

SPECTRUM®

3Com PortSwitch Hubs Management Module Guide

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Cabletron Systems, Inc.
P.O. Box 5005
Rochester, NH 03866-5005

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Use this guide as a reference for the 3Com PortSwitch Hubs management software. Before using this guide, you should be familiar with SPECTRUM's functions and navigational techniques as described in the Administration documentation and the Operation documentation.

For the purposes of this guide, the 3Com PortSwitch Hub is referred to as "device."

What Is in This Guide

The organization of the 3Com PortSwitch Hubs Management Module Guide is as follows:

| <u>Chapter</u> | <u>Description</u> |
|---|--|
| Chapter 1 Introduction | Describes the device, the management module, and model types. This chapter also provides information on accessing device specific views. |
| Chapter 2 Device Views | Describes the Device views representing the device. |
| Chapter 3 Configuration Views | Describes the Configuration views for the device and the network management information provided by these views. |
| Chapter 4 Event and Alarm Messages | Lists and explains the event and alarm messages generated in the Event Log or Alarm Manager for the device. |
| Chapter 5 Application Views | Describes the Application views and application-specific information for this device. |

Conventions

This guide uses the following conventions:

- Menu selections and buttons referenced in text appear in bold; for example, **Configuration** or **Detail**.
- Buttons names appear in shadowed boxes when introducing paragraphs describing their use; for example,

Help

- Menu navigation appears in order of selection; for example, **Icon Subviews -> Utilities -> Application**.
- Referenced chapter titles and section headings appear in italics.
- Referenced documents appear in bold italics.
- The 3ComPortSwitch Hub is referred to as “device.”
- References in [blue](#) are hypertext links for online documents.

Related SPECTRUM Documentation

When using this guide, you should have a clear understanding of SPECTRUM functionality and navigational techniques as described in the Administration documentation, the Operation documentation, and the following documentation:

Report Generator User's Guide

Getting Started with SPECTRUM for Operators

Getting Started with SPECTRUM for Administrators

How to Manage Your Network with SPECTRUM

Other Related Documentation

Refer to the following documentation for more information on managing TCP/IP-based networks:

Martin, James, Kathleen Kavanagh Chapman, Joe Leben. Local Area Networks: Architectures and Implementations, 2d ed. Englewood Cliffs, NJ: Prentice Hall, 1994.

Rose, Marshall T. The Simple Book: An Introduction to Management of TCP/IP-based Internets. Englewood Cliffs, NJ: Prentice Hall, 1991.

Stallings, William. Data and Computer Communications, 4th ed. New York: Macmillan Publishing Company, 1994.

Tanenbaum, Andrew S. Computer Networks, 3d ed. Englewood Cliffs, NJ: Prentice Hall, 1996.



Chapter 1

Introduction

What Is in This Chapter

This chapter introduces the SPECTRUM Management Module for 3Com PortSwitch Hubs. It describes the following:

- 3Com PortSwitch Hubs
- SPECTRUM Model Type
- Accessing SPECTRUM views
- SPECTRUM Views Roadmap

3Com PortSwitch Hubs

The 3Com PortSwitch Hubs are stackable Fast Ethernet hubs that provide Fast Ethernet uplinks. This device provides 12 or 24 ports for twisted pair connections via RJ-45 connectors.

SPECTRUM Model Type

The model type Hub3ComPortSw refers to the management module software package used to specify attributes, actions, and associations for the physical 3Com PortSwitch Hub device using the Simple Network Management Protocol (SNMP) and Management Information Bases (MIBs) for that device.

Accessing SPECTRUM Views

Icons and labels that display information within an icon provide access to SPECTRUM views. This is done using double-click zones ([Figure 1-1](#)) and Icon Subviews menu selections ([Figure 1-2](#)).

To access the Icon Subviews menu as shown in [Figure 1-2](#) and [Figure 1-3](#), do the following:

1. Highlight the icon or label.
2. From the View menu select Icon Subviews or click the applicable mouse button (middle or right). Refer to the SPECTRUM Icons Reference for information on configuring your mouse.

Figure 1-1. Using Double-Click Zones to Access SPECTRUM Views

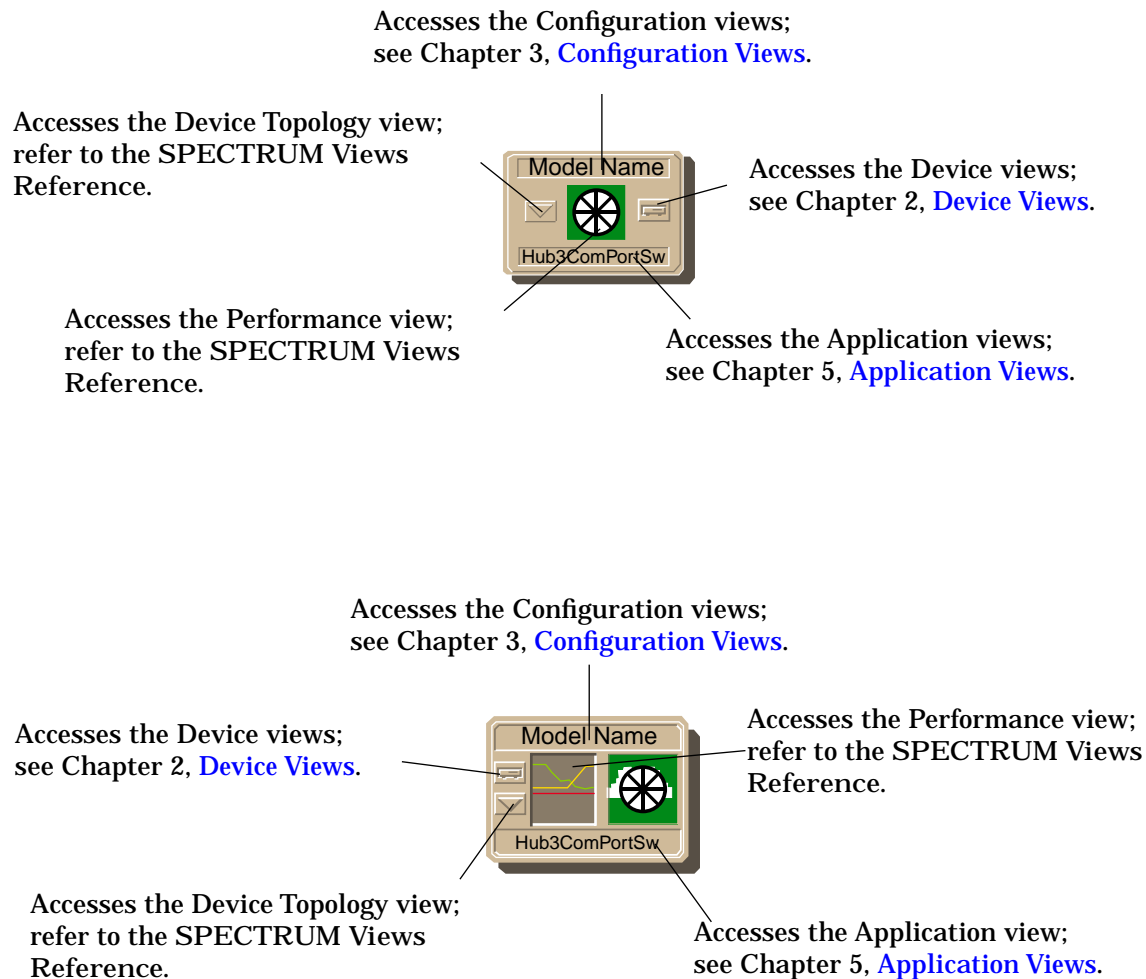


Figure 1-2. Using the Icon Subviews Menu to Access SPECTRUM Views

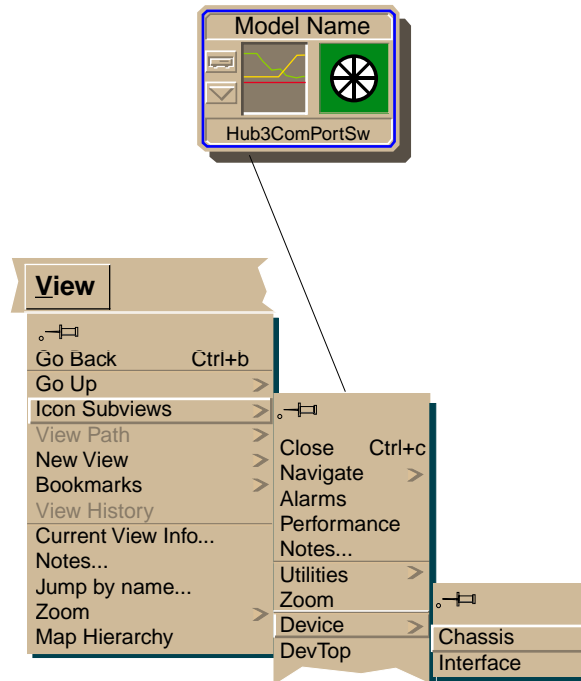
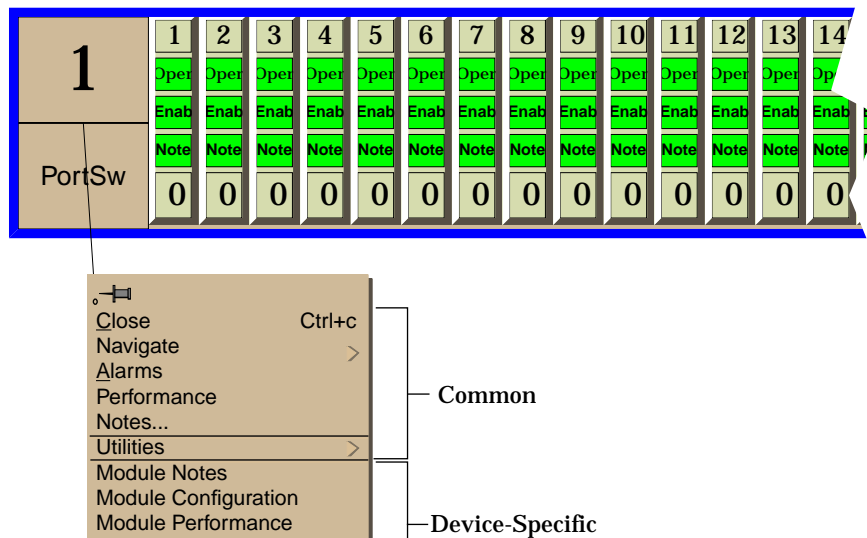


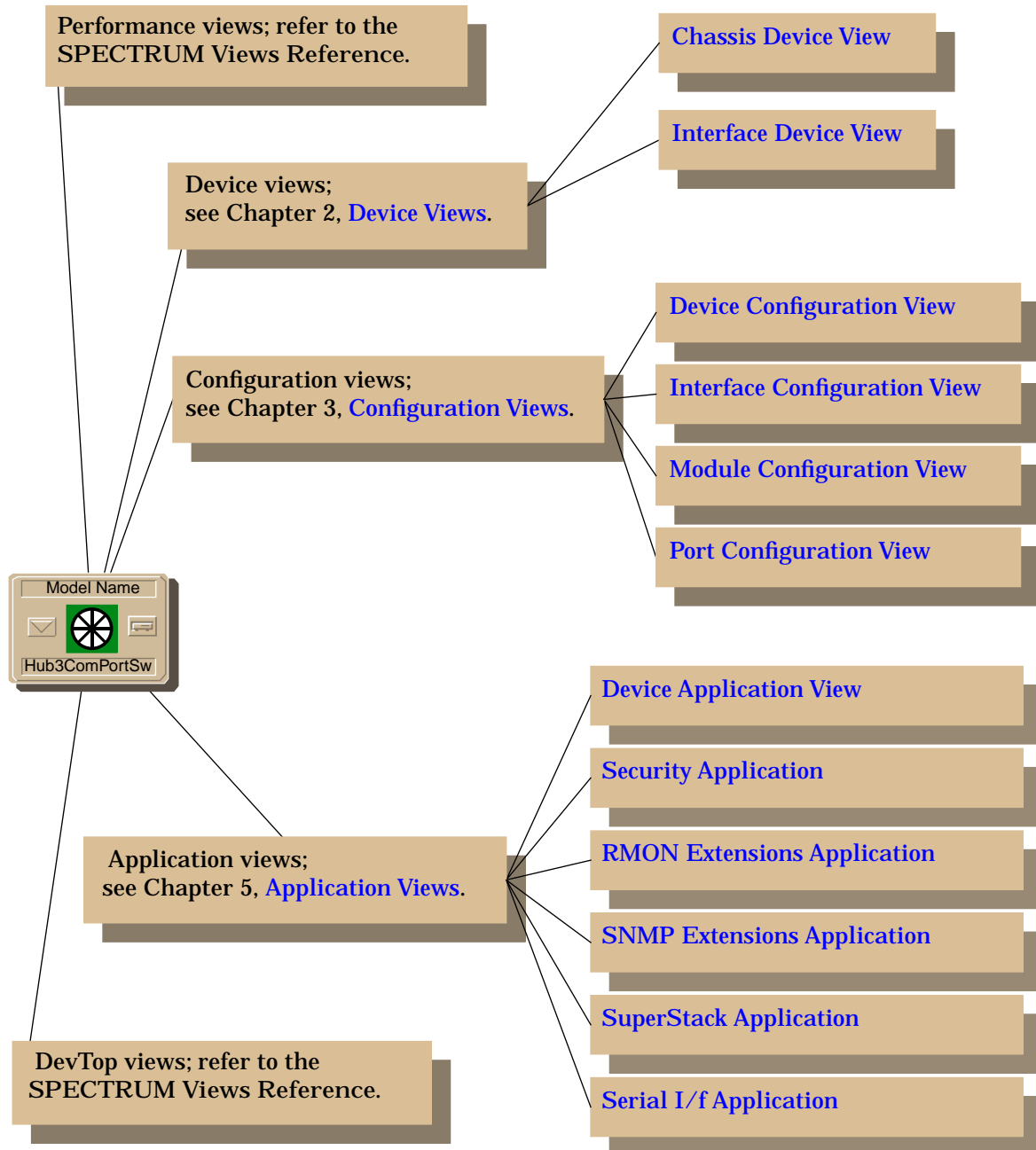
Figure 1-3. Accessing Icon Subviews Menus from Labels



SPECTRUM Views Roadmap

Figure 1-4 shows a “roadmap” of the SPECTRUM views for this device. These views are accessible from double-click zones (Figure 1-1) and Icon Subviews menus (Figure 1-2 and Figure 1-3).

Figure 1-4. SPECTRUM Views Roadmap





Chapter 2

Device Views

What Is in This Chapter

This chapter describes the following device views available for 3Com PortSwitch Hubs.

- Chassis Device view
- Interface Device view

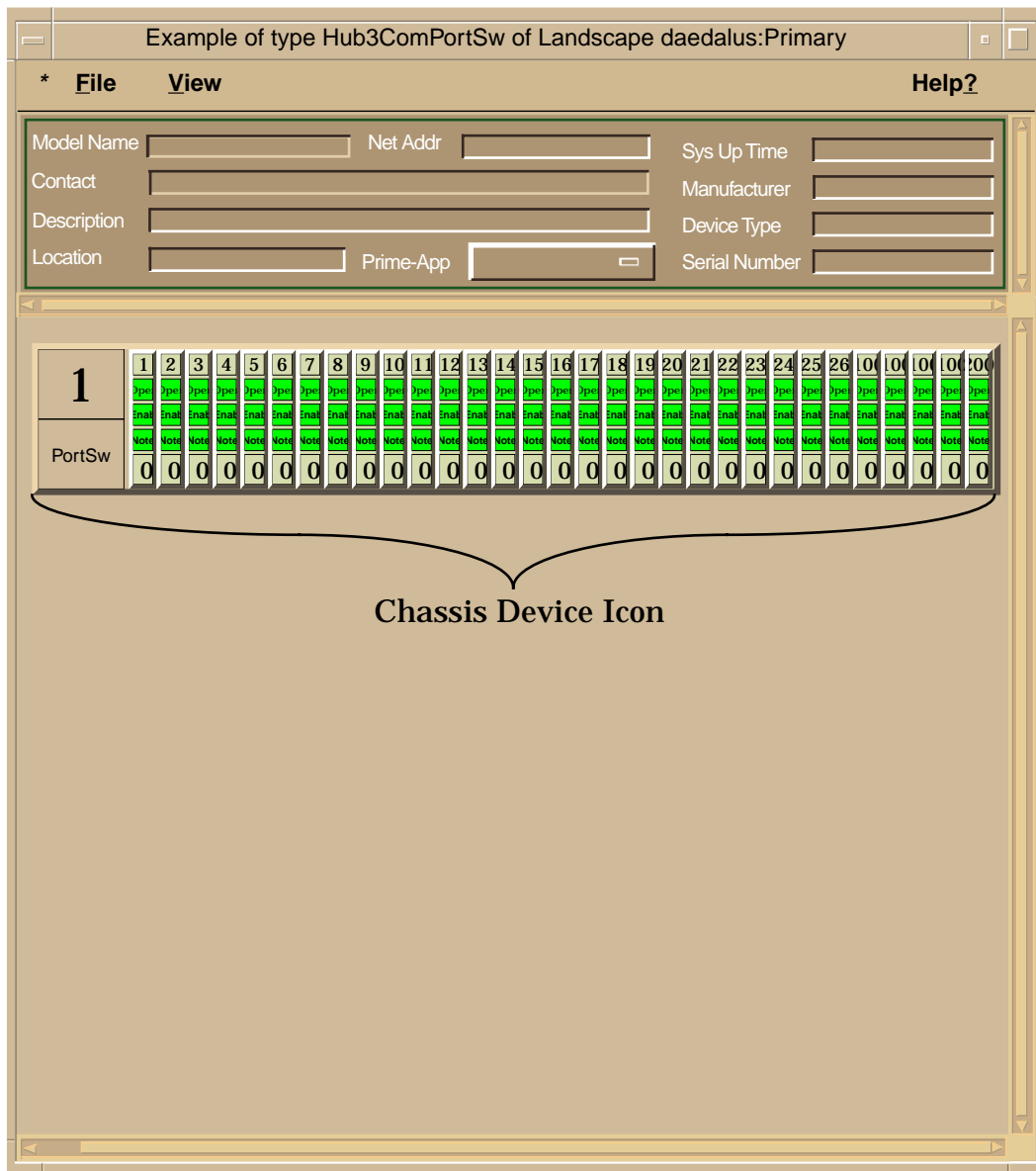
See Chapter 1, [Introduction](#), for information on [Accessing SPECTRUM Views](#).

Chassis Device View

This view shows a logical representation of the device chassis and its interfaces or ports. The Chassis Device icon provides menu and double-click zone access to the views that monitor the interfaces.

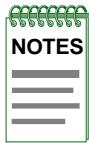
Figure 2-1 shows an example of the Chassis Device view for 3Com PortSwitch Hubs.

Figure 2-1. Chassis Device View



Chassis Device Icon

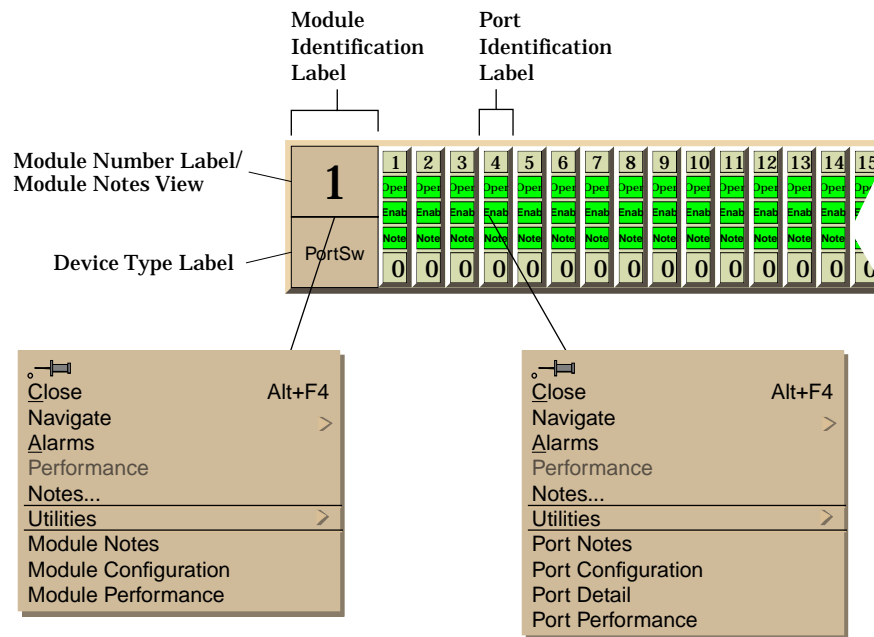
This icon is a logical representation of the physical device and its front panel interfaces. This section describes the information available from the Chassis Device icon. [Figure 2-2](#) shows an example of the Chassis Device icon for 3Com PortSwitch Hubs.



The callouts displayed in this illustration identify the label name and, when available, the view to which it provides double-click access. For example: Module Number/Module Notes View displays the device model number and provides double-click access to the Module Notes view.

The menus displayed in the illustration are the Icon Subviews menus for that label.

Figure 2-2. Chassis Device Icon



Module Identification Label

This label provides the following information (see [Figure 2-2](#)):

Module Number

Displays the position of the module in the hub stack. Double-click this area to open the Notes view described in the SPECTRUM Views Reference.

Device Type Label

Identifies the type of device.

Module Icon Subviews Menu

[Table 2-1](#) lists each of the device-specific Icon Subviews menu selections available for this device. For information on [Accessing SPECTRUM Views](#), see Chapter 1, [Introduction](#).

Table 2-1. Module Icon Subviews Menu

| Menu Selection | Description |
|----------------------|---|
| Module Notes | Opens the Notes view described in the SPECTRUM Views Reference. |
| Module Configuration | Opens the Module Configuration View described in Chapter 3, Configuration Views . |
| Module Performance | Opens the Module Performance view described in the SPECTRUM Views Reference. |

Port Identification Label

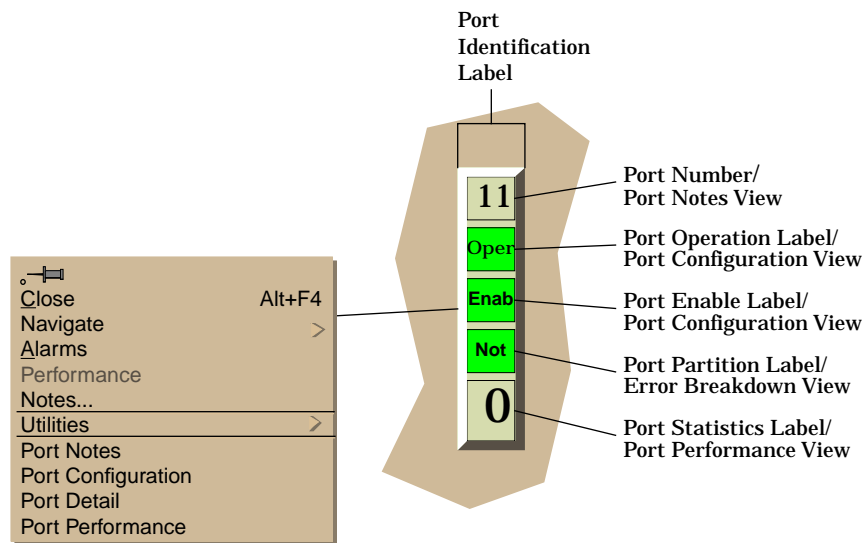
These labels provide access to the Icon Subviews menu for the individual ports. The labels contain the following information (see [Figure 2-3](#)):



The callouts displayed in this illustration identify the label name and the view to which it provides double-click access. For example: Port Number/Port Notes View displays the port number and provides double-click access to the Port Notes view.

The menu displayed in the illustration is the Icon Subviews menu for that label.

Figure 2-3. Port Identification Label



Port Number

Displays the number of the port within the module. Double-click this area to open the Port Notes view described in the SPECTRUM Views Reference.

Port Operation Label

Displays the operational status of the port. Possible values are Operational and Nonoperational. Double-click this area to open the [Port Configuration View](#) described in Chapter 3, [Configuration Views](#).

Port Enable Label

Displays the enable status of the port. Possible values are Enable and Disable. Double-click this area to open the [Port Configuration View](#) described in Chapter 3, [Configuration Views](#).

Port Partition Label

Displays partition status of the port. Possible values are Not Partitioned and Auto Partitioned. Double-click this area to open the Error Breakdown view described in the SPECTRUM Views Reference.

Port Statistics Label

Displays the number of packets transmitted. Double-click this area to open the Port Performance view described in the SPECTRUM Views Reference.

Port Identification Label Subviews Menu

Table 2-2 describes the Port Identification Label Subviews menu selections. See Chapter 1, [Introduction](#), for information on [Accessing SPECTRUM Views](#).

Table 2-2. Port Identification Label Subviews Menu

| Menu Selection | Description |
|--------------------|---|
| Port Notes | Opens the Port Notes view described in the SPECTRUM Views Reference. |
| Port Configuration | Opens the Port Configuration View described in Chapter 3, Configuration Views . |
| Port Detail | Opens the Error Breakdown view described in the SPECTRUM Views Reference. |
| Port Performance | Opens the Module Performance view described in the SPECTRUM Views Reference. |

Interface Device View

This view shows a logical representation of the interfaces or ports on the device. The Interface Device icon provides menu and double-click zone access to the views that monitor the interfaces.

Figure 2-4 shows an example of the Interface Device view for 3Com PortSwitch Hubs.

Figure 2-4. Interface Device View

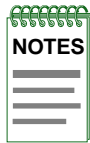
| Model Name | Net Addr | Sys Up Time |
|-------------|-----------|---------------|
| | | |
| Contact | | Manufacturer |
| Description | | Device Type |
| Location | Prime-App | Serial Number |

| | | | |
|-----------------------|----------|---------------------|---------|
| Find | Phy Addr | Network Information | ADDRESS |
| Interface Description | | | |

| | | | |
|---------------|----|------------------|----|
| 10494 | ON | 56627 | ON |
| Ethernet | | Ethernet | |
| 0:0:0:0:0:0 | | 0:0:0:0:0:0 | |
| 0 | | 0 | |
| 22714 | ON | 58903 | ON |
| SLIP | | Ethernet | |
| 192.168.101.1 | | 8:0:4:E:19:48:90 | |
| | | 172.19.125.219 | |
| 0 | | 0 | |
| 32884 | ON | | |
| Ethernet | | | |
| 0:0:0:0:0:0 | | | |
| 0 | | | |
| 40351 | ON | | |
| Ethernet | | | |
| 0:0:0:0:0:0 | | | |
| 0 | | | |

Interface Device Icon

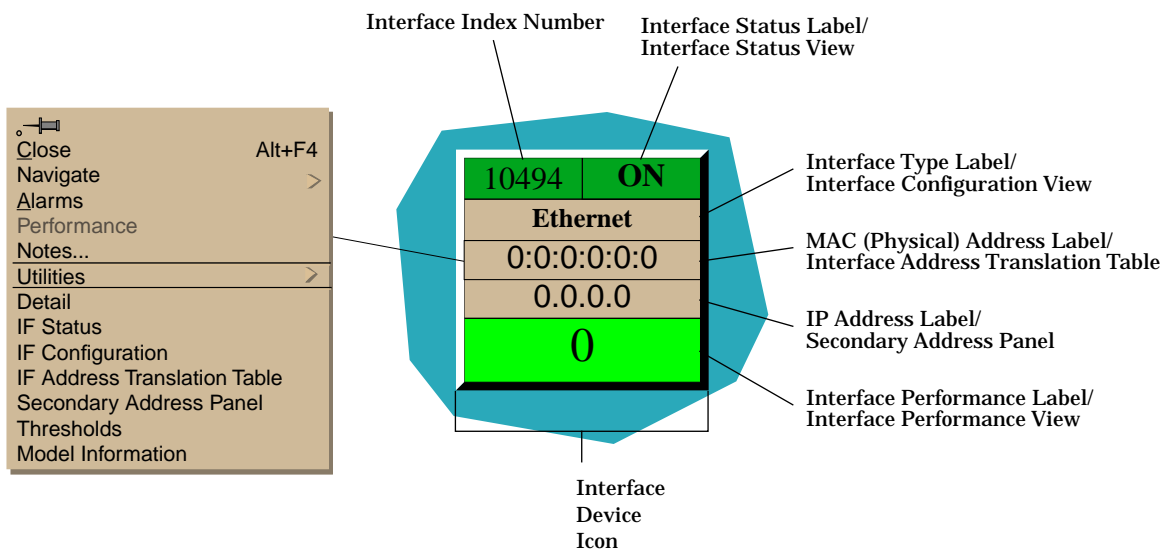
This icon is a logical representation of the services provided by this device. This section describes the information available from the Interface Device icon. [Figure 2-5](#) shows an example of the Interface Device icon for 3Com PortSwitch Hubs.



The callouts displayed in this illustration identify the label name and, when available, the view to which it provides double-click access. For example: Interface Status Label/Interface Status View displays the operating status of the interface and provides double-click access to the Interface Status view.

The menus displayed in the illustration are the Icon Subviews menus for that label.

Figure 2-5. Interface Device Icon



Interface Index Number

Displays the number used to refer to this interface.

Interface Status Label

Displays the operational status of this interface. Double-click this area to open the Interface Status view. Possible values are Default, ON, OFF, and Testing.

Interface Type Label

Displays the protocol in use on this interface. Double-click this area to open the [Interface Configuration View](#) described in Chapter 3, [Configuration Views](#).

MAC (Physical) Address Label

Displays the MAC address of this interface. Double-click this area to open the [Interface Address Translation Table](#) described in Chapter 3, [Configuration Views](#).

IP Address Label

Displays the IP address of this interface. Double-click this area to open the [Network Information Panel](#) described below.

Interface Performance Label

Displays the number of packets transmitted. Double-click this area to open the Interface Performance view described in the [SPECTRUM Views Reference](#).

Interface Icon Subviews Menu

[Table 2-3](#) describes the Interface Icon Subviews menu selections. See Chapter 1, [Introduction](#), for information on [Accessing SPECTRUM Views](#).

Table 2-3. Interface Icon Subviews Menu

| Menu Selection | Description |
|------------------------------|---|
| Detail | Opens the Interface Detail view described in the SPECTRUM Views Reference . |
| IF Status | Opens the Interface Status View described below. |
| IF Configuration | Opens the Interface Configuration View described in Chapter 3, Configuration Views . |
| IF Address Translation Table | Opens the Interface Address Translation Table described in Chapter 3, Configuration Views . |
| Network Information Panel | Opens the Network Information Panel described below. |
| Thresholds | Opens the Interface Threshold View described below. |
| Model Information | Opens the Model Information view described the SPECTRUM Views Reference . |

Interface Status View

This view displays the operational status if the interface and allows you to set the administrative status of the interface.

Network Information Panel

This panel displays the following information on the configuration of a network:

Name

Displays the name of the network in question.

Address

Displays the network address of the network in question.

Mask

Displays the subnet mask for the network in question.

Interface Threshold View

This view allows you to configure the values at which the following categories generate alarms. The value in the On field sets the value at which a device will send an alarm indicating that there is a fault. The value in the Off field sets the value at which the device will recover from the fault.

- Load Threshold
- Packet Rate Threshold
- Error Rate Threshold
- % Discarded Threshold

Configuration Views

What Is in This Chapter

This chapter describes the Configuration views available for 3Com PortSwitch Hubs. These views display network configuration and operating information for the device and its interfaces.

The following Configuration views are available for this device:

- Device Configuration View
- Interface Configuration View
- Module Configuration View
- Port Configuration View

See Chapter 1, [Introduction](#), for information on [Accessing SPECTRUM Views](#).

Device Configuration View

This view provides device-specific configuration information as well as access to other views that allow you to configure device components.

To access the Device Configuration view do the following:

1. Highlight the device icon.
2. From the Icon Subviews menu, select Configuration.

Device Configuration Information

This section of the Configuration view displays the following device-specific information:

Device Name

Displays the user-settable name of the device.

Contact Status

Indicates whether a connection with the device has been established. Possible status messages include: Established, Lost and Initial.

Number of Interfaces

Displays the number of interfaces or ports available on this device.

Router Redundancy

This menu button allows you to set router redundancy to true or false.

This view also provides the following buttons:

IF Address Translation

Opens the Interface Address Translation Table, described below.

Reconfigure

Reconfigures the device with the current settings.

Interface Address Translation Table

This table provides the following fields:

Interface Index

Displays the number for a given interface or port.

Physical Address

Displays the physical (MAC) address of the interface or port.

Network Address

Displays the network address of the interface or port.

Interface Configuration Table

Double-click any entry in this table to access the [Interface Configuration View](#) described later in this chapter.

This table within the Device Configuration view provides the following configuration information about the device's interfaces or ports:

Index

Displays the index number for a given interface or port.

Description

Displays a brief description of the device.

Type

Displays the type of hardware interface for the port. See the Administration documentation for a full list of possible interface types.

Bandwidth

Displays the interface bandwidth in bits per second. For interfaces that do not vary in bandwidth or for those where no accurate estimation can be made, this will be the nominal bandwidth.

Physical Address

Displays the physical (MAC) address of the interface or port.

Operation Status

Displays the current operational state of this port. Possible values are On, Off, and Testing.

Admin Status

Displays the current operational state of this port. Possible values are On, Off, and Testing.

Last Change

Display the date and time of the last change to the port's status.

Queue Length

Displays the length of the queue.

Packet Size

Displays the size of packets moving through this port.

Interface Configuration View

This view provides information on the configuration and operating status of the interface.

To access the Interface Configuration view do the following:

1. Within the Interface Device view, highlight the device icon.
2. From the Icon Subviews menu, select IF Configuration.

The Interface Configuration view provides the following information:

Operation Status

Displays the status of the module. Possible values are operational, notoperational and unknown.

Admin. Status

Provides a menu button to set the Administrative status of the port. Once disabled, a port must be explicitly enabled to restore operation. A port that is already disabled when power is lost or when a reset is exerted will remain disabled when normal operation resumes. Possible values are On, Off, and Testing.

Last Change

Displays the system uptime at which the interface entered its current operational state. A value of zero indicates that the status has not changed since the agent was last restarted.

Network Name/Address

Displays the network name and the address at which it appears.

Physical Address

Displays the physical (MAC) address of the interface or port.

Bandwidth

Displays the interface bandwidth in bits per second. For interfaces that do not vary in bandwidth or for which no accurate estimate can be made, this will be the nominal bandwidth.

Packet Size

Displays the largest Maximum Transmission Unit (MTU) that can be transmitted or recieved by the port, measured in octets.

Queue Length

Displays the length of the outbound packet queue in packets.

Module Configuration View

This view provides information on the configuration and operating status of the module.

To access the Module Configuration view do the following:

1. Within the Chassis Device view, highlight the module icon.
2. From the Icon Subviews menu, select Module Configuration.

The Module Configuration view provides the following information:

Operational Status

Displays the status of the module. Possible values are operational, notoperational and unknown.

Last Status Change

Displays the system up time at the time when the value of the operational status object for this group last changed. A value of zero indicates that the group's status has not changed since the agent was last restarted.

Port Capacity

Displays the number of ports on the module.

Module Type (OID)

Displays the Object ID of the MIB for this device.

Module Description

Displays a brief description of the device.

Port Configuration View

This view provides information on the configuration and operating status of a port within a module.

To access the Port Configuration view do the following:

1. Within the Chassis Device view, highlight the port icon.
2. From the Icon Subviews menu, select Port Configuration.

The Port Configuration view provides the following information:

Administrative Status

This menu button allows you to enable and disable the port. Once disabled, a port must be explicitly enabled to restore operation. A port which is already disabled when power is lost or when a reset is exerted will remain disabled when normal operation resumes.

The Administrative Status value takes precedence over Auto Partition and functionally operates between the auto-partition mechanism and the AUI/PMA.

Enabling the port sets it to notAutoPartitioned regardless of its pre-disabling state.

Operational Status

Displays the port's operational state. The operational state indicates that the port is enabled and working, even though it might be auto-partitioned. The notPresent state indicates the port is physically removed (note this may or may not be possible depending on the type of port). Possible values are operational, notOperational, and notPresent.

Auto Partition State

Indicates whether the port is currently partitioned by the repeater's auto-partition protection.

The conditions that cause port partitioning are specified in the IEEE 802.3 Standard.

Last Source Address

Displays the Source Address of the last readable frame received. If there is no data 0.0.0.0.0 is displayed.

Source Address Changes

This counter is incremented by one for each time the Last Source Address attribute changes. This may indicate whether a link is connected to a single DTE or another multi-user segment. The approximate minimum time for rollover of this counter is 81 hours.



Event and Alarm Messages

What Is in This Chapter

This chapter lists the types of events and alarms generated by 3Com PortSwitch Hubs and provides any probable cause messages corresponding to these alarms.

Device Events and Alarms

Table 4-1 lists the SPECTRUM database directory paths (in bold) and the messages displayed for the Event Log and Alarm Manager when applicable.

Table 4-1. 3Com PortSwitch Hubs Events and Alarms

| Message in the Event Log | Alarm View Probable Cause Message |
|--|-----------------------------------|
| CsEvFormat/Event00010306 {d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m}, has been cold started. (event [{e}]) | No Probable cause message. |
| CsEvFormat/Event00010307 {d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m} has been warm started. (event [{e}]) | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|---|--|
| <p>CsEvFormat/Event00010308</p> <p>{d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m}, has detected a communication Link Down. (event {{e}})</p> | <p>CsPCause/Prob00010308</p> <p>Communication link is down.</p> |
| <p>CsEvFormat/Event00010309</p> <p>{d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m}, has detected a communication Link Up. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event0001030a</p> <p>{d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m}, has detected an Authentication Failure. (event {{e}})</p> | <p>CsPCause/Prob0001030a</p> <p>Authorization failure. Other user is trying to connect to device with an invalid community string.</p> |
| <p>CsEvFormat/Event0001030b</p> <p>{d "%w- %d %m-, %Y - %T"} A(n) {t} device, named {m}, has detected an EGP Neighbor Loss. EGP Neighbor IP address is {O 1}. (event {{e}})</p> | <p>CsPCause/Prob0001030b</p> <p>Lost contact with EGP neighbor.</p> |
| <p>CsEvFormat/Event00ea0013</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) Is informing the manager that the device is still operating. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0014</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) has had its configuration modified via the ascii agent. This may be through Telnet or the V24 port. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0015</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) An user "{S 1}" has attempted a login and failed three times. The cause was {T comstat 2}. (event {{e}})</p> | <p>No Probable cause message.</p> |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|---|-----------------------------------|
| <p>CsEvFormat/Event00ea0016</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) a gauge {O 1} has gone over its threshold {I 3}. The sample period was {I 5} and the number of samples used is {I 7}. (event [{e}])</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0017</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) a gauge {O 1} has gone below its recovery level {I 3}. The sample period was {I 5} and the number of samples used is {I 7}. (event [{e}])</p> | <p>No Probable cause message.</p> |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|---|---|
| <p>CsEvFormat/Event00ea0018</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) has reported that a sytem load request has failed. The reason was {T slstat 1}. (event {{e}})</p> | <p>CsPCause/Prob00ea0018</p> <p>When a system load is requested, a response is returned immediatly and the load proceeds in the background. If an error is detected this trap is generated indicating the reason why in the status, as follows:</p> <ul style="list-style-type: none"> (1) file not found; (2) access violation; (4) illegal TFTP operation; (5) unknown transfer ID; (7) no such user; (8) no response from the load server; (9) the download could not be started because of a lack of resources; (10) the length of a record differs from that implied by the value of the record length field; (11) the record type is not recognised; (12) record checksum error; (13) the device type in the file is incorrect; (14) the software image is not suitable for this version of the hardware; (15) the first record in the file was not a file header; (16) The byte count reported in the file trailer record differed from the number of bytes actually received. <p>When loading a new image into the device containing the agent itself, the agent first reads the beginning of the image file to test if it is accessible and contains a valid image. If there is anything wrong, this trap is generated, no download is performed and the device continues to run uninterrupted. If this check is successful the download proper is begun. Should that fail, it is simply retried continuously until either an attempt succeeds or the device is reset.</p> |
| <p>CsEvFormat/Event00ea0019</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports the endstation table has moved to the modified state. (event {{e}})</p> | <p>No Probable cause message.</p> |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|---|
| <p>CsEvFormat/Event00ea0020</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports the endstation table is full. (event {{e}})</p> | <p>CsPCause/Prob00ea0020</p> <p>When the end-station table becomes full this trap is generated.</p> |
| <p>CsEvFormat/Event00ea0025</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the slot. port. index {I 2} mau has entered or left the available state. current state is {T maustate 1}. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0027</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a new entity of service type {T service 1} has been installed at location {I 2}. The service ID is {I 5} and the entity has name {S 9} and {I 7} ports. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0028</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that an entity of service ID {I 1} and entity name {S 3} has been removed. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0029</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that an entity of service ID {I 1} at the slot. index is {I 4} has changed its facilities for its type {T etype 3} to {I 5}. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0030</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a card is added to the service {I 1}. (event {{e}})</p> | <p>No Probable cause message.</p> |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|---|---|
| <p>CsEvFormat/Event00ea0031</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a card has been removed from the service {I 1}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0032</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a physical entity of service id {I 1} has changed state to {T estate 3}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0033</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the power requirements of the entities in the chassis exceed the power capacity of the power supplies. (event [{e}])</p> | <p>CsPCause/Prob00ea0033</p> <p>The combination of the power requirements of all the entities in the chassis has been calculated to exceed the power capacity of the power supplies present in the chassis.</p> |
| <p>CsEvFormat/Event00ea0034</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the management card temperature sensing device is reporting DANGER. (event [{e}])</p> | <p>CsPCause/Prob00ea0034</p> <p>Mounted on the Management card is a temperature sensing device. This device provides three output levels: OK, WARM and DANGER. DANGER causes a trap to be generated.</p> |
| <p>CsEvFormat/Event00ea0035</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the status input {I 2} of name {S 3} has changed state to {I 1} (1=Open, 2=Closed). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0036</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that port {I 2} has learned a station address {H 3}. (event [{e}])</p> | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|---|
| <p>CsEvFormat/Event00ea0037</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has detected a security violation. (event {{e}})</p> | <p>CsPCause/Prob00ea0037</p> <p>This trap indicates that this port has detected security violation.</p> |
| <p>CsEvFormat/Event00ea0038</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had its partition state changed to {I 1} (1=Partitioned, 2=UnPartitioned). (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0039</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had its link state changed to {I 1} (1=Present, 2=Absent). (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0040</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had its Admin state changed to {I 1} (1=Enabled, 2=Disabled) by a gauge. (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0041</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had its Bandwith Used threshold {I 3} exceeded. The Bandwith used is {I 1} (event {{e}})</p> | <p>No Probable cause message.</p> |
| <p>CsEvFormat/Event00ea0042</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had its Errors/10000 packets threshold {I 3} exceeded. The Errors/10000 packets is {I 1} (event {{e}})</p> | <p>No Probable cause message.</p> |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|---|-----------------------------------|
| <p>CsEvFormat/Event00ea0043</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} in a resilience pair has had a change in state and the active port has been switched. The state of the main port is {I 1} the state of the backup port is {I 3} (1=Failed, 2=OK, 3=OK-And-Active) (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0044</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} in a resilience pair has had a change in state and the active port has not been switched. The state of the main port is {I 1} the state of the backup port is {I 3} (1=Failed, 2=OK, 3=OK-And-Active) (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0045</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a topology change has ocured in the ring at time {I 1}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0046</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the main rings state has changed to {T rstate 1}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0047</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the backup rings state has changed to {T rstate 1}. (event [{e}])</p> | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|-----------------------------------|
| <p>CsEvFormat/Event00ea0048</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that either the main and backup rings have wrapped or that the wrap condition has been removed. The new wrap state is {I 1} (1=NotWrapped, 2=Wrapped). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0049</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a MAU port {I 2} has had a change in attach state and the admin state of the port is disabled. The new attach state is {I 1} (1=Absent, 2=Present). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0050</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the Ring In port has changed state while the mode is fail-safe. The new Ring In state is {I 1} (1=Open, 2=Wrap). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0051</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the Ring Out port has changed state while the mode is fail-safe. The new Ring Out state is {I 1} (1=Open, 2=Wrap). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0060</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a MAU port {I 2} has changed state due to operation of ZDL or DRI. The new MAU port state is {I 1} (1=Enabled, 2=Disabled). If disabled the reason is {I 3} (1=None, 2=Mgmt, 3=ZDL, 4=DRI). (event [{e}])</p> | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|-----------------------------------|
| <p>CsEvFormat/Event00ea0061</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the managed agent has recieved a reply to a poll after a sequence of four or more un-successfull polls. The address is {S 1} with protocol {T pprot 3}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0062</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the managed agent has not recieved a reply to a poll after a sequence of four un-successfull polls. The address is {S 1} with protocol {T pprot 3}. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0063</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the Resilient Backup Power Supply connected to this repeater has developed a fault. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0064</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that the Resilient Backup Power Supply connected to this repeater has recovered from a fault. (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0066</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has seen an unrecognised MAC address and is doing the following action {I 1} (2=Notify, 3=Disconnect). (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0067</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a repeater {I 2} has had its Bandwith Used threshold {I 3} exceeded. The Bandwith used is {I 1} (event [{e}])</p> | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|-----------------------------------|
| <p>CsEvFormat/Event00ea0068</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a repeater {I 2} has had its Errors/10000 packets threshold {I 3} exceeded. The Errors/10000 packets is {I 1} (event {{e}})</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0069</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a card {I 2} has had its Bandwith Used threshold {I 3} exceeded. The Bandwith used is {I 1} (event {{e}})</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0070</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a card {I 2} has had its Errors/10000 packets threshold {I 3} exceeded. The Errors/ 10000 packets is {I 1} (event {{e}})</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0071</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a new station has been learned. The station info is {I 2} (slot. port. MAC-Address) (event {{e}})</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0074</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a poll has been replied to from address {I 1}. (event {{e}})</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0075</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a poll has failed to be replied to from address {I 1}. (event {{e}})</p> | No Probable cause message. |

Table 4-1. 3Com PortSwitch Hubs Events and Alarms (Continued)

| Message in the Event Log | Alarm View Probable Cause Message |
|--|-----------------------------------|
| <p>CsEvFormat/Event00ea0078</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a security violation has occurred on port {I 2} (slot. port. MAC-Address). The port's admin status is now {I 3} (1=Enabled, 2=Disabled) (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0079</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had a change in auto partition state. The new state is {I 1}. (1=Partitioned, 2=Unpartitioned) (event [{e}])</p> | No Probable cause message. |
| <p>CsEvFormat/Event00ea0080</p> <p>{d "%w- %d %m-, %Y - %T"} A 3Com Hub, {t} (name {m}) reports that a port {I 2} has had a change in link state. The new state is {I 1}. (1=Partitioned, 2=Unpartitioned) (event [{e}])</p> | No Probable cause message. |



Application Views

What Is in This Chapter

This chapter describes the device-specific applications listed below for 3Com PortSwitch Hubs. The corresponding application model type is shown in parentheses.

- 3Com Security Application (3ComSecApp)
 - Local SNMP Application (3ComSnmpApp2)
 - Power Supply Application (3CompowerApp)
 - System Loader Application (3ComsysLdApp2)
- 3Com RMON Extensions Application (3ComRmonExtApp)
- 3Com SNMP Extensions Application (3Com1516ExtApp)
- 3Com SuperStack Configuration Application (3ComSSConfApp)
- 3Com Serial Interface Application (3ComserIfApp)
 - Interface Extensions Application (3ComExtIfApp)
 - Port Security Application (3ComSecPortApp)
 - Mrm Resilience Standby Application (3CommrmResApp)

Common Applications

This device supports the following common applications described in the MIB II Applications Reference:

- MIB-II (SNMP2_Agent)
 - ICMP (ICMP_App)
 - IP (IP2_App)
 - System (System2_App)
 - TCP (TCP2_App)
 - UDP (UDP2_App)

The Standard RMON application is available if you purchase the associated service. This application is described in its management module guide.

Device Application View

This view shows the common and device-specific applications supported by this device and provides access to application-specific information.

See Chapter 1, [Introduction](#), for information on [Accessing SPECTRUM Views](#).

[Figure 5-1](#) provides an example of an Application view in the icon mode.

[Figure 5-2](#) provides an example of an Application view in the list mode.

To change the display mode, select View -> Mode -> List or Icon.

Figure 5-1. Device Application View (Icon Mode)

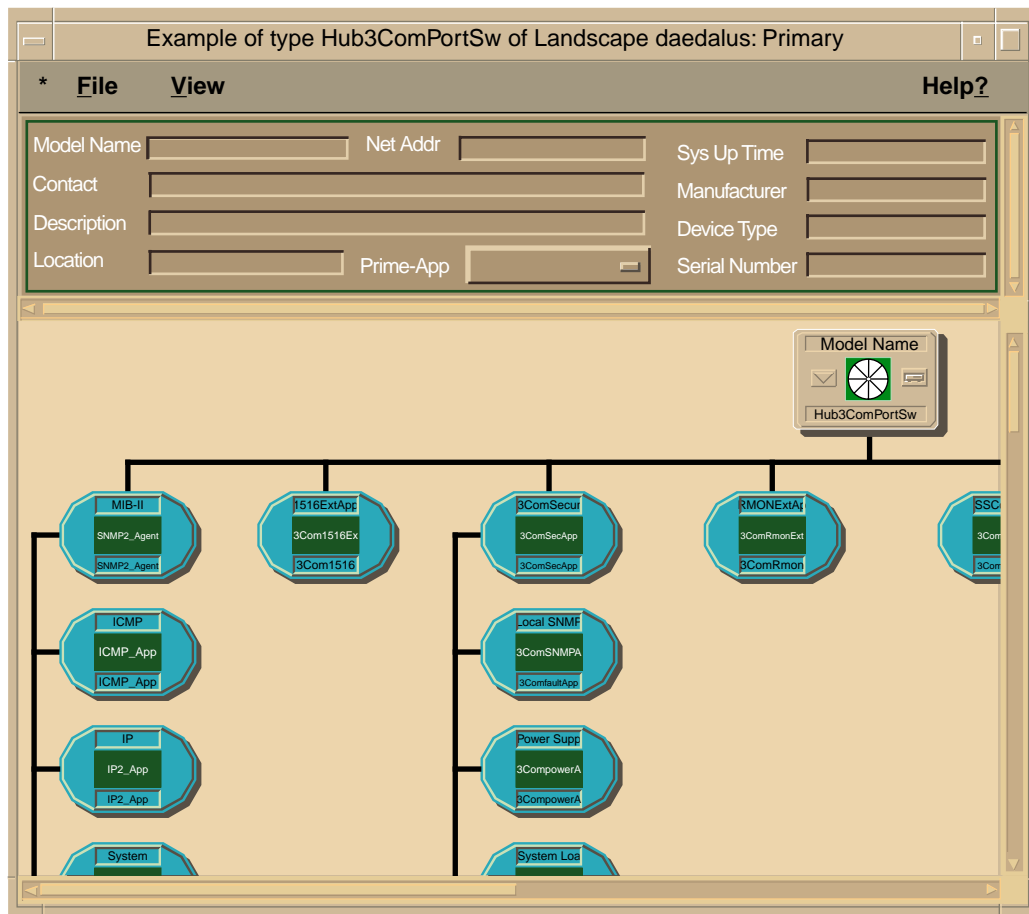
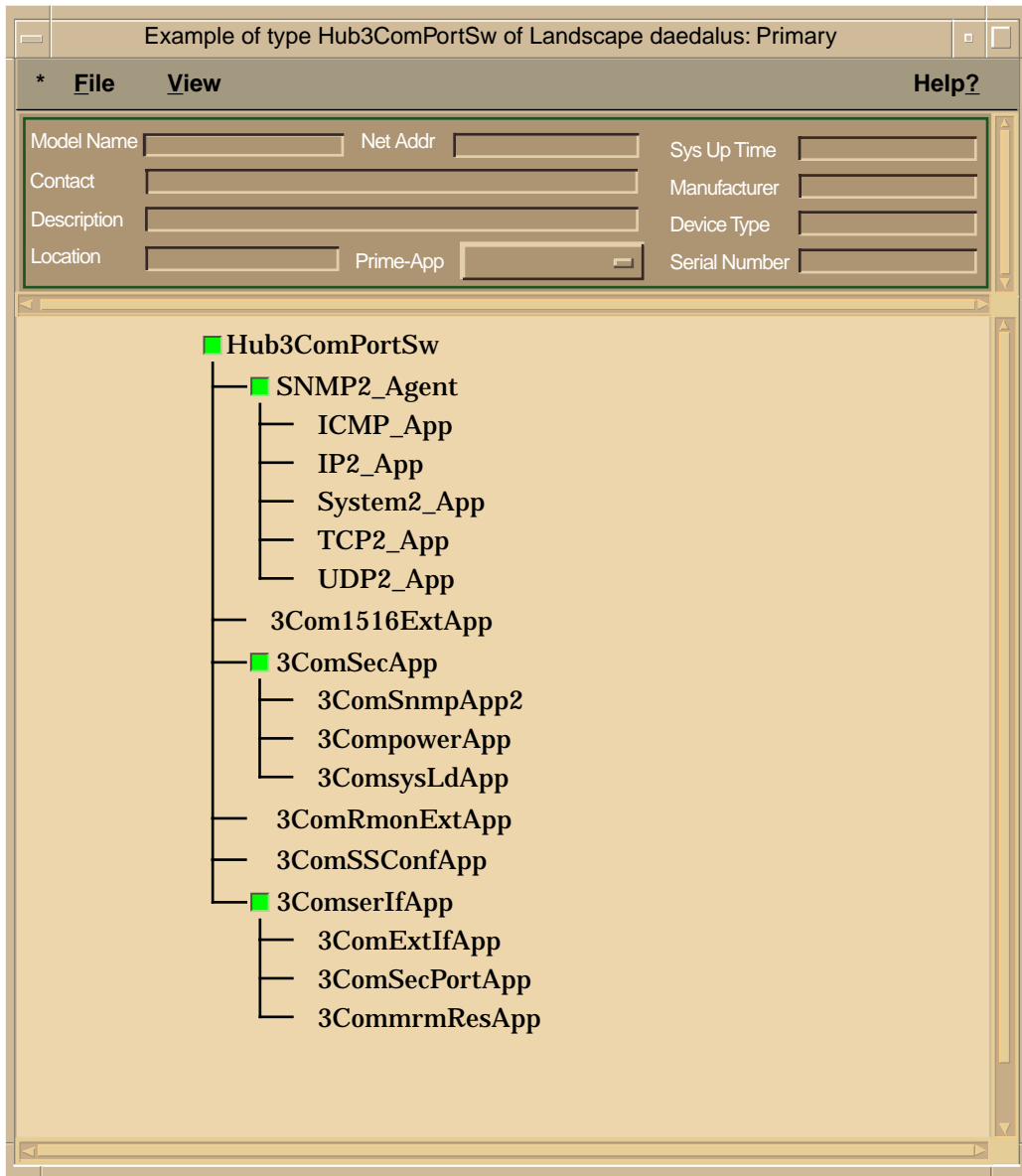


Figure 5-2. Device Application View (List Mode)



Security Application

This application supports security features on the device. The model type name is 3ComSecApp.

Security View

This view contains the Security Enable Table and the following buttons:

Security Users

Accesses the Security Users Table view, described below.

Security Audit Log

Accesses the Security Audit Table view, described below.

Security Enable Table

This table displays permission for access to the device from each of its interfaces. Users are assigned security levels in the Security Users Table view.

Security Level

Displays the security level for the table. This field also acts as the index for the table. Possible values are Monitor, SecureMonitor, Manager, Specialist, and Security.

The following fields have possible values of Enable, Disable, PermanentlyEnabled, and PermanentlyDisabled. You can change these fields from the Security Enable Table Entry view.

Community

The community SNMP access permission.

Secure

The secure SNMP access permission.

Terminal

The local terminal access permission.

Telnet

The Telnet access permission.

FrontPanel

The front panel access permission.

Security Users Table view

This view allows you to add and delete users and to modify their security levels. The default users, Monitor, Manager, and Security, cannot be deleted. Double-clicking an entry in this table displays the Security Enable Table Entry view.

This table displays the following:

Status

Displays the user status. Possible values are Valid and Invalid. A value of Invalid means the user can no longer access the device. The default users, Monitor, Manager, and Security, can not have their status changed to Invalid. You can update this field in the Security Users Table Entry view.

Name

Displays the user name. This is the index for the table. Empty user names are not allowed.

Level

Displays the user access level. This access level defines the scope of management this user can perform. The levels of security are the same as in the Security Enable Table described on Page 5-5. You can update this field for all users except the default users.

Password

Displays the password required for user confirmation when access is made from the local serial port, the front panel, or through Telnet. The Password field is only available in the Security Users Table Entry view and is a write-only field.

Community

Displays a string identifying the user when access is through the original community-based SNMP (RFC1157). You can update this field.

Local Party

Displays the local party identity of the user when access is through secure SNMP. You can update this field.

Manager Party

Displays the manager party identity of the user when access is through secure SNMP. You can update this field.

Add Entry

Allows you to add entries to the table.

Security Audit Table View

This view displays a record of all updates to the managed database of the device. When the log is full the oldest entry is overwritten. Therefore, this log should be read regularly by a management device so that a permanent record of the management history can be stored.

This view cannot be modified. It displays the following:

Index

Displays the index number for an entry. This is a value between 1 and 65535, which resets to 1 after reaching 65535.

Time

Displays the time of the last update request, in hundredths of a second since the last system restart.

User

Displays the name of the user making the request.

Object

Displays the object identifier for the item being updated. This includes any qualifier for the object.

Value

Displays the new value for the item.

Result

Displays the result of the update request. See [Table 5-1](#) for possible responses.

Table 5-1.

Security Audit Log Results

| Result | Meaning |
|--------------------|--|
| Success | Update succeeded |
| Pending | Update not yet completed |
| Too-big | Value rejected as too big for the item |
| Failed | Value rejected by access function |
| Locked | Item is locked by another manager |
| Security-violation | User does not have privileges for this request |
| No-such-function | Item is read-only |
| No-such-item | Item does not exist |

Local SNMP Application

This application provides access to the Local SNMP view, allowing you to set SNMP Traps for this device. The model type for this application is 3ComSnmpApp2.

Local SNMP View

This view contains the following:

Next Free Index

Displays the index value for the next table entry.

Add Entry

Accesses the Add SNMP Table Entry view, which allows you to set the following values for a new entry.

SNMP Trap Table

This table stores the destination addresses of SNMP managers that wish to receive traps from this device. Double-clicking an entry in this table displays the SNMP Trap Table Entry view in which you can update values.

Index

Displays the index for this entry.

Destination

Displays the network address of the device to which the SNMP traps will be sent.

Protocol

Displays the transport protocol to use when sending the trap. Possible values are IP, IPX, and None.

Community

Displays the SNMP community string to be used when sending the trap. You can update this field.

Category

Displays the categories of traps in which the Destination is interested.

[Table 5-2](#) shows possible values and descriptions.

Table 5-2. SNMP Trap Categories

| Value | Description |
|-------------|-----------------------------------|
| '00000001'h | High priority configuration traps |
| '00000002'h | Low priority configuration traps |
| '00000004'h | High priority security traps |
| '00000008'h | Low priority security traps |
| '00000010'h | Alarms and polling traps |
| '00000020'h | Regular heartbeat traps |
| '00000040'h | End Station Table traps |
| '00000080'h | Reserved |
| '00000100'h | Physical entity traps |
| '00000200'h | Facility traps |
| '00000400'h | Service related traps |
| 0xFFFFFFFF | Enables all traps |

Throttle

The maximum rate at which the Destination is willing to receive traps, in milliseconds. A value of 2000 will limit the traps to one every 2 seconds. A value of 0 indicates that no trap throttling is required. You can update this field.

Row Status

The status for this entry. [Table 5-3](#) shows possible values and descriptions.

Table 5-3. SNMP Trap Row Status Values

| Value | Description |
|--------------|--|
| Active | This status can be displayed and set |
| NotInService | This status can be displayed and set |
| NotReady | This status can be displayed but not set |
| Create&Go | Used only when adding entries |
| Create&Wait | Used only when adding entries |
| Destroy | Deletes the entry |

Power Supply Application

This application provides access to the Power Supply Configuration view, which presents a table containing power supply information for this device. The model type for this application is 3CompowerApp.

Power Supply Configuration View

This view contains the Power Supply Table and a description of how power supply information is generated.

Power Supply Table

This table displays the status of all power supply units in the stack. Double-click an entry in this table to display the Power Supply Table Entry view for that entry. You can not update information in either view.

Index

Displays the index number of the unit in question.

RBS Present

Indicates if a Resilient Backup Power Supply unit is attached to the unit.

RBS Status

Displays the status of the Resilient Backup Power Supply attached to the unit. [Table 5-4](#) shows possible values and descriptions.

Table 5-4. Power Supply RBS Status Values

| Value | Description |
|------------------|--|
| RBSNotApplicable | The unit does not support Resilient Power Supplies |
| RBSOK | The Resilient Power Supply is functioning with no faults |
| RBSFault | The Resilient Power Supply has a fault |

System Loader Application

This application provides access to the System Loader View, which presents a table containing a history of software images loaded on this device. The model type for this application is 3ComsysLdApp2.

System Loader View

This view contains the System Loader Table. Double-click an entry in this table to display the System Loader Entry view in which you can update the Filename and Server Address fields for that entry and initiate downloads.

System Loader Table

This table is used to control the loading of new software images to the device controlled by the management agent. By convention, the first entry in the table (Type=System) controls the loading of the device containing the management agent itself. Agents that have no subsidiary devices will have only this entry in the System Loader Table. For agents with subsidiary devices, the other entries control the loading of software into these devices.

Type

Displays the type of device to load. Simple agents contain only one device type, which is always "System". Subsidiary agents have the type "Component". In general, a "System" device is one that monitors and manages the operation of component devices.

Inst

Displays the instance of the device type in the Type field.

Status

Displays the status of the last system load operation for this device, or the reason for its failure. [Table 5-5](#) shows possible status settings.

Table 5-5. System Loader Status States

| State | Message |
|-----------------|--|
| “Normal” states | LoadPending LoadActive Success Paused |
| Error states | FileNotFound AccessViolation IllegalOperation UnknownTransferID NoSuchUser NoResponse NoResource RecLenMismatch InvalidRecType ChecksumError WrongDevice WrongHardwareVersion NoFileHeader ByteCountError InvalidProgAddress EraseFailed ProgFailed ModInvalidAddress ModChecksumError ModTimeout ModBusy ModRemoved ModNoResource ModFailure |

SWVers

Displays the version of the software running on this device.

HWVers

Displays the revision number of the hardware of this device.

Filename

Displays the name of the file that contains the software image to load or that was last loaded. You can update this field.

Server Addr or Server IP

The IP address of the host containing the file which contains the software image. You can update this field. This can be either an IP address in the format nnn.nnn.nnn.nnn, or an IPX address in the format

AABBCCDD:112233445566. An error is returned if the agent does not support the download protocol implied by the address format.

Protocol

Displays the protocol to use when downloading the software. This is determined from the format of the address in the Server Addr field.

Load

This field is only available in the System Loader Entry view. It is always displayed as NoAction. Set the value to StartDownLoad to load the new software as specified in this entry.

RMON Extensions Application

This application supports the RMON Extensions View. The model type for this application is 3ComRMONExtApp.

RMON Extensions View

This view contains a Poll Table and the following buttons:

Host Tables

Accesses the [RMON Extensions Host View](#) described below.

Alarm Event Tables

Accesses the [RMON Extensions Event Alarm View](#) described below.

Poll Table

This table appears in two windows on the RMON Extensions View. It contains the following information:

Index

Identifier of a row in the Poll Table.

IP Address

Displays the network address of the device to monitor. Typically this is an IP, MAC, or IPX address. The following formats can be used.

- IP nnn.nnn.nnn.nnn - dotted format
- MAC AABBCCDDEEFF - hex notation
- IPX AABBCCDD:AABBCCDDEEFF - network : node

Protocol

Displays the protocol used to monitor the device. Writing to the address field causes a default protocol value, derived from the format/content of the address, to be setup. If the protocol is not supported or is not compatible with the address, an error is returned when the status is set to valid. Possible values are unknown, ip, ipx, netBIOS, appleTalk, and amp.

Timeout

Displays the time-out value in hundreds of a second for each request packet.

Attempt

Displays the number of unsuccessful requests necessary before deciding that the device is not responding.

Period

Displays how often the device will be polled, in seconds. The first poll is sent as soon as the status becomes valid.

Last Request

Displays the time, counting from the last system reset, at which the most recent request packet was sent.

LastReply

Displays the time, counting from the last system reset, at which the most recent request packet was received.

Information

After each poll, this field is updated with protocol-specific information from the packet exchange. For the IPX protocol, this displays the number of router hops made by the poll response packet. For the IP protocol, this displays the value of Time-To-Live from the IP packet header.

Success Index

Displays the index of the event that is used when a successful poll is made after a number of unsuccessful ones. If this value is zero, no event will be generated.

Failure Index

Displays the index of the event that is used when an unsuccessful poll is made after a number of successful ones. If this value is zero, no event will be generated.

Owner

Displays the owner of the device. RMON OwnerString conventions are used here to help control multi-manager situations.

Status

Displays the creation or deletion status of entries in the PollTable. RMON EntryStatus conventions are used.

RMON Extensions Host View

This view contains MAC to Port and Port to MAC tables. These tables provide cross references between the MAC address of a port and the complete Object ID string that refers to that port.

RMON Extensions Event Alarm View

This view contains the Alarm Table and the Event Table. The Alarm Table cross references the index number for an alarm with its peak value. The Event Table cross references the index number for an event with its action. Double-click the Event Action field to edit it.

SNMP Extensions Application

This application supports the SNMP-Repeater Configuration View. The model type name for this application is 3Com1516ExtApp

SNMP-Repeater Configuration View

This view contains the following buttons and fields:

Reset

Allows you to reset the repeater. Resetting does not affect the management counters or the Administrative State, but it does cause a disruptive Self-Test. As a result of this action a Reset trap may be sent. This action may result in the loss of packets. Possible values are noReset and reset.

NonDisrupt Test

Selecting selfTest performs an agent-specific, non-disruptive self-test. After performing this test the agent will update the repeater health information. If a change in the repeater health has occurred, the agent will send a trap. Possible values are noSelfTest and selfTest.

Operational Status

Displays the operational state of the repeater. In the case of multiple kinds of failures (for example, a repeater failure and a port failure), this value will reflect the highest priority failure.

See [Table 5-6](#) for possible values and their meanings.

Table 5-6. SNMP-Repeater Operational Status Values

| Value | Description |
|----------------|--------------------------|
| other | Undefined or unknown |
| ok | No known failures |
| rptrFailure | Repeater related failure |
| groupFailure | Group related failure |
| portFailure | Port related failure |
| generalFailure | An unspecified failure |

Health Text

Displays a string that provides information on the operational state of the repeater. This may be used to provide detailed failure information or instructions for problem resolution.

Partitioned Ports

Displays the number of ports in the repeater whose current state meets all the following criteria:

- The Port Operational Status does not have the value notPresent
- The Port Administrative Status is enabled
- The Port Auto Partition State is set to autoPartitioned

Group Capacity

Displays the number of groups that can be contained within the repeater. Within each managed repeater, groups are numbered from 1 to this number. Some groups may not be present in a given repeater, in which case the actual number of groups will be less than this number.

In practice, this will generally be the number of modules, cards, or boards that can fit in the physical repeater enclosure, and the group numbers will correspond to numbers marked on the physical enclosure.

Reconfigure Application

This button applies the current settings.

rfc1516 Extensions

This button accesses the RFC1516 Extensions view.

RFC1516 Extensions View

This view contains the RFC1516 Extensions Table, which displays information on the configuration of the ports on the device. Double-click any of the table entries to access the RFC1516 Extension Entry view, from which the Part Event, Link Event and Repeater Num can be modified.

RFC1516 Extensions Table

This table contains the following fields:

Index

Displays the specific port within the stack in the format "module.port".

Part Even

Displays whether an RMON event is generated when the port partition state changes. If no event is generated, this will be zero. The default value will be zero for point-to-point fiber and copper links like UTP, 10BaseF, etc. For multi-drop links, this will default to sending a trap and logging an event in the RMON log table.

LinkState Event

Displays the RMON event generated when the link signal is lost for this port. If no event is required, this object will be zero. The default value is zero.

Module

This attribute indicates whether the port is a modular port or not. Possible values are Unknown, Modular Port, and Not Modular Port.

Function

Displays the function of the port. Possible values are Unknown, Repeater, and Bridge.

Repeater Num

Displays the repeater to which this port is connected in a multiple repeater system. Setting this to a value that is illegal for a particular repeater will result in an error code being returned. By default each port is connected to a default repeater.

Each repeater in the stack is represented in the system by an entry in the interface table. To switch a repeater port between different repeaters, change the value of the interface index to the new value. An error is returned if the value cannot be used; for example, using an index number that does not represent a repeater, or attempting to connect to a repeater that is not in the same unit.

Allowed Reprs

Displays the repeaters to which a particular port may be connected.

This is a sequence of 16-bit numbers, each a pair of octets. Each encoded value represents a repeater. The value of the field Repeater Num may be set to any of the values in this list.

For example, is a port can be connected to repeaters 55, 92, and 333, the encoding would be:

| Repeater 55 | Repeater 92 | Repeater 333 |
|-------------|-------------|--------------|
| 00.37 | 00.5c | 01.4d |

The final value would be 00.37.00.5c.01.4d.

Conn Type

Displays the connector type. Possible values are Unknown, RJ45, Telco, ST, SMA, Female-DType-15, BNC, SC, Male-DType-15, and Cascade.

SuperStack Application

This application supports the SuperStack Configuration view. The model type name for this application is 3ComSSConfApp.

SuperStack Configuration View

This view provides the SuperStack Table. Double-click any field to access the Stack Config Entry view, in which you can modify the Name and Attention settings of a device.

Index

Displays a number used to identify individual devices in the stack. This value will usually be contiguous but gaps may be present due, for example, to unpowered devices.

Address

Displays the physical (MAC) address. Note that the index value can change if devices are inserted into the stack, but that the physical address will not.

Last Reset

Displays the time, in hundredths of a second, since this device was last reset. If a device is not operational, this will be zero.

Type

Displays a number that represents this type of device in the MIB.

The values of this integer are administered by allocating a MIB object identifier for each type of unit from a common branch. The value of this object is then the last level in that identifier. The values are defined in this MIB

module, and unlikely to be contiguous. If a type value is not available for this device, this will return zero. There are two reasons why this value may not be available through this view of the MIB; the device may not currently be active, or the information is only available through the device's own agent.

Description

Displays a text string that describes the device. If it cannot provide a name, this will be empty.

Name

Displays a simple text string that can be used to assign a name to a device. By default this string is empty. If a management application writes to this field, the device will store the string in non-volatile storage.

State

Displays the state of a unit in the stack. Possible values are shown in [Table 5-7](#):

Table 5-7. SuperStack Table State Values

| Value | Description |
|------------------|--|
| unitInactive | The unit fails to send out periodic messages, but still appears to be in the stack. |
| unitOperational | The unit sends out periodic messages indicating that it is operational. |
| unitLoading | The unit is in a special mode, which is unmanaged, while loading a new image. If the stack contains units which can download an image while still being managed, this will report 'unitOperational'. |
| unitStateUnknown | The unit is in an unknown state. |

Management

Displays the management method used to access this unit. Possible values are shown in [Table 5-8](#):

Table 5-8. SuperStack Table Management Values

| Value | Description |
|-------------|---|
| Unknown | The unit is either faulty or not managable. |
| Distributed | The unit can be managed, but may or may not have an active comm stack. If it does, the address for that agent can be determined from the address table. |
| Intelligent | The unit has its own SNMP agent, which is accessed seperately from the SuperStack management. |

Capabilities

Displays the capabilities of the device. This is used in conjunction with the upgrade level of the stack to enable a management application to correctly enable and disable the various features of the application depending on the capabilities of the unit.

The object is an octet string, where each octet represents a capability. Possible values are shown in [Table 5-9](#):

Table 5-9. SuperStack Table Capability Values

| Value | Description |
|-------|--------------------------------------|
| 01 | Full RMON |
| 02 | 3Com Proprietary repeater resilience |
| 03 | 3Com Repeater Security MIB |

If a unit has a value of '02 03' for this object, then it supports repeater resilience and security, but no other features such as RMON.

Prom Version

Displays the PROM version number on the device. If the unit has no PROM, does not correctly report the PROM version, or is currently non-operational, this will be empty.

HW Version

Displays the hardware version number of the device. If the hardware version is not available, this will be empty.

SW Version

Displays the software version number of the device. If a unit does not make its version number information available, or the device has no software, this will be empty.

Serial Number

Displays the serial number for the device.

Attention

Displays if there is an attention mechanism on a device. Possible values are No Attention and Attention.

Some units contain a mechanism for drawing attention, which is useful for directing maintenance personnel. This is often done by flashing a special LED.

Mgmt If

If the Management type is Distributed, this field displays the entry in the interface table which represents the potential management interface for the device. If this is zero, there is no management available for the device.

Slip Mgmt

If the Management type is Distributed, this field displays the entry in the interface table which represents the potential SLIP (serial port) management interface for the device. If this is zero there is no SLIP access port available on the device.

Serial I/f Application

The Serial Interface application supports the V.24 Port Config view, and serves as the anchor point for the Interface Extensions application, the Port Security application, and the Mrm Resilience application. The model type for this application is 3ComserIfApp.

V.24 Port Config View

This view contains the V.24 Port Config Table and Slip Port field.

Slip Port

The serial port which SLIP can use to send and receive packets. If this field has a value of 0xffff, then SLIP can not send or receive packets. You can update this field.

V.24 Port Config Table

This table describes the configuration parameters for the V.24 ports. Double-click an entry to access the V.24 Configuration Table Entry view in which you can update the selected entry.

This table contains the following:

Id

Displays the Port ID and index for this table.

Conn

Displays whether the port is connected Local to a terminal or terminal emulator, or Remote to a modem. If it is Local no interface signals need to be asserted unless by other management options. If it is Remote, at least DSR is required.

Auto Con

Displays Enabled if the next four parameter values are determined automatically from an initial character sequence entered by the user. Displays Disabled if the parameter values are entered explicitly.

Speed

Displays the receive and transmit speed of the port if AutoConfig is disabled. Different speeds for transmit and receive are not possible.

Char Size

Displays the character size if AutoConfig is disabled. Possible values are size7 and size8.

Stop Bits

Displays the number of stop bits, either 1, 1.5, or 2, if AutoConfig is disabled.

Parity

Displays the parity option to use if AutoConfig is disabled.

DSR Cont

This field only applies to Local connection types. It displays whether DSR needs to be asserted for a local connection to be made and if the connection needs to be released if the DSR is seen deasserted.

DCD Cont

This field only applies to Local connection types. It displays whether DCD needs to be asserted for a local connection to be made and if the connection needs to be released if the DCD is seen deasserted.

Flow Cont

Displays the flow control protocol to be used.

Update

Set this field to Change using the V.24 Configuration Table Entry view to force the port to update its parameters.

Interface Extensions Application

This application provides the Interface Extensions view. The model type for this application is 3ComExtIfApp.

Interface Extensions View

This view contains the Interface Extensions Table. Double-click an entry to access the RFC1516 Extension Entry view, which allows you to modify an interface.

If

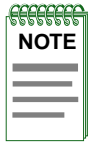
Displays the interface number.

Enable Bootp

Displays whether BootP is enabled or not.

IP Address

Displays the IP address for this interface.



This parameter can be changed to a new IP; however, changing this parameter by itself has no effect on the IP stack configuration and this value will not automatically be stored for the next restart.

The correct sequence is to make any changes, then Apply Changes. When Apply Changes is set to 'apply', the IP stack will store the changes permanently and will restart the stack.

Netmask

Displays the subnet mask for this interface. See the description of IP Address for a more information.

Default Router

Displays the IP address of the default router used by this interface. See the description of IP Address for a more information.

Apply Changes

This causes changes to the IP configuration of the device to be made permanent, reconfigures the stack to use the parameters, and optionally restarts the stack using these parameters. Store And Apply will store changes in non-volatile memory and reconfigure the stack to use those parameters.

Applying the new parameters may cause the device to reset. In this case there will be a delay of a few seconds before the new configuration is adopted, which will allow the SNMP response to the set request to be returned.

The correct procedure when changing IP configuration is to set all individual parameters and then apply changes. If the device resets before a Store And Apply is done, it will lose the changes.

Possible values are Not Applicable and Store And Apply.

Enable IPX

Displays whether IPX is enabled or not.

Possible values are Not Available, Enable, and Disable.

Name

Displays a short text name associated with an interface. Not all interface types can be named. If an instance of this object does not exist for a particular interface, then that interface cannot be named.

Port Security Application

This application provides access to the the Port Security View. The model for this application is 3ComSecPortApp.

Port Security View

This view contains the following security information:

Port Security Table

This table displays the security status of each port. A port can have a number of authorized MAC addresses, which are displayed in the Port Address Table.

Double-click any entry to edit information for that row.

Slot

Displays the unit on which a given port resides.

Port

Displays the number of the port in question.

Mode

Displays the learning and security modes of the port. Possible values are No Restrictions, Continuous Learning, Auto Learn, and Secure. No Restrictions disables all learning and security. Continuous Learning means that addresses are learned continually. If more addresses are learned than are permitted on the port, the older entries will be aged out. Auto Learn deletes all addresses for this port, learns addresses up to the number permitted, then sets Port Mode to secure. Secure disables learning.

When in a learning mode, Num Addr displays the maximum number of addresses that can be learned on the port. This can be set by the user.

A trap is sent whenever a station has been learned, and a different trap is sent whenever a packet is received from an unauthorized station.

Need To Know

Displays the way frames are to be forwarded to this port. [Table 5-10](#) shows possible values and their meanings.

Table 5-10. Port Security Need To Know Values

| Value | Meaning |
|---------------|--|
| Not Available | Need to know is not available. This is not changeable. |
| Disabled | No restrictions are in place and all frames get sent. |

Table 5-10. Port Security Need To Know Values (Continued)

| Value | Meaning |
|---|---|
| Need To Know Only | Frames are restricted to those addressed to authorized devices. |
| Need To Know With Broadcast Allowed | Frames are restricted to those addressed to authorized devices and broadcast frames. |
| Need To Know With Multicast Allowed | Frames are restricted to those addressed to authorized devices, broadcast and multicast frames. |
| Permanent Need To Know Only | Frames are restricted to those addressed to authorized devices. This is not changeable. |
| Permanent Need To Know With Broadcast Allowed | Frames are restricted to those addressed to authorized devices and broadcast frames. This is not changeable. |
| Permanent Need To Know With Multicast Allowed | Frames are restricted to those addressed to authorized devices, broadcast and multicast frames. This is not changeable. |

Intr Action

Displays the action taken if an unauthorized device transmits on this port.

Possible values are Not Available, No Action, and Disable Port.

Num Addr

Displays the maximum number of addresses that the port can learn or store. Reducing this number may cause some addresses to be deleted. This value is set by the user and cannot be automatically changed by the agent. This value must be less than or equal to Max Addr.

Num Addr Stored

Displays the number of addresses that are currently in the Port Address Table for this port. If this object has the same value as Num Addr, no more addresses can be authorized on this port. This value must be less than or equal to Num Addr.

Max Addr

Displays the maximum value that Num Addr can be set to. It is dependent on the system resources available, and so may change as system processes change. If resources are shared between ports, this value could increase or decrease as resources are shifted around.

Port Address Table

This table displays the MAC addresses assigned to each port. Addresses will normally be defined as authorized, and describe the devices which are permitted to transmit and receive on the corresponding port.

Slot

Displays the slot number of the port in question.

Port

Displays the port number of the port in question.

MAC Address

The MAC address of a station assigned to this port.

Row Status

The status for this entry.

[Table 5-11](#) shows possible values and descriptions.

Table 5-11.

Row Status Values

| Value | Description |
|--------------|--|
| Active | This status can be displayed and set |
| NotinService | This status can be displayed and set |
| NotReady | This status can be displayed but not set |
| Create&Go | Used only when adding entries |
| Create&Wait | Used only when adding entries |
| Destroy | Deletes the entry |

Mrm Resilience Application

This application provides access to the Mrm Resilience Table view. The model for this application is 3CommrmResApp.

Mrm Resilience View

This view contains the Mrm Resilience Table and the following:

Flush Table

Setting this menu button to Flush empties the Resilience Table. Once flushed, no resilient links are configured. You can now configure new links.

Add Entry

This button opens the Add Resilient Table Entry view. Enter the Instance of the new pair and set the Under Mod field to Under-Mod. This creates an empty entry in the table. Double-click the entry to be able to enter the definition.

StandBy Map Table

This button opens the Mrm Resilience Standby Table.

Mrm Resilience Table

A device can be configured to have a number of “resilient pairs” 802.3 Point-to-Point connections; for example, UTP, which allows two repeaters to be connected in a resilient configuration. In such a pair, one port is the main port, the other the standby port. One of these ports is enabled and is the current active port, the other is present in case the active port fails. The device detects a failure and switches ports.

For a resilient pair definition to be valid, both ports must be on the same repeater. Also, the standby port must be configured to be “disabled on boot”; that is, it must recover from a power failure in a disabled state to prevent loops in the network.

This table allows creation and deletion of resilient pairs and provides status control and information. The entries are indexed on the repeater number and slot/port location of the main port.

Double-clicking an entry accesses the Mrm Resilience Table Entry View in which you can update the configuration of a resilient pair.

Repeater

Displays the repeater on which both ports in the pair are located.

Main Slot

Displays the slot number of the main port in the pair.

Main Port

Displays the port number of the main port in the pair.

Main State

Displays the state of the main port. [Table 5-12](#) shows possible values and descriptions.

Table 5-12. Mrm Resilience Main or Standby States

| Value | Description |
|-------------|---|
| Failed | Loss of signal to the port |
| OK | Port is capable of carrying traffic but is in the standby state |
| OKandActive | Port is active |

SBY Slot

Displays the slot number of the standby port in the pair. You can update this field using the Mrm Resilience Table Entry view.

SBY Port

Displays the port number of the standby port in the pair. You can update this field using the Mrm Resilience Table Entry view.

SBY State

Displays the state of the main port. [Table 5-12](#) shows possible values and descriptions.

Pair State

Displays the state of the resilient pair. Possible values are Operational and Invalid. When this field is Operational, all of the parameters in the entry are valid. When this field is Invalid, either information has been omitted, or the resilient pair rules are no longer valid because of a change in the configuration of the device, such as moving a card.

Mod State

Displays the Modification State of the resilient pair. You must set the Under Mod field in the Mrm Resilience Table Entry view to a value of Under-Mod before changing the configuration of a pair. The changes are not applied until this field shows the value Stable.

Pair Action

This field is used to change the state of the pair. Setting a value of Create configures the pair using the definitions in the entry. Setting Delete removes the entry from the table and terminates operation of resilience on this pair of ports. The setting TogglePort swaps the currently active port with the standby one if, and only if, the standby port has a status of OK.

Pair Enable

This field Enables or Disables both ports in the resilient pair.

Mrm Resilience Standby Table

The Mrm Resilience Standby Table is accessed by clicking the Standby Map Table button in the Mrm Resilience view. This is a read-only table which provides shortcut information to allow the translation of a port number to a corresponding main port number. This number can then be used to access the Mrm Resilience Table. Each resilient pair has two entries in the table, one for the main port and one for the standby.

Repeater

Displays the repeater on which the port is located.

Slot

Displays the slot number on which the port is located.

Port

Displays the port number of the port.

Type

Displays the type of the port. Possible values are Main and Standby.

Main Slot

Displays the slot number of the main port in the pair.

Main Port

Displays the port number of the main port in the pair.



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