
| PORT_17 | • | • | • | • |
| dev7_PORT_8 | • | • | • | • |
| dev5_PORT_10 | • | • | • | • |
| dev6_PORT_10 | • | • | • | • |
| dev7_PORT_10 | • | • | • | • |
| dev8_PORT_10 | • | • | • | • |
| dev9_PORT_10 | • | • | • | • |
| dev8_PORT_8 | • | • | • | • |
| dev9_PORT_8 | • | • | • | • |
| dev10_PORT_10 | • | • | • | • |

FIGURE 41 Zone Access Map

Some HBAs and storage devices can be configured with dual initiator and target capability. Such devices are displayed as both HBA and storage devices in the matrix.

Editing the zoning configuration

You can customize which HBAs can access which storage devices by clicking **Edit** in the **Zoning** task panel. This starts a wizard that creates a new **Custom Zoning** scheme based on your device accessibility choices.

If you make any zoning changes to the default **Typical Zoning** configuration, you will be creating a **Custom Zoning** configuration to replace it. You can later restore the **Typical Zoning** configuration by clicking **Restore Default Typical Zoning** in the task panel.

1. Click **Edit** under Zoning in the task panel.

A wizard launches, briefly displaying the **Zone Access Map for Devices**.

A **Review Device Connections** screen displays device connections, over the **Zone Access Map for Devices**. Check to be sure all connected devices are present and recognized by the switch.

2. Click **Next**.

The **Define Device Aliases** screen is displayed.

3. Add or modify aliases in the **New Alias** column.

4. Click **Next**.

The **Edit HBA/Storage Accessibility Matrix** is displayed.

If no devices are connected to the switch, or if only storage devices or only HBAs are connected, then the Switch Manager displays a message and the **Edit HBA/Storage Accessibility Matrix** does not launch.

3 Zoning management

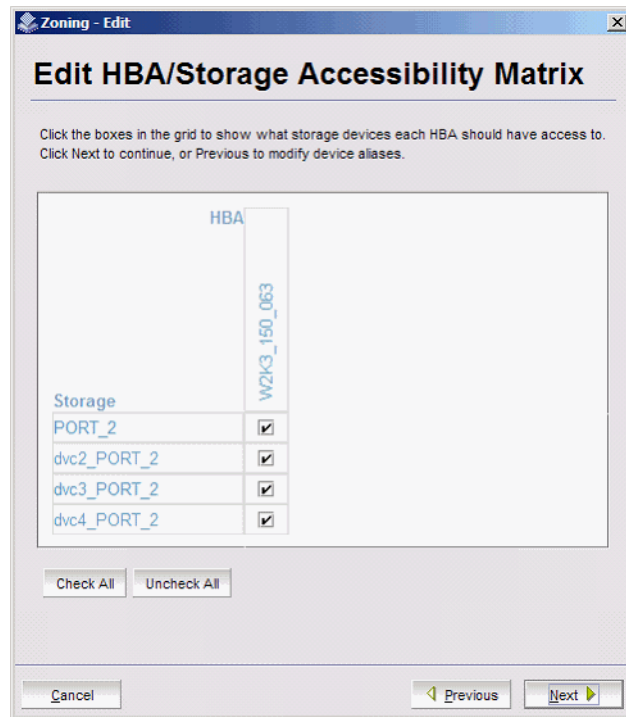


FIGURE 42 Edit HBA/Storage Accessibility Matrix window

5. Clear the check boxes selectively until you have defined the access groups and accessibility relationships you want in your zoning scheme.
6. When you are done making changes, click **Next** and the zoning **Summary and Confirmation** screen is displayed (Figure 43). Use the **Print** button if you would like a printed record of the zoning scheme.
7. Click **Finish** to create the zoning scheme. Click **Cancel** if you do not want to create this zoning scheme, and prefer to leave a previous scheme in place.

If you click **Finish**, allow time for the new scheme to be created. The **Zone Access Map** is updated with any new aliases, and a **Zone commit succeeded** confirmation dialog box is displayed.

8. Dismiss the confirmation dialog box. The **Zone Access Map** is updated to show the new accessibility relationships.

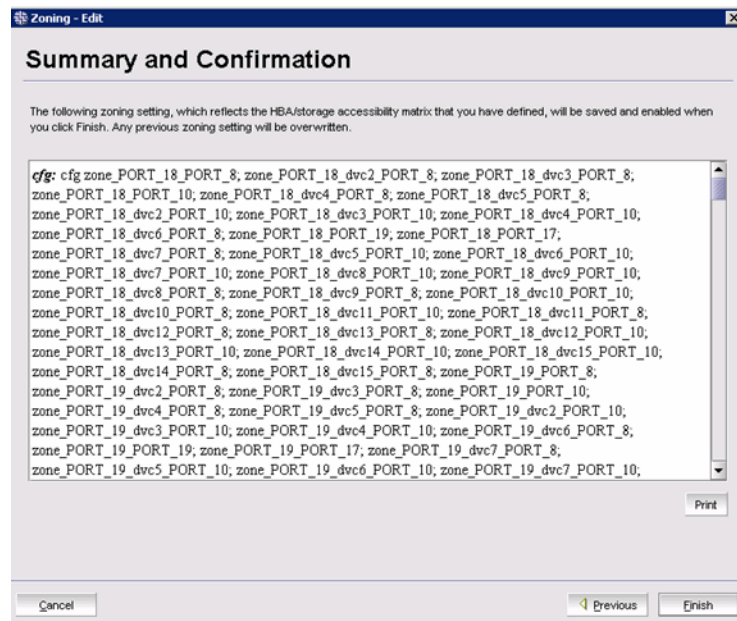


FIGURE 43 Zoning summary information

Validating zoning configuration

You can validate the current zoning configuration against the following rules:

- Every HBA has access to at least one storage device.
- Every storage device is accessible by at least one HBA.
- No offline devices exist in the zoning configuration.

If offline devices are in the current zoning setup, you are prompted you to delete those devices from the zoning database.

1. Click **Validate** under **Zoning** in the task panel.
The **Validate Zoning** wizard launches.
2. Follow the instructions in the wizard.
3. Note any devices that are not zoned properly and, after exiting the wizard, and click **Edit** to update the zone configuration.

Restoring Typical Zoning

If you have modified your zoning configuration and want to reset the configuration back to the default Typical zoning configuration, use the following procedure.

1. Click **Restore Default Typical Zoning** under **Zoning** in the task panel.
2. Click **Yes** in the confirmation window.

When this task is complete, the matrix in the **Zoning** page is automatically updated to reflect the changes.

Accessing Web Tools for advanced management

From the Switch Manager, you can launch Web Tools, which provides more extensive switch management functions for more experienced users. See the *Web Tools Administrator's Guide* for information on the Web Tools interface.

To launch Web Tools, ensure that you have completed all Switch Manager tasks and then click **Advanced Management** in the *Miscellaneous* category of the task panel. The Switch Manager session will be closed. Any editing in Switch Manager that has not been applied is lost.

After entering Web Tools, you must re-log in to manage the switch.

You cannot return to EZSwitchSetup Switch Manager unless you close and reopen your browser window and relaunch EZSwitchSetup.

Making EZSwitchSetup your default switch manager

If you want to be sure that the EZSwitchSetup Manager is launched as the default switch management program from your web browser instead of Web Tools, do the following.

1. Log in to the switch.
2. Use the **configure** command to check Web Tools attributes by typing **yes** or **y** to display Web Tools attributes, as in the following example.

```
switch:admin> configure
```

```
Not all options will be available on an enabled switch.  
To disable the switch, use the "switchDisable" command.
```

```
Configure...
```

```
System services (yes, y, no, n): [no]  
ssl attributes (yes, y, no, n): [no]  
rpcd attributes (yes, y, no, n): [no]  
webtools attributes (yes, y, no, n): [no] y
```

Web Tools attributes are displayed.

3. Type **yes** or **y** for the **Basic User Enabled** attribute to make the EZSwitchSetup Manager start by default from your web browser rather than Web Tools, as in the following example.

```
Basic User Enabled (yes, y, no, n): [yes] y
```

```
If no or n is specified, Web Tools is launched. Note that no is the default value.
```

EZSwitchSetup Limitations

In this appendix

- [General limitations](#) 49

General limitations

[Table 3](#) lists general EZSwitchSetup limitations, which apply to all browsers and switch platforms.

TABLE 3 EZSwitchSetup Switch Manager limitations

| Problem Area | Details |
|--------------------|--|
| HTTP timeout | <p>Very often, you may see the following message when you try to get data from a switch or to send a request to the switch:</p> <p>Failed to get switch response. Please verify the status of your last operation and try again if necessary.</p> <p>This indicates that an HTTP request did not get a response. The request was sent to the switch, but the connection was down, probably caused by a temporary loss of the Web server on the switch. Due to the nature of an HTTP connection, Switch Manager will report this error after a 90-second default timeout.</p> <p>In this case, verify the status of your last request, using Telnet to check related status, or click the Refresh button in the Switch Manager to retrieve related data. If your request did not get through to the switch, resubmit it. Executing a refresh from Switch Manager retrieves a copy of switch data at that moment; the data you entered can be lost if it had not already been committed to the switch.</p> |
| Loss of Connection | <p>Occasionally, you may see the following message when you try to retrieve data from the switch or send a request to the switch:</p> <p>Switch Status Checking</p> <p>The switch is not currently accessible.</p> <p>The dialog title may vary, because it indicates which module is having the problem.</p> <p>This is caused by the loss of HTTP connection with the switch, due to a variety of possible problems. Switch Manager automatically tries to regain the connection. While Switch Manager is trying to regain the connection, check if your Ethernet connection is still functioning. If the problem is not with the Ethernet connection, wait for Switch Manager to recover the connection and display the following message:</p> <p>You will have to resubmit your request after closing this message.</p> <p>If the temporary switch connection loss is caused by switch hot code load, or other similar operation, the Switch Explorer you are currently running can be downloaded from a different firmware version than the new one. In this case the following message displays: Switch connection is restored. The firmware version you are running is not in sync with the version currently on switch. Close your browser and re-launch Webtools.</p> <p>You must close Switch Manager and relaunch it to reopen the connection.</p> |

A General limitations

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