



CHAPTER 2

Chassis Display Tasks

These topics describe the chassis display tasks for Element Manager:

- [Viewing Card Properties, page 2-2](#)
- [Deleting Inactive Images from an Interface Card, page 2-4](#)
- [Resetting an Interface Card, page 2-4](#)
- [Enabling or Disabling a Card, page 2-4](#)
- [Viewing the Card Inventory, page 2-5](#)
- [Viewing Internal Gateway Ports of a Card, page 2-6](#)
- [Viewing Card IP Addresses, page 2-7](#)
- [Viewing Card Bridging Details, page 2-8](#)
- [Viewing Port Properties, page 2-8](#)
- [Viewing Serial Management Port Properties, page 2-11](#)
- [Viewing Ethernet Management Port Properties, page 2-12](#)
- [Viewing and Setting InfiniBand Management Port Properties, page 2-13](#)
- [Viewing Port Bridging Properties, page 2-14](#)
- [Configuring Ports, page 2-14](#)
- [Rebooting the Server Switch, page 2-17](#)



Note

When you launch Element Manager and open a server switch, a graphical display of that server switch appears. Colors in the display indicate the status of various components of the server switch. Various right- and left-click options let you configure the components that you see in the display.

Viewing Card Properties

To view card properties, follow these steps:

Step 1 Right-click the card in the chassis display with properties that you want to view.

A right-click menu appears.

Step 2 From the right-click menu, choose **Properties**.

A window opens and displays the type and number of the card in the title bar. [Table 2-1](#) describes the fields that appear in the Card tab of the card window.

Table 2-1 Card Tab Fields

Field	Description
Admin Type (gateway cards only)	Administratively configured card type.
Card Type field	Dynamically discovered card type.
Enable/Disable Card (choose cards only)	Up and down radio buttons enable or disable the card.
Current Card Status	Displays up if the card can currently run traffic; otherwise, displays down.
Operational State	Displays the general condition of the interface card. The general condition can be any of the following: • unknown • normal • wrongBootImage • bootFailed • tooHot • booting A condition of unknown indicates an unsupported interface card. To address this condition, replace the card with a supported card. The operational state of a card must be normal for the current status of the card to appear as up. A wrong-image condition indicates that the active system image on the interface card does not match the active system image on the controller. All cards must run the same active system image as the controller card. A bootFailed condition indicates that the active system image on the card was incompletely or incorrectly loaded. If the other interface cards come up successfully, reset the individual card; otherwise, reboot your entire device. A tooHot condition indicates that the card is overheating. From the Health menu, click Status and then select the Fans tab to see if your fans failed. The booting condition indicates that the card has not finished loading the necessary image data for internal configuration.

Table 2-1 Card Tab Fields (continued)

Field	Description
Card Boot Stage	Boot Stage values can be any of the following: • recovery • ipl • ppcboot • fpga • pic • ib • rootfs • kernel • exe • done • none
Card Boot Status	Boot Status values can be any of the following: • upgrading • success • failed • badVersion • badCrc • memoryError • outOfSpace • programmingError • hardwareError • fileNotFound • inProgress • none
Serial Number	Factory-assigned product serial number of the card.
PCA Serial Number	Printed circuit assembly (PCA) serial number of the card.
PCA Assembly Number	Printed circuit assembly (PCA) assembly number of the card.
FRU Number	Field-replaceable unit (FRU) number of the card.
Product Version ID	Version of the product.
Action (varies by card type)	Provides none, reset, and deleteInactiveImages radio buttons. For more information, see the “Deleting Inactive Images from an Interface Card” section on page 2-4 and the “Resetting an Interface Card” section on page 2-4 .
Result	Result of the action from the Action field.

Deleting Inactive Images from an Interface Card

To remove an inactive image from an interface card, follow these steps:

-
- Step 1** Right-click the card in the chassis display with properties that you want to view.
A menu appears.
- Step 2** From the menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** In the Action field, click the **deleteInactiveImages** radio button.
- Step 4** Click **Apply**.
-

Resetting an Interface Card

To reset an interface card, follow these steps:

-
- Step 1** Right-click the card in the chassis display with properties that you want to reset.
A menu appears.
- Step 2** From the menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** In the Action field, click the **reset** radio button.
- Step 4** Click **Apply**.
-

Enabling or Disabling a Card

With Element Manager, you can bring up or shut down any card on your chassis. These procedures configure the administrative status of a card:

- [Enabling a Card, page 2-4](#)
- [Disabling a Card, page 2-5](#)

Enabling a Card

To enable an interface card, follow these steps:

-
- Step 1** Right-click the card in the chassis display that you want to bring up.
A menu appears.
- Step 2** From the menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.

- Step 3** In the Enable/Disable Card field, click the **up** radio button.
- Step 4** Click **Apply**.
-

Disabling a Card

To disable a card, follow these steps:

- Step 1** Right-click the card in the chassis display that you want to shut down.
A menu appears.
- Step 2** From the menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** In the Enable/Disable Card field, click the **down** radio button.
- Step 4** Click **Apply**.
-

Viewing the Card Inventory

To view memory and image information on a card, follow these steps:

- Step 1** Right-click the card in the chassis display with properties that you want to view.
A right-click menu appears.
- Step 2** From the right-click menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** Click the **Inventory** tab.
[Table 2-2](#) describes the fields in the Inventory tab of the card window.

Table 2-2 *Inventory Tab Field Descriptions*

Field	Description
Used Memory	Used memory on the card, in kilobytes.
Free Memory	Available memory on the device, in kilobytes.
Used Disk Space	Used disk space on the card, in kilobytes.
Free Disk Space	Available disk space on the device, in kilobytes.
Current Image Source	Image that the card runs.
Image Source for Next Reboot	Image that the card runs when you reboot.
Image One	First image stored on the card.
Image Two	Second image stored on the card.
CPU Description	Description of the CPU on the card.

Table 2-2 *Inventory Tab Field Descriptions (continued)*

Field	Description
PIC Firmware Revision field (some cards)	Current PIC firmware version that the card runs.
FPGA Firmware Revision field (some cards)	Current FPGA firmware version that the card runs.
IB Firmware Revision field	Version of InfiniBand firmware on the card. See Note below.
Card Uptime	How long, in seconds, the card has been running.

**Note**

For platforms designed with the InfiniScale III switch chip (7000 and 7008 platforms), the Element Manager displays the device ID and version number of the InfiniBand chip for each card. For platforms using the original InfiniScale switch chip (3001 and 3012 platforms), no parenthetical text appears. The Cisco SFS 3001 and Cisco SFS 3012 chassis run original InfiniScale switch chips. The Cisco SFS 7000 and Cisco SFS 7008 chassis run later versions.

Viewing Internal Gateway Ports of a Card

Ethernet Gateway cards use two internal gateway ports to pass traffic through a server switch. To view gateway port details for Ethernet Gateway cards, follow these steps:

- Step 1** Right-click the card in the chassis display with gateway ports you want to view.
A right-click menu appears.
- Step 2** From the right-click menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** Click the **Gateway Ports** tab.

[Table 2-3](#) describes the fields in the Gateway Ports tab of the card window.

Table 2-3 *Gateway Ports Tab Field Descriptions*

Field	Description
IfIndex	Port (interface) number, in slot#/port# format
Port Name	Port name
Port Type	Port type
Current Port Speed	Current speed of the port

Viewing Card IP Addresses

To view the IP addresses of Ethernet Gateway cards, follow these steps:

- Step 1** Right-click the card in the chassis display with IP addresses you want to view.
A right-click menu appears.
- Step 2** From the right-click menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** Click the **IP Addresses** tab.
[Table 2-4](#) describes the fields in the IP Addresses tab of the card window.

Table 2-4 IP Addresses Tab Field Descriptions

Field	Description
Port	Port number, in card#port# format. A port# of 0 represents the internal gateway port of the interface card.
Address	IP address that you assigned to the port.
Netmask	Subnet mask that you assigned to the port.
BcastAddrFormat	IP broadcast address format that the port uses.
ReasmMaxSize	Size of the largest IP datagram that this port can receive and reassemble from incoming fragmented IP datagrams.
Type	Displays primary or backup to indicate whether the interface card acts as the primary or backup interface for the IP address that appears in the address field.
Status	Displays active or inactive to indicate whether the card actively services IP packets addressed to the IP address in the address field or does not service packets to the specified address.

Viewing Card Bridging Details

To view bridging details for Ethernet Gateway cards, follow these steps:

-
- Step 1** Right-click the card in the chassis display with bridging details you want to view.
A menu appears.
- Step 2** From the menu, choose **Properties**.
A window opens and displays the type and number of the card in the title bar.
- Step 3** Click the **Bridging** tab.

[Table 2-5](#) describes the fields in the Bridging tab of the card window.

Table 2-5 *Bridging Tab Field Descriptions*

Field	Description
Port	Port number, in slot#/port# format.
IB P_Key	Partition key that you assigned to the bridge group to which the port belongs.
Bridge Group ID	Bridge group to which the port belongs. Assign the bridge group by choosing Ethernet > Bridging . For more information, see the “Creating a Bridge Group” section on page 12-9.

Viewing Port Properties

To view port properties, follow these steps:

-
- Step 1** Right-click the port in the chassis display with properties that you want to view.
- Step 2** Choose **Properties**.
A window opens and displays the type and number of the port in the title bar. The contents of the window vary by port type.
- [Table 2-6](#) describes the fields in the properties window of an Ethernet port.
 - [Table 2-7](#) describes the fields in the properties window of a Fibre Channel port.
 - [Table 2-8](#) describes the fields in the properties window of an InfiniBand port.

Table 2-6 *Ethernet Port Properties Window Field Descriptions*

Field	Description
Port Type	Identifies the port type based on the function of the port (Ethernet, Fibre Channel, or InfiniBand) and the type of card on which the port resides.
Port Name	A port name that you can edit and apply to the port.

Table 2-6 Ethernet Port Properties Window Field Descriptions (continued)

Field	Description
Enable/Disable Port	Up and down radio buttons let you configure the administrative status of the port.
Current Port Status	Indicates whether or not the port is ready for use.
Physical State	Displays the current state of the port, for example polling.
Auto Negotiation Supported	Displays true if the port supports autonegotiation.
Enable Auto Negotiation	Enables or disables autonegotiation on the port.
Set Port Speed	Radio buttons let you configure the speed of the port.
Current Port Speed	Displays the speed of the port.
Set Duplex (Ethernet gateway ports)	Radio buttons let you configure the duplex setting of the port.
Current Duplex (Ethernet gateway ports)	Indicates whether the port runs in full duplex mode or half duplex mode.
Enable Link Up/Down Trap	Enabled and disabled radio buttons let you configure whether or not the port sends a trap when links go up or down.
MTU	Displays the maximum transmission unit (MTU) of the port, in bytes.
MAC Address	Displays the media access control (MAC) address of the port.
Last Changed On	Displays the time and date of the last time that a user configured the port.
Action (Ethernet gateway ports)	Flushes the ARP table when you choose the flushArp radio button, and then click Apply . Executes no action if you choose the none radio button and click Apply .
Result (Ethernet gateway ports)	Displays the result of the action in the Action field after it is applied.

Table 2-7 Fibre Channel Port Properties Window Field Descriptions

Field	Description
Port Type	Identifies the port type based on the function of the port (Ethernet, Fibre Channel, or InfiniBand) and the type of card on which the port resides.
Port Name	Port name that you can edit and apply to the port.
Enable/Disable Port	The up and down radio buttons let you configure the administrative status of the port.
Current Port Status	Indicates whether or not the port is ready for use.
Auto Negotiation Supported	Displays true if the port supports autonegotiation.
Enable Auto Negotiation	Check box lets you enable or disable autonegotiation on the port.
Set Port Speed	Radio buttons let you configure the speed of the port.
Current Port Speed	Displays the speed of the port.

Table 2-7 Fibre Channel Port Properties Window Field Descriptions (continued)

Field	Description
Current Connection Type	Displays the current connection type.
Enable Link Up/Down Trap	Enabled and disabled radio buttons let you configure whether or not the port sends a trap when links go up or down.
MTU	Displays the maximum transmission unit of the port in bytes.
WWNN	World-wide node name of the HCA of the port.
WWPN	World-wide port name of the port.
FC ID	Native Fibre Channel ID of the port.
Last Changed On	Displays the time and date of the last time that a user configured the port.

Table 2-8 InfiniBand Port Properties Window Field Descriptions

Field	Description
Port Type	Identifies the port type based on the function of the port (Ethernet, Fibre Channel, InfiniBand) and the type of card on which the port resides.
Port Name	Port name that you can edit and apply to the port.
Enable/Disable Port	The up and down radio buttons let you configure the administrative status of the port.
Current Port Status	Indicates whether or not the port is ready for use.
Physical State	Displays the current state of the port; for example, polling.
Auto Negotiation Supported	Displays true if the port supports autonegotiation.
Enable Auto Negotiation	Check box lets you enable or disable autonegotiation on the port.
Set Port Speed	Drop-down menu configures the link capacity of the port in terms of its link width (1x, 4x, or 12x) and its lane speed (sdr or ddr). Valid values are 1x-sdr (2.5 Gbps), 4x-sdr (10 Gbps), 12x-sdr(30 Gbps), 1x-ddr (5 Gbps), 4x-ddr (20 Gbps), and 12x-ddr (60 Gbps). Note For an InfiniBand port connected with an SDR cable or any cable longer than 8 feet, you must be manually configure the port to support only SDR.
Current Port Speed	Displays the link capacity of the port.
Power Connector Dongle Type	Displays the power connector dongle type only if the port supports the power connector. Possible values are as follows: • none (1) • ib4xFX (2)

Table 2-8 *InfiniBand Port Properties Window Field Descriptions (continued)*

Field	Description
Power Connector Dongle State	Indicates the power control state of a dongle that is attached to a powered interface connector. Possible values are as follows: - noStateChange (0) - on (1) - off (2)
Clear Counters	Check box lets you clear the port counters.
Enable Link Up/Down Trap	Enabled and disabled radio buttons let you configure whether or not the port sends a trap when links go up or down.
MTU	Displays the maximum transmission unit (MTU) of the port, in bytes.
Last Changed On	Displays the time and date that a user last configured the port.

Viewing Serial Management Port Properties

To view serial management port properties, follow these steps:

Step 1 From the Edit menu, choose **Management Ports**.

The Management Ports window opens.

Step 2 Click the **Serial Port** tab.

[Table 2-9](#) describes the fields in the Serial Port tab.

Table 2-9 *Serial Port Field Descriptions*

Field	Description
Baud Rate	Baud rate setting to which you must set your serial connection.
Data Bits	Data bit setting to which you must set your serial connection.
Stop Bits	Stop bit setting to which you must set your serial connection.
Parity	Parity field setting to which you must set your serial connection.

If you do not have a serial connection, see the [“Establishing a Serial Connection”](#) section on page 2-12.

Establishing a Serial Connection

To create a serial connection to your server switch, follow these steps:

-
- Step 1** Connect the straight-through M/F serial cable (provided with your server switch) to the Serial Management port, and then connect the cable to your terminal, workstation, or terminal server.
 - Step 2** Launch a terminal session (on a workstation, use a terminal emulation application such as HyperTerminal) and configure your terminal parameters to match the parameters listed in [Table 2-9](#).
 - Step 3** Press the **Enter** key until the login prompt appears.
-

Viewing Ethernet Management Port Properties

To view Ethernet management port properties, follow these steps:

-
- Step 1** From the Edit menu, choose **Management Ports**.
The Management Ports window opens.
 - Step 2** Click the **Ethernet Port** tab.
[Table 2-10](#) describes the fields in the **Ethernet Port** tab.

Table 2-10 Ethernet Management Port Field Descriptions

Field	Description
MAC Address	MAC address of the Ethernet Management Port (which serves as the MAC address of the server switch).
Enable Auto Negotiation	Displays true if the Ethernet Management port dynamically determines the connection speed of the device to which it connects over the Ethernet cable; otherwise, it displays false.
Administrative Port Status	Displays the administrative status that you configure through the CLI with the shutdown and no shutdown commands.
Current Port Status	Displays up if the port runs successfully. Displays down if the port cannot transmit and receive traffic for any reason.
IP Address	IP address of the Ethernet Management port.
Network Mask	Subnet mask of the Ethernet Management port.
Gateway	Ethernet Gateway assigned to the port.
Address Option	Address option configured with the addr-option CLI command.

Viewing and Setting InfiniBand Management Port Properties

These topics discuss viewing and setting InfiniBand management port properties:

- [Viewing InfiniBand Management Port Properties, page 2-13](#)
- [Changing the Inband IPoIB Partition, page 2-13](#)

Viewing InfiniBand Management Port Properties

To view InfiniBand management port properties, follow these steps:

Step 1 From the Edit menu, and choose **Management Ports**.

The Management Ports window opens.

Step 2 Click the **InfiniBand Port** tab.

[Table 2-11](#) describes the fields in the InfiniBand Port tab.

Table 2-11 *InfiniBand Management Port Field Descriptions*

Field	Description
Administrative Port Status	Administrative status that you configure through the CLI with the shutdown and no shutdown commands.
Current Port Status	Displays up if the port runs successfully. Displays down if the port cannot transmit and receive traffic for any reason.
IP Address	IP address of the InfiniBand Management port.
Network Mask	Subnet mask of the InfiniBand Management port.
Gateway	IP address of the gateway that the InfiniBand port uses.
Address Option	Address option configured with the addr-option CLI command.
MTU	Maximum transmission unit of the InfiniBand port.

Changing the Inband IPoIB Partition

In case IPoIB multicast joins are disabled on the default partition, you can change the inband IPoIB management partition to a partition that allows IPoIB multicast joins.

To use a different partition as the inband IPoIB management partition, follow these steps:

Step 1 From the Edit menu, choose **Management Ports**.

The Management Ports window opens.

Step 2 Click the **InfiniBand Port** tab.

- Step 3** In the PKey field, enter the partition key you want to use for the inband IPoIB partition.
- Step 4** Click **Apply**.
-

Viewing Port Bridging Properties

To view the bridging properties of a port, follow these steps:

- Step 1** Right-click the Ethernet port in the chassis display with bridging properties you want to view.
- Step 2** From the right-click menu, choose **Properties**.
- A window opens and displays the type and number of the port in the title bar. The contents of the window vary by port type.
- Step 3** Click the **Bridging** tab.
- [Table 2-12](#) describes the fields in this tab.

Table 2-12 Port Bridging Table Field Descriptions

Field	Description
Port	Port that you choose from the Ports table.
IEEE VLAN Tag	Virtual LAN (VLAN) of the bridge to which the port belongs.
Bridge Group ID	Bridge ID of the bridge to which the port belongs.

Configuring Ports

Element Manager provides different configuration options for each type of port. The options available to each port appear in the Port Properties window.



Note

To configure multiple ports at once, press the **Ctrl** key and click multiple ports of the same type, and then right-click one of the ports that you selected to view right-click menu options.

These topics describe how to configure port properties:

- [Configuring a Port Name, page 2-15](#)
- [Enabling or Disabling a Port, page 2-15](#)
- [Configuring Autonegotiation on a Port, page 2-15](#)
- [Configuring Port Speed, page 2-16](#)
- [Clearing InfiniBand Port Counters, page 2-16](#)
- [Configuring Port IP Addresses, page 2-16](#)

Configuring a Port Name

To configure the administrative name of a port, follow these steps:

-
- Step 1** Double-click the port that you want to configure.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** In the Port Name field of the window, enter a name for the port, and then click **Apply**.
- Step 3** Click **Close** to close the window.
-

Enabling or Disabling a Port

To enable or disable a port, follow these steps:

-
- Step 1** Double-click the port that you want to configure.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** In the Enable/Disable Port field of the window, click the **up** (enable) or **down** (disable) radio button, and then click **Apply**.
- Step 3** Click **Close** to close the Port Properties window.



Tip

As a shortcut, right-click the port and choose **Enable** or **Disable**.

Configuring Autonegotiation on a Port

To enable or disable autonegotiation on a port, follow these steps:

-
- Step 1** Double-click the port that you want to configure.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** In the Auto Negotiation Supported field of the window, check the **Enable Auto-Negotiation** check box to enable or uncheck to disable it, and then click **Apply**.
- Step 3** Click **Close** to close the window.
-

Configuring Port Speed

**Note**

For an InfiniBand port connected with an SDR cable or any cable longer than 8 feet, you must manually configure the port to support only SDR.

To configure the speed of a port, follow these steps:

-
- Step 1** Double-click the port that you want to configure.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** In the Auto Negotiation field, uncheck the **Enable** check box.
- Step 3** In the Set Port Speed field of the window, select a speed as follows:
- For an Ethernet or Fibre Channel port, click a radio button to select a speed.
 - For an InfiniBand port, select a speed from the drop-down menu.
- Step 4** Click **Apply**.
- Step 5** Click **Close** to close the window.
-

Clearing InfiniBand Port Counters

To clear InfiniBand port counters, follow these steps:

-
- Step 1** Double-click the port for which you want to clear the counters.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** Check the **Clear Counters** check box.
- Step 3** Click **Apply**, and then click **Close**.
-

See [Table 7-1 on page 7-2](#) for descriptions of the counters reset by this procedure.

Configuring Port IP Addresses

To configure an IP address for a port, follow these steps:

-
- Step 1** Double-click the port that you want to configure.
A window opens that identifies the type of the port and the port number (in slot#port# format).
- Step 2** Click the **IP Addresses** tab.

**Note**

Before you can manually add IP addresses, you must configure the port for bridging. For more information, see the *Ethernet Gateway User Guide*.

- Step 3** Click **Insert**.
The Insert IP Addresses window opens.
- Step 4** Enter an IP address and subnet mask, and then click **Insert**.
The address appears in the table under the IP Addresses tab.
- Step 5** Click **Close** to close the window.
-

Rebooting the Server Switch

To reboot the server switch, follow these steps:

-
- Step 1** Right-click the server switch in the chassis display (avoid selectable elements such as ports and cards), and click **Reboot**.
A window opens and prompts you to save configuration changes.
- Step 2** Click **Yes** to save configuration changes, or click **No** to discard the changes.
A window opens to verify that you want to reboot.
- Step 3** Click **OK** to reboot; otherwise, click **Cancel**.
-

