

Fiber Smart
NETWORKS

COMMAND LINE INTERFACE (CLI)

Customer User Manual

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GENERAL

About This Document

The purpose of the Manual is to enable customers to use the ROME Command Line Interface (CLI). This manual provides step-by-step instructions for normal operations of the Fiber Smart Networks Robotic Optical Engine (ROME) System by the customer. It provides background and instructions for each function.

AUDIENCE

This document is intended for ROME Customers. There are three types of customer users: Super Users, System Administrators, and Security Administrators.

ABOUT THE FIBER SMART NETWORKS CLI

The Fiber Smart Networks CLI is a command line interface running over a real time operating system. It provides a powerful set of commands used to provision, monitor and configure the Fiber Smart Networks ROME.

The CLI is a straightforward interface. Commands are typed on a single line and are executed when you press the Enter key. The CLI provides command help and command completion, and supports keyboard sequences that enable you to scroll through recently executed commands.

CLI COMMAND ACCESS

Super Users have access to all the commands in this manual.

All users have access to the following commands:

?, activate, alarm, broadcast, cat, history, logout, pwd, stty, users password, whoami, and write.

System Administrators (also known as a provisioning users) have access to the following additional commands:

connection clear, connection create, connection disconnect, connection global, connection show, port set, and port show.

Security Administrators have access to the following additional commands:

logout force, set radius-server, users access, users add, users delete, users disable, users enable, and users show.

SYNTAX CONVENTIONS

Table 1. Text and Syntax Conventions

| Conventions | Description | Examples |
|--|---|---|
| Bold text like this | Represents text that you type. | Type help edit to display the list of editing shortcuts |
| <i>[Italicized text]</i> <i>{Italicized in curly bracket}</i> | Represents a variable – for which you substitute a value. The nature of the variable is written within the brackets. Optional variable | The syntax of this command is activate [command] In this case, [command] stands for one of the following values: convert, dashes, log, retries, or scroll. |
| Print | Throughout this manual, Print, means displays output on terminal. | The log is printed Means: The log is displayed on the terminal. |

CLI MESSAGES

The CLI displays messages when you enter and exit from configuration and operational command modes, when you successfully complete some commands, and when you type an invalid string or value.

If you type an invalid string—for example, the name of a command or statement that does not exist—you will see the message "syntax error" or "unknown command." A caret (^) indicates the location of the error.

```
240[OPER]# set hard
                ^
Error: Bad command
Syntax: set
```

KEY FEATURES OF THE CLI

The hierarchical organization results in commands that have a regular syntax and provides several features that simplify CLI use:

- **Available commands** — Lists and descriptions of available commands are displayed by typing a question mark (?) at any level. A list of available commands will be displayed together with a short description of each.
- **Command completion** — Command completion for command names and options is available at each level of the command. To complete a command or option that you have partially typed, press the **Tab** key. If the partially typed letters begin a string that uniquely identifies a command, the complete command name appears. Otherwise, a caret (^) indicates that you have entered an ambiguous command, and the possible completions are displayed. Completion also applies to other strings, such as filenames, interface names, usernames, and configuration statements.

Getting Started: A Quick Tour of the CLI

As an introduction to the command-line interface, this section provides instructions for simple steps after starting the system.

STARTING THE CLI

A CLI session may be started via:

- Ethernet Port (Telnet)
- RJ45 Console Port (RS232)

Log in as follows:

- a. Start a telnet (Ethernet) session on the ROME.
 - i. Open a new connection or command window.
 - ii. For connection select TCP/IP, Service select Telnet.
 - iii. Enter the Telnet [IP address], set The “Login” prompt appears.
 - iv. Enter your username. The “Password” prompt appears.
 - v. Enter the password.
 - vi. The “CLI#” prompt appears upon successful login.

—or—

- b. Connect the RJ45 console cable to the front of the ROME.
 - i. Open a new connection or command window
 - ii. For connection select serial port, Set speed to 115200
 - iii. The “Login” prompt appears.
 - iv. Enter your username. The “Password” prompt appears.
 - v. Enter the password.
 - vi. The “CLI#” prompt will appear upon successful login.

When you log in to the CLI, the privileges for your user account determine which commands and configuration statements you can access.

OPERATING TIPS

1. When not sure of the command syntax, use the Help (?) command. The applicable options are displayed with short explanations.

The options displayed depend where the user ‘is’: if on the top level, then the entire list of commands is displayed; if the user has entered a part of a command, then the sub-commands are displayed.

Note: The first row explains the command itself.

2. Use the Auto Complete feature (**Tab** key). Type the initial characters of any command/flag; then, press **Tab**. The command is completed only if characters are unique to the preceding command.

If the typed characters are not unique, all the available commands starting with the entered characters will be displayed.

Note: If the command/flag is mistyped, or not applicable, it will not be completed.

3. Using the Up **↑** and Down **↓** keys, scrolls through the previously used commands.
4. To delete a character, use the **Backspace** key.
5. By default, the prompt line consists of the following:
 - a. ROME name
 - b. ROME state (normally "OPER")

CLI COMMANDS

? (Help)

| | |
|-------------------------|---|
| Description | Used to display the applicable commands, or parameters/flags in alphabetical order, with a short description. The root command is displayed on the first row. When used at the root prompt, all the main commands are displayed. |
| Related Commands | None |
| Syntax | <i>[command] ?</i> |
| Options | ? <i>[command] ?</i> All the main commands are displayed, in alphabetical order, with a short description. Displays the applicable command or flags. |
| Examples | alarm ? The following is displayed: alarm - manage alarms acknowledge - set alarm acknowledge clear - clear <seqId> show - Show alarm/s unacknowledge - unacknowledge alarm alarm clear ? The following is displayed: <seqId> - Sequence identifier of alarm (unsigned integer value) or '*'/'all' to clear all alarms |
| Privilege level | All |

activate

| | | |
|-------------------------|--|--|
| Description | Used to activate or deactivate a printing command – a command whose feedback is displayed on the screen. | |
| Related Commands | None | |
| Syntax | activate <i>[command]</i> – activates command activate no <i>[command]</i> – deactivates command Where <i>command</i> can be: convert, dashes, retries, or scroll. | |
| Options | activate convert | Converts escaped characters. |
| | activate no convert | Disables a previous activate convert command. |
| | activate dashes | Error lines will use dashes instead of spaces. |
| | activate retries | In the event of an input (typed) error, the input is reprinted, and the error is indicated by a cursor (caret). <i>e.g., activate reetries</i> ^ |
| | activate scroll | In case the displayed feedback (reply or printout) is longer than the length of a screen, you are prompted to press Enter before scrolling to the next screen (page). |
| Privilege level | All | |

activate log

| | | |
|-------------------------|--|---|
| Description | Used to activate or deactivate a logging command – a command whose feedback is displayed on the screen. | |
| Related Commands | activate | |
| Syntax | activate log <i>[parameter]</i> - activates log command activate no log <i>[parameter]</i> – deactivates log command Where <i>parameter</i> is a mandatory parameter for command activate log . | |
| Options | activate log <i>[parameter]</i> | Turns command logging ON or OFF |
| | activate log input | Logs only the user commands input. |
| | activate log output | Logs only the system output of the commands. |
| | activate log both | Logs both input and output activities. |
| | activate no log <i>[parameter]</i> | |
| | activate no log both | Disables a previous activate log both command |
| Privilege level | SuperUser | |

alarm

| | | |
|-------------------------|--|---|
| Description | <p>An Alarm is generated when a failure or fault is detected by the ROME.</p> <p>The severity of the fault is indicated in the alarms list (see alarms show below).</p> <p>When an Alarm is cleared (resolved) it is removed from the alarms list.</p> | |
| Related Commands | None | |
| Syntax | <p>alarm <i>command</i> [<i>parameter</i>]</p> <p>Where <i>command</i> can be: acknowledge, clear, show, unacknowledge.</p> <p>Where <i>parameter</i> is a mandatory parameter for commands alarm acknowledge, unacknowledge, and alarm clear.</p> | |
| Options | <p>alarm acknowledge [<i>seqld</i>]</p> <p><i>e.g.</i>, alarm acknowledge 38</p> <p>alarm clear [<i>seqld</i>]</p> <p><i>e.g.</i>, alarm clear 88</p> <p><i>e.g.</i>, alarm clear *</p> <p>alarm show</p> <p>alarm unacknowledge [<i>seqld</i>]</p> <p><i>e.g.</i>, alarm unacknowledge 38</p> | <p>Acknowledges an alarm. The alarm state (Ackstate) changes from N/A to ACK (Acknowledged – owned).</p> <p>Acknowledges alarm #38.</p> <p>Deletes an alarm from the list.</p> <p>Deletes alarm #88.</p> <p>Deletes all alarms from the alarms list.</p> <p>Shows all outstanding alarms.</p> <p>Un-Acknowledges an alarm. The alarm state (Ackstate) changes from ACK (Acknowledged – owned) to UNACK (Unacknowledged)</p> <p>Un-Acknowledges alarm #38.</p> |
| Privilege level | All | |

alias

| | | | | | | | | | | | | | |
|--|--|--------------|---|--|----------------------|-----------------------------------|--|-------------------------------|-----------------------------|-----------------------|-------------------------------|----------------|--------------------------|
| Description | <p>An alias enables you to customize the text used to enter any specific command – usually a complex one.</p> <p>For example, typing clr could be set to perform the command connection clear all.</p> <p>Each ROME comes with the following default aliases.</p> <ul style="list-style-type: none"> ▪ cc connection show connected ▪ cp connection show pending ▪ ce connection set command-execution enable ▪ pc port show connected ▪ c* connection clear pending * <p>These aliases can be edited.</p> | | | | | | | | | | | | |
| Related Commands | None | | | | | | | | | | | | |
| Syntax | <p>alias [<i>alias</i>] '[<i>command</i>]'</p> <p><i>Where [alias] is optional and can be any text string (for a new alias), an existing alias (to delete that alias), or a "*" (to delete all aliases).</i></p> <p><i>Where command is an optional parameter for the command alias [alias].</i></p> <p><i>Note:</i> [<i>command</i>] can be enclosed in either a pair of single quotes ("<i>command</i>") or in a pair of double quotes (""<i>command</i>"")</p> <p><i>Note:</i> The max number of aliases allowed is 32. Each alias and command combination is allowed to be maximum of 1024 characters.</p> | | | | | | | | | | | | |
| Options | <table> <tr> <td style="vertical-align: top;">alias</td> <td>Displays the list of the current aliases.</td> </tr> <tr> <td style="vertical-align: top;">alias [<i>alias</i>] '[<i>command</i>]'</td> <td>Creates a new alias.</td> </tr> <tr> <td style="vertical-align: top;"><i>e.g., alias dt 'show date'</i></td> <td>Typing dt displays the same result as typing show date.</td> </tr> <tr> <td style="vertical-align: top;">alias [<i>alias</i>]</td> <td>Deletes the specified alias</td> </tr> <tr> <td style="vertical-align: top;"><i>e.g., alias dt</i></td> <td>Deletes the alias dt.</td> </tr> <tr> <td style="vertical-align: top;">alias *</td> <td>Deletes all the aliases.</td> </tr> </table> | alias | Displays the list of the current aliases. | alias [<i>alias</i>] '[<i>command</i>]' | Creates a new alias. | <i>e.g., alias dt 'show date'</i> | Typing dt displays the same result as typing show date . | alias [<i>alias</i>] | Deletes the specified alias | <i>e.g., alias dt</i> | Deletes the alias dt . | alias * | Deletes all the aliases. |
| alias | Displays the list of the current aliases. | | | | | | | | | | | | |
| alias [<i>alias</i>] '[<i>command</i>]' | Creates a new alias. | | | | | | | | | | | | |
| <i>e.g., alias dt 'show date'</i> | Typing dt displays the same result as typing show date . | | | | | | | | | | | | |
| alias [<i>alias</i>] | Deletes the specified alias | | | | | | | | | | | | |
| <i>e.g., alias dt</i> | Deletes the alias dt . | | | | | | | | | | | | |
| alias * | Deletes all the aliases. | | | | | | | | | | | | |
| Privilege level | SuperUser | | | | | | | | | | | | |

bmc

| | | |
|-------------------------|--|--|
| Description | Controls the Bar Motor cleaning process, which may be needed if the robot arm guide needs cleaning. The BMC process may take up to several minutes, and is completed automatically. Notifications are issued on progress and completion. | |
| Related Commands | None | |
| Syntax | bmc <i>[command]</i> | |
| Options | bmc run | Starts the Bar Motor cleaning process. |
| Privilege level | SuperUser | |

broadcast

| | |
|-------------------------|---|
| Description | Used to broadcast a message to all logged users. |
| Related Commands | write |
| Syntax | broadcast '[Message]' <i>where [Message] is the message to send to all logged users.</i> |
| Options | broadcast '[Message]' <i>e.g., broadcast 'Do not use Server MRS_2 within the next 2 hrs'</i> |
| Privilege level | All |

cat

| | | |
|-------------------------|--|---|
| Description | Prints the contents of a file. | |
| Related Commands | write | |
| Syntax | cat <i>[Filename]</i> <i>where [Filename] is the filename to be displayed.</i> | |
| Options | cat <i>[Filename]</i> <i>e.g., cat logEvt.txt</i> | Displays the contents of the logEvt.txt file. |
| Privilege level | All | |

clear

| | | |
|-------------------------|--|--|
| Description | Clears various ROME parameters. | |
| Related Commands | None | |
| Syntax | clear <i>[parameter]</i> | |
| | <i>Where [parameter] can be: log security, screen, or radius-server.</i> | |
| Options | clear log security | Clears the security log table. |
| | clear screen | Clears the screen. |
| | clear radius-server <i>[IpAddress] [port] [type]</i> | Deletes the entry of the Radius server. The Radius server identifier is its IP address + Port. All parameters are mandatory. |
| | | Where: |
| | | <i>[IpAddress]</i> is the RADIUS server IP address |
| | | <i>[port]</i> is the RADIUS server port |
| | | <i>[type]</i> is the RADIUS server type (authentication/accounting) |
| | <i>e.g., clear radius-server</i> 192.168.10.11 1812 authentication | Removes the Radius server that functions as an authentication server and has the IP address 192.168.10.11 and port 1812 |
| Privilege level | Super User | |

connection clear

| | | |
|-------------------------|---|--|
| Description | Clears the pending connection table. A connection In Process cannot be cleared. | |
| Related Commands | connection show , show board | |
| Syntax | connection clear pending <i>[SeqId]</i> | |
| Options | connection clear pending * | Deletes all the Pending requests in the Pending Connection Queue. |
| | or | Alias: c* |
| | connection clear pending all | |
| | connection clear pending <i>[SeqId]</i> | Deletes a specific connection. |
| | <i>e.g.</i> , connection clear pending 6 | Deletes connection numbered 6 (in the Sequence ID) from the Pending Connection Queue. |
| | | Use the command connection show in order to view the Pending Connection Queue. |
| | | If the SeqId is that of a connection in process (i.e., a connection that is being executed right now), that Clear operation will not be performed. |
| Privilege level | Super User, System Administrator | |

connection create

| | | |
|-------------------------|---|---|
| Description | Sends a connect command between two selected ports. | |
| Related Commands | connection set command-execution ; connection disconnect ; connection show pending | |
| Syntax | <p>connection create 1ae<i>[East Port #]</i> to 1aw<i>[West Port #]</i> <i>[sync]</i></p> <p>connection create 1be<i>[East Port #]</i> to 1bw<i>[West Port #]</i></p> <p>Where <i>East/West Port #</i> are the physical port names.</p> <p>connection create <i>[Patch Panel Name, Port#1]</i> to <i>[Patch Panel Name, Port#2]</i></p> <p>Where <i>Logical Port Name A and Logical Port name B</i> are the Logical port names – provided that the ROME has a logical ports table (LPN)</p> <p>Sync is an optional parameter for logical ports only that ensures both connections are done in sync.</p> | |
| Options | <p><i>e.g., connection create 1ae</i>100 to 1aw100</p> <p><i>e.g., connection create</i> PP1,5 to PP2,15</p> <p><i>e.g., connection create</i> PP1,5 to PP2,15 sync</p> | <p>Creates a connection between east port 100 on matrix A of unit 1 to port west port 100 on matrix A of unit 1</p> <p>Creates a connection between logical port PP1,5 (port 5 on patch panel PP1) to logical port PP2,15 (port 15 on patch panel PP2).</p> <p>Where this logical connection could represent a pair connection between physical ports; for example, 1ae5 to 1aw15 and 1be5 to 1bw15.</p> <p>The sync parameter ensures both connections are synchronized.</p> |
| Restrictions | Physical ports can be connected within the same matrix (A or B) only | |
| Privilege level | Super User, System Administrator | |

connection disconnect

| | | |
|-------------------------|--|--|
| Description | Sends a disconnect command between the named ports. | |
| Related Commands | connection set command-execution ; connection create ; connection show pending | |
| Syntax | <p>connection disconnect 1ae[East Port #] to 1aw[West Port #] [<i>sync</i>]</p> <p>connection disconnect 1be[East Port #] to 1bw[West Port #] [<i>sync</i>]</p> <p>Where <i>East/West Port #</i> are the physical port names.</p> <p>connection disconnect [<i>Patch Panel Name, Port1#</i>] from [<i>Patch Panel Name, Port2#</i>]</p> <p>Where <i>Logical Port Name A</i> and <i>Logical Port name B</i> are the Logical port names – provided that the ROME is configured to work in Duplex Fiber mode.</p> <p>Sync is an optional parameter for logical ports only that ensures both connections are done in sync.</p> | |
| Options | connection disconnect [<i>port1</i>] from [<i>port2</i>] | Disconnects one pair of named ports. |
| | <i>e.g.</i> , connection disconnect 1be3 from 1bw4 | Disconnects east port 3 on matrix b of unit 1 from west port 4 on matrix b of unit1 |
| | <i>e.g.</i> , connection disconnect PP1,5 from PP2,15 | Disconnects Logical port PP1,5 (port 5 on patch panel PP1) from logical port PP2,15 (port 15 on patch panel PP2) |
| | | Where this logical connection could represent a pair disconnection between physical ports; for example, 1ae5 to 1aw15 and 1be5 to 1be15. |
| | <i>e.g.</i> , connection disconnect PP1,5 from PP2,15 sync | The sync parameter ensures both connections are synchronized. |
| Privilege level | Super User, System Administrator | |

connection set command-execution

| | | |
|-------------------------|--|--|
| Description | Connection set command-execution [<i>enable/disable</i>]. This command is used in to enable/disable provisioning and maintenance (connect, disconnect, tmd) commands during troubleshooting. When disabled, provisioning requests – new or existing – remain queued until connection set command-execution enable command is given. | |
| Related Commands | show board | |
| Syntax | connection set command-execution [<i>enable/disable</i>] | |
| Options | connection set command-execution enable | Enables execution of provisioning requests. |
| | connection set command-execution disable | Prevents execution of provisioning requests. |
| Privilege level | Super User, System Administrator | |

connection show

| | | |
|-------------------------|--|--|
| Description | Displays a list of connected or pending connections. | |
| Related Commands | connection clear ; connection create ; connection disconnect | |
| Syntax | connection show <i>[Status]</i> <i>where [Status] can be: connected or pending,</i> | |
| Options | connection show <i>connected</i> | Shows all the existing connections Alias: cc The following information is displayed: Port1 to Port2 connections: The connected ports Created: Displays the date timestamp in which the ports were connected. User: User that created connection Logical port number: logical port assignment within the matrix. |
| | connection show <i>pending</i> | Shows all the pending connections (Pending Connection Queue) Alias: cp The following information is displayed: Req ID: The Request ID is the index in the queue. The index can be reset by using the Port1 to Port2 connections: The connected ports Command: Displays the command issued Source: Interface command issued from Logical port number: logical port assignment within the matrix. User: User that issued commandhomin |

Privilege level Super User, System Administrator

ftp

| | | |
|-------------------------|--|--|
| Description | <p>Use this command in order to upload or download files to/from the ROME.</p> <p>An external FTP server application needs to be set up (refer to set ftp) prior to using this command. The ROME functions as an FTP client. A file (of any type) will be downloaded – one at a time – from the home directory (source) to the ROME root directory (target). You can also download to the ROME a new firmware (a.k.a “image”), although this method is not recommended – to upgrade firmware it is recommended to use the SW Upgrade Tool.</p> | |
| Related Commands | <p>set ftp</p> | |
| Syntax | <p>ftp <i>[command]</i> <i>[filename]</i></p> <p>where <i>[command]</i> can be: get file or put fname</p> <p>and where <i>[filename]</i> is the filename of the file to download or upload.</p> | |
| Options | <p>ftp get file <i>[filename]</i></p> <p><i>e.g., ftp get file test.txt</i></p> <p>ftp put fname <i>[filename]</i></p> <p><i>e.g., ftp put fname test.txt</i></p> | <p>Download a regular file to the flash file system, from the Home Directory of the FTP server application.</p> <p>Downloads file test.txt to the flash file system, from the Home Directory of the FTP server application.</p> <p>Uploads a regular file to the home directory of the FTP server application.</p> <p>Uploads a file test.txt to the home directory of the FTP server application.</p> |
| Privilege level | <p>Super User</p> | |

help

| | | |
|------------------------|---|--|
| Description | Displays additional help. | |
| Syntax | help <i>[parameter]</i> <i>where [parameter] is either edit or inventory.</i> | |
| Options | help edit | Displays a list of editing shortcuts (keystrokes) |
| | help inventory | Displays a list of the field replaceable units (FRUs) of the ROME. |
| Privilege level | Super User | |

history

| | | |
|-------------------------|--|--|
| Description | Shows the last 30 commands that were issued by the user. | |
| Related Commands | None | |
| Syntax | history <i>[parameter]</i> | |
| Options | history clear | Clears the history log. |
| | history enable | Turns on the command history logging functionality. |
| | history filter | Prevents the utility from capturing repeated input. |
| | history info | Displays the status of the history utility <ul style="list-style-type: none">• History filter: on/off• History utility: on/off• History ring: on/off |
| Privilege level | All | |

homing

| | |
|-------------------------|--|
| Description | Controls the homing operation, which returns the robots to a set, "Home", position. Once the Homing process is successfully completed, the ROME is ready to handle provisioning requests again. |
| Related Commands | None |
| Syntax | homing <unit> run, unit = ROME Chassis number <U1,U2,U3,U4> homing run, Runs homing on all ROME chassis connected to the same LCU. |
| Options | Each LCU may support up to four ROME chassis. Performs homing on all the axes. |
| Privilege level | Super User |

logout

| | |
|-------------------------|---|
| Description | Logs out of the Telnet session. For logging on instructions, refer to Login . |
| Related Commands | Login |
| Syntax | logout |
| Options | logout Logs out of the current Telnet session. |
| Privilege level | All |

logout force

| | | |
|-------------------------|--|---|
| Description | Forces log outs of the Telnet session. For logging on instructions, refer to Login . | |
| Related Commands | Login | |
| Syntax | logout force {user} <i>where {user} is optional and indicates the specific user to logout.</i> | |
| Options | logout force {user> | Disconnects all the sessions of the specified user. |
| | <i>e.g.,</i> logout force user88 | Disconnects all the sessions of user88 . |
| | <i>e.g.,</i> logout force | Disconnects all the sessions of the current Telnet session. |
| Privilege level | Super User, Security Admin | |

port set

| | | |
|-------------------------|--|---|
| Description | Manages port operations | |
| Related Commands | port show | |
| Syntax | port set <i>[portID]</i> <i>[parameter]</i> <i>[state]</i> | |
| Options | <p>port set <i>[port]</i> oper_status <i>[state]</i></p> <p><i>e.g., port set 1bw3 oper_status disable</i></p> <p>port set <i>[portID]</i> name <i>[name]</i></p> <p><i>e.g., port set 1ae100 name Office2</i></p> <p>port set <i>[portID]</i> admin-status <i>[state]</i></p> <p><i>e.g., port set 1bw50 admin-status locked</i></p> <p>port set <i>[portID]</i> role <i>[state]</i></p> <p><i>e.g., port set 1bw50 role test</i></p> | <p>Sets the named port to the Disabled/Enabled state – this state indicates that this port is malfunctioning and should not be used.</p> <p>Port 1bw3 is port disabled state.</p> <p>Sets a name for the named port</p> <p>Port 1ae100 is assigned the name Office2.</p> <p>Sets the named port to an Unlocked/Locked state.</p> <p>A Locked state indicates that a provisioning operator has preserved this port for future use.</p> <p>An Unlocked state releases a port in the locked state</p> <p>Port 1bw50 has been reserved for future use and to prevent a change in provisioning.</p> <p>Set the role of a designated port to connect, test, testbus, passthrough, link. Use by customer to label the function or use of the port. No functions embedded in system software.</p> |
| Privilege level | Super User, System Admin | |

port show

| | | |
|--------------------|--|--|
| Description | Shows the state of the ports. | |
| | The following parameters are detailed: | |
| | Port ID | The index of the physical port. This value cannot be edited. |
| | Admin Status | Unlocked, locked Locked (the port cannot be connected or disconnected unless Unlocked first). A port is usually locked in order to reserve it for future use and/or to indicate to other users that for the time being they should refrain from using it. |
| | Oper Status | Enable, disabled Enabled_Connections/disconnections may be made to selected port. Disabled_Connections/disconnections cannot be made to the selected port. |
| | Port Status | Disconnected, Connected, In Process Disconnected_No connections to port; Connected_Port connected; In Process_Connection/disconnection is in process or being executed. |
| | Counter | Connection counter counts the total number of times the port has been connected/disconnected. |
| | Connected Port ID/Name | The number (and name, if exists) of the physical port to which this port is currently connected. |
| | Logical | Logical port number |

Related Commands [port set](#)

Syntax `port show [parameter]`
where {parameter} is optional and can be connected, disconnected, logical, range, locked, unlocked, enabled, disabled. Selected filter only displays ports in the selected status.

Options Shows the complete table of ports

| | |
|---|---|
| port show | and their state. |
| port show connected | Shows only the connected ports. |
| port show disconnected | Shows only the disconnected ports. |
| port show logical | Shows only the Logical (paired) ports, with their Logical names |
| port show range <i>[port1]</i> to <i>[port2]</i> | Shows only the defined range of ports. |
| <i>e.g., port show</i> range 1ae100 to 1ae150 | |
| Privilege level | Super User, System Admin |

pwd

| | | |
|-------------------------|---------------------------------------|--|
| Description | Shows (prints) the working directory. | |
| Related Commands | None | |
| Syntax | pwd | |
| Options | pwd | The working directory is displayed (<i>e.g., C:\Users\SuperUser\</i>) |
| Privilege level | All | |

reset

| | | |
|------------------------|---|--|
| Description | Resets the ROME. When this command is run, ROME will first finish the current in process command, then commence an orderly shutdown. After shutdown, ROME will then restart. Anything pending in the queue when this command is run will remain in the queue and will be processed after ROME restarts. | |
| Syntax | reset | |
| Options | reset | Initiates the Reset procedure. After prompting, the ROME finalizes all on-going activities (Provisioning, FTP, etc.) and restarts. |
| Privilege level | Super User | |

set board

| | | |
|-------------------------|---|---|
| Description | Sets ROME board related parameters. | |
| Related Commands | None | |
| Syntax | set board <i>[parameter]</i> | |
| | <i>where [parameter] can be adminState, authentication-order, connection-type, imageswap, ipParams, name, unpack image.</i> | |
| Options | set board adminState | Enable/disable the board. |
| | set board authentication-order <i>[authentication type]</i> | Sets the method by which user name and password will be authenticated. The authentication methods are as follows: <ul style="list-style-type: none"> • Local – by the ROME (local) • Radius – by an external Radius server • First-radius – Radius + ROME, where Radius is the primary. |
| | <i>e.g., set board</i> authentication-order local | Sets the user authentication to be done locally – by the ROME user DB. |
| | <i>e.g., set board</i> authentication-order radius | Sets the user authentication to be done by the Radius server only. |
| | <i>e.g., set board</i> authentication-order first-radius | Sets Radius as the prime authentication server. If the Radius server is inaccessible, authentication will be performed locally by the ROME user DB. |
| | set board connection-type | Set connection type to SSH, Telnet, or SSH + Telnet. |
| | set board imageswap | Makes the backup image active and vice versa. This is used for software upgrades. |
| | set board ipParams <i>[device]</i> | Enables configuration of all The ROME network parameters (IP Address; Subnet Mask; DNS; Default Gateway) You can either change these one at a time, or by concatenating them all at once. |

e.g., set board ipParams ipAddr 192.168.10.10 IP address of a device.

e.g., set board ipParams subnetMask 0xffff0000 or 255.255.0.0 The subnet mask. This value can also be defined as a Hexadecimal

e.g., set board ipParams dnsServer 192.168.10.10 IP address of a DNS server.

e.g., set board ipParams dfltGateway 192.168.10.1 IP address of the default gateway.

e.g., set board ipParams hostPcAddr 192.168.10.16 IP address of the host PC.

set board name *[name]* Sets the ROME name.

e.g., set board name 240 The ROME name is set to 240 characters, and appears at the beginning of the prompt.

Privilege level Super User

set ftp

| | | |
|-------------------------|--|---|
| Description | Sets the FTP server parameters. | |
| Related Commands | ftp get ; ftp put | |
| Syntax | set ftp user <i>[username]</i> passwd <i>[password]</i> serverip <i>[server ip]</i> | |
| Options | <i>[Username]</i> | The username can be up to 15 characters |
| | <i>[Password]</i> | The password can be up to 12 characters |
| | <i>[server ip]</i> | FTP server IP address |
| Privilege level | Super User | |

set radius-server

Description

Sets up and configures a RADIUS server.

RADIUS is a client/server protocol for carrying authentication authorization and configuration messages between a network access point and a RADIUS server.

ROME user management can be done via Radius, namely:

- Add/Delete users
- Manage User/Password
- Authenticate User/Password
- User accounting

User management can now operate in three optional modes:

1. User management is done solely by the Radius server
2. User management is done primarily by the Radius server and secondarily by ROME
3. User management is done solely by the ROME (Default mode)

Radius server redundancy:

In order to enhance system security reliability, a redundant Radius server can be set up, so that in case one server fails, the other can resume seamless operation.

Related Commands

[clear radius-server](#); [set board authentication-order](#)

Syntax

set radius-server *[ip-address]* *[secret]* *[port]* *[type]* *[retries]* *[timeoutInterval]*

Where:

[ip-address] is the RADIUS server IP address

[secret] is the RADIUS password for RADIUS–ROME communication

[port] is the RADIUS server port

[type] is the RADIUS server type (authentication/accounting)

[retries] is the RADIUS server poll retries value (default = 3)

[timeoutInterval] is the RADIUS server poll timeout interval (default = 3 – not including overhead)

set radius-server

The settings of this Radius server are

Examples

as follows:

Port: 1812
Server type: Accounting
Poll retries: 4
Poll timeout: 3 (default)

Privilege level Super User, Security Admin

set time

| | | |
|-------------------------|--|---|
| Description | Sets the ROME time. The time can be synchronized according to one of the following: <ul style="list-style-type: none"> • A timeserver: NTP (a.k.a SNTP) • Manually • RTC (the ROME Real Time Clock) | |
| Related Commands | show date | |
| Syntax | set time [parameters] | |
| Options | set time ntp TZ [<i>offset hrs</i>] <i>e.g., set time ntp TZ -3.5</i> | Sets the hr offset from the NTP. Sets the time to -3.5 hrs from the NTP time. |
| | set time ntp default [<i>name</i>] <i>e.g., set time ntp default nist1-ny.ustiming.org</i> | Sets the default NTP server parameters. |
| | set time ntp server [<i>name</i>] <i>e.g., set time ntp server tock.nap.com.ar</i> | Sets an NTP. |
| | set time source manual | Sets the time manually. |
| | set time source rtc | Sets the time according to an RTC source. |
| | set time source sntp | Sets the time according to the default SNTP source. |
| Privilege level | Super User | |

set cli

| | | |
|-------------------------|---|--|
| Description | Changes the Command Line Interface parameters. | |
| Related Commands | None | |
| Syntax | set cli session timeout <i>[seconds]</i> | |
| Options | set cli session timeout <i>[seconds]</i> | Sets the CLI session timeout in seconds. The default value is 600 seconds. If there is no activity over this time, the Telnet session ends. <i>e.g., set cli session timeout 300</i> |
| Privilege level | Super User | |

show

| | | |
|-------------------------|---|--|
| Description | Shows information on the defined parameter. Use it to show the requested state before and after a command. | |
| Related Commands | None | |
| Syntax | show <i>[parameter]</i> <i>where [parameter] can be: board, date, files algo, and log.</i> | |
| Options | show board | Displays all the parameters related to the ROME. |
| | show date | Displays the current date in the device, and from where it is derived. |
| | show files algo | Displays a list of all the configuration and DB files used by the ROME. |
| | show log <i>[parameter]</i> | Displays the specified log file. |
| | <i>e.g.,</i> show log events | Displays the log of all the events. |
| | <i>e.g.,</i> show log security | Displays the security log. |
| Privilege level | Super User | |

stty

| | | |
|-------------------------|--|---|
| Description | Manages the terminal settings – height (in rows), width (in columns), text wrapping. | |
| Related Commands | None | |
| Syntax | stty [<i>parameter</i>] | |
| Options | <i>e.g., stty rows [10..256]</i> | Sets the terminal height in rows. Available value is 10 to 256. |
| | <i>e.g., stty columns [20..255]</i> | Sets the terminal width in characters. Available value is 20 to 255. |
| | <i>e.g., stty columns 40 hardwrap</i> | Sets the terminal at 40 characters wide, with text wrapping (long text continuing in a new line). |
| | stty info | Displays the current terminal settings. |
| Privilege level | All | |

users access

| | | |
|-------------------------|---|--|
| Description | Used to change user permissions (rights) to specific users. The specific users are identified according to their Username (login name). The following access levels are available: <ul style="list-style-type: none"> • Super User • Security Administrator • System Administrator | |
| Related Commands | users show | |
| Syntax | users access <i>[username]</i> <i>[access level]</i> Where <i>[username]</i> can be any existing user name. Where <i>[access level]</i> is a mandatory parameter that indicates the new access level. | |
| Options | users access <i>[username]</i> SecurityAdmin | Changes user rights to Security Administrator. |
| | users access <i>[username]</i> SysAdmin | Changes user rights to System Administrator. |
| | users access <i>[username]</i> SuperUser | Changes user rights to Super User, having all Operations and Permissions. <i>Note:</i> Only a Super User can create another Super User. |
| Privilege level | Super User, Security Admin | |

users add

| | |
|-------------------------|--|
| Description | Used to add a user to the ROME database. The following access levels are available: <ul style="list-style-type: none">• Super User• Security Administrator• System Administrator |
| Related Commands | users show |
| Syntax | users add <i>[username] [password] [access level]</i> |
| Options | users add <i>[username] [password] [access level]</i> Adds a user, by name, password, and access level. |
| | It is advisable to remind new users to change their passwords upon initial login. |
| Privilege level | Super User, Security Admin |

users delete

| | | |
|-------------------------|--|--|
| Description | Used to remove a user from the database. | |
| Related Commands | users show | |
| Syntax | users delete <i>[username]</i> | |
| Options | users delete <i>[username]</i> | Deletes the defined user from the database. |
| | <i>e.g., users delete</i> FredAndrews | Deletes user FredAndrews from the database. |
| Privilege level | Super User, Security Admin | |

users disable

| | | |
|-------------------------|---|---|
| Description | Used to disable a user account. Until enabled, the user will not be able to log on. | |
| Related Commands | users enable ; users show | |
| Syntax | users disable <i>[username]</i> | |
| Examples | users disable FredAndrews | User FredAndrews will be unable to log on |
| Privilege level | Super User, Security Admin | |

users enable

| | | |
|-------------------------|--|---|
| Description | Used to enable a user account. The user can now log on. | |
| Related Commands | users disable ; users show | |
| Syntax | users enable <i>[username]</i> | |
| Examples | users enable FredAndrews | User FredAndrews will be able to log on from now on |
| Privilege level | Super User, Security Admin | |

users password

Description Used to change a user password (including your own).

Related Commands [users show](#)

Syntax `user password [userID]`

Options `user password [userID]`

Change another user's password

1. After typing the username of the required user, press **Enter**.
2. Type the new password, and press **Enter**.
3. Confirm the new password, and press **Enter**.
4. Type your own password, and press **Enter**.

The new password is set.

Change your own password

1. Type your username, and press **Enter**.
2. Type the new password, and press **Enter**.
3. Confirm the new password, and press **Enter**.
4. Type your current password, and press **Enter**.

The new password is set.

Privilege level All

users show

| | | |
|-------------------------|--|---|
| Description | Used to display the users listed in the ROME database. | |
| Related Commands | None | |
| Syntax | users show <i>{Parameter}</i> <i>where {Parameter}</i> is an optional parameter and can be disconnected or logged. | |
| Options | users show | The following details are displayed for each user: <ul style="list-style-type: none">• ID Number – Number in the list• Enabled – Yes or No• Username• Group – Access Level |
| | users show disconnected | Shows the users that are currently disconnected. |
| | users show logged | Shows the users that are currently logged on. In addition to the above information, details of the open sessions are also displayed. |
| Privilege level | Super User, Security Admin | |

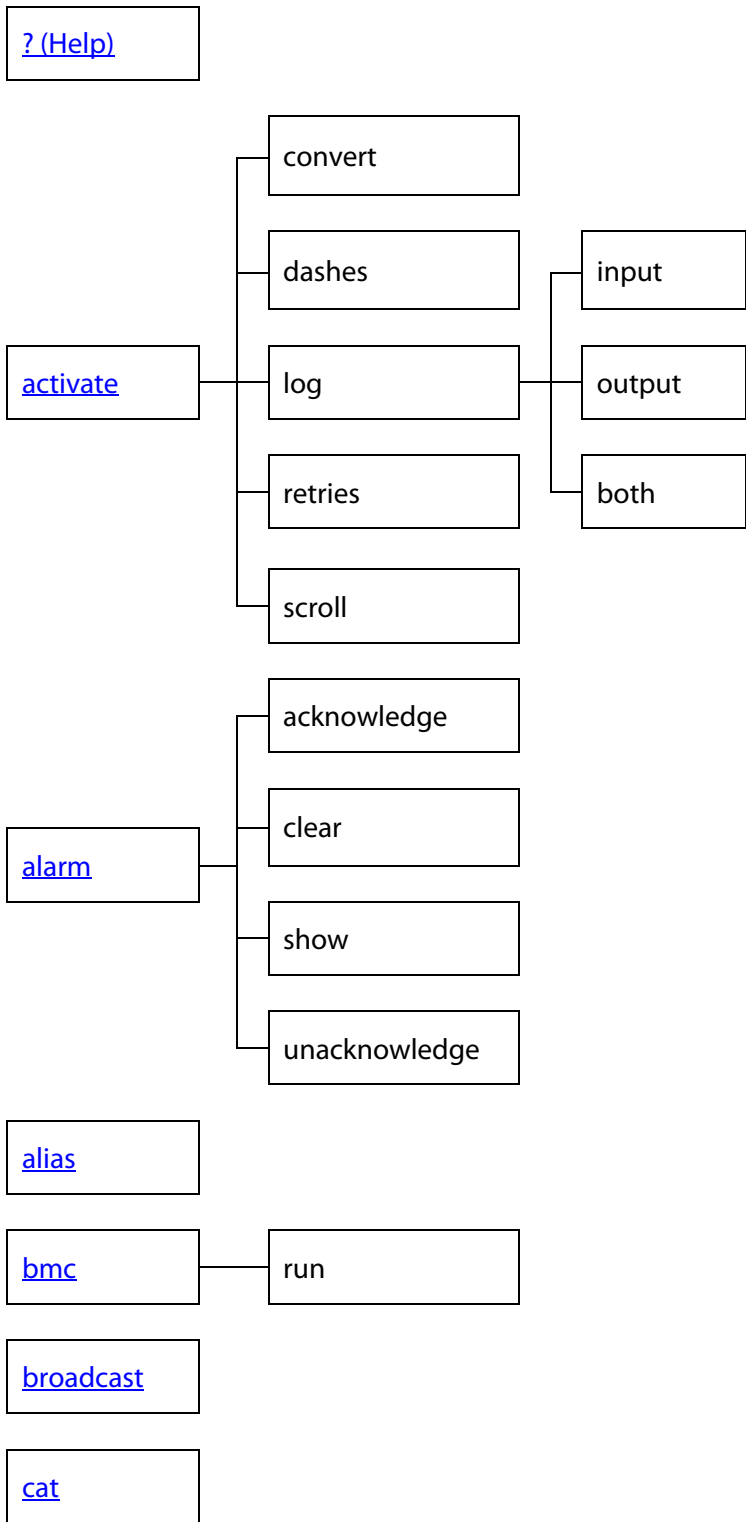
whoami

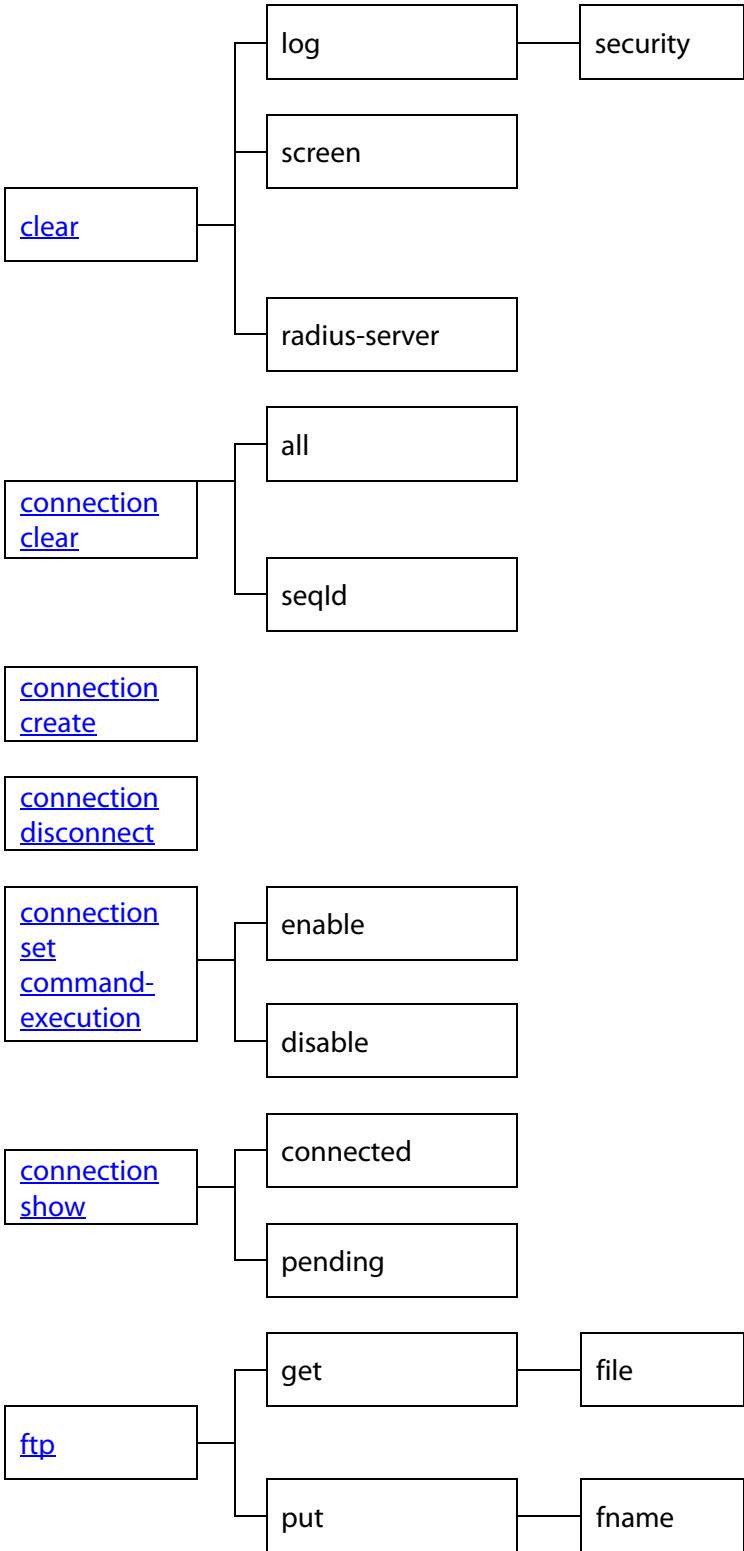
| | |
|-------------------------|--|
| Description | Displays the user and user group details of the operating user – the one whose login credentials are being used. |
| Related Commands | None |
| Syntax | whoami |
| Options | whoami |
| Privilege level | All |

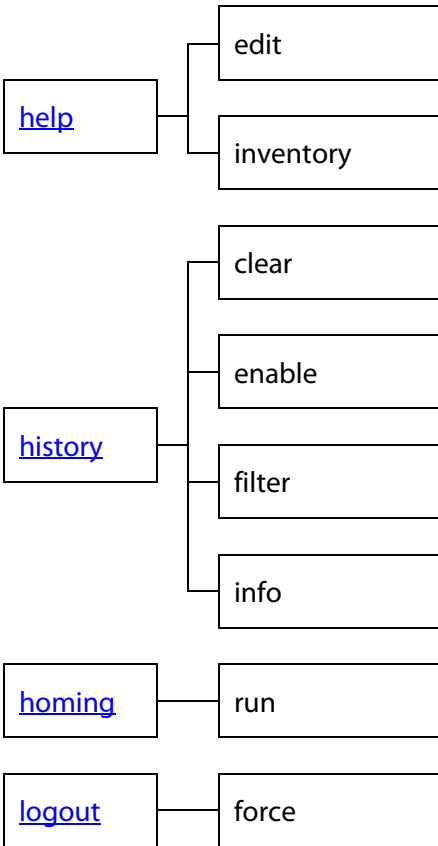
write

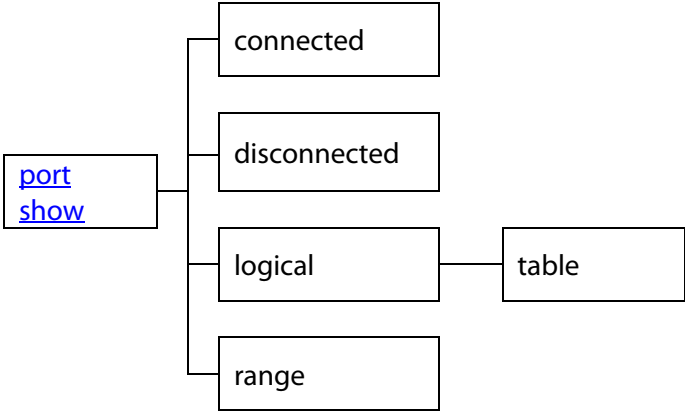
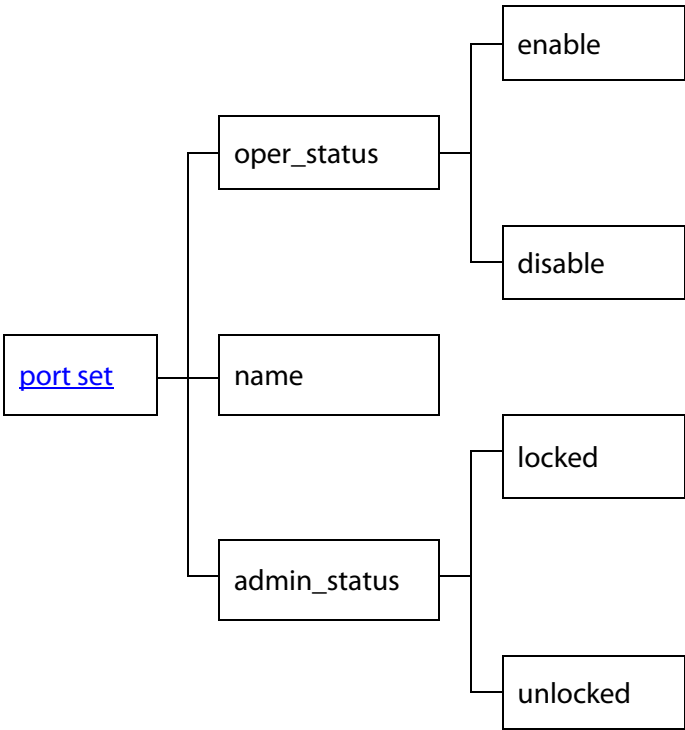
| | | |
|-------------------------|---|---|
| Description | Send a message to a specified user, who is logged on. | |
| Related Commands | broadcast | |
| Syntax | write <i>[recipient] [message]</i> | |
| Options | write <i>[recipient] [message]</i> | |
| | write User_1 "Please call me when you get this..." | If User_1 is logged on, he/she will receive the notification. |
| Privilege level | All | |

APPENDIX A - CLI COMMANDS TREE



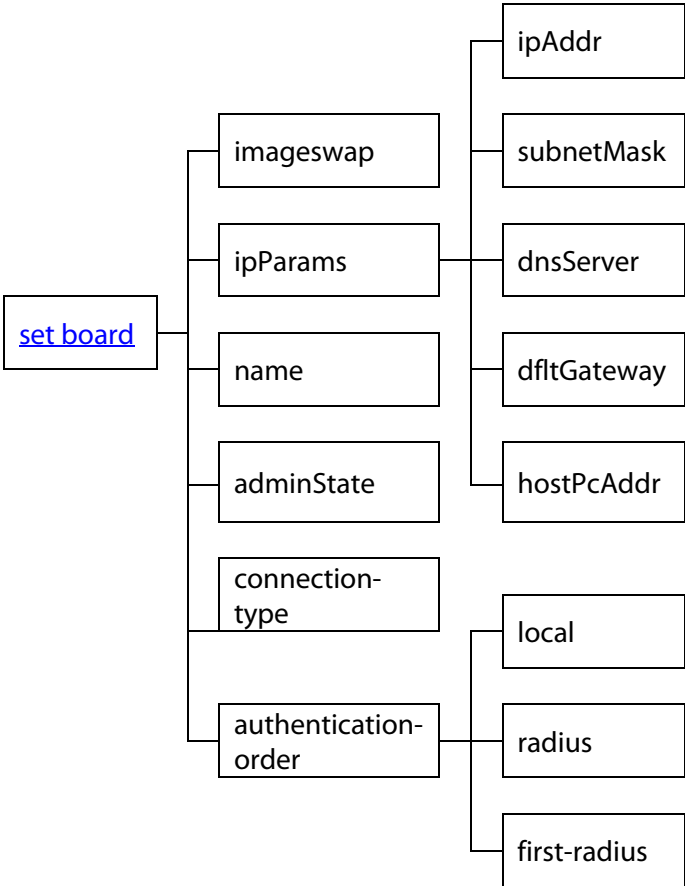






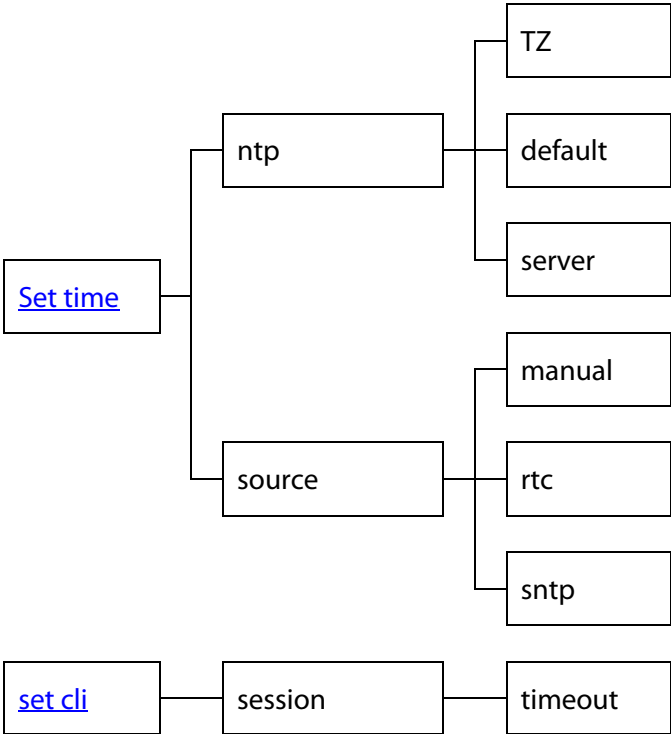
[pwd](#)

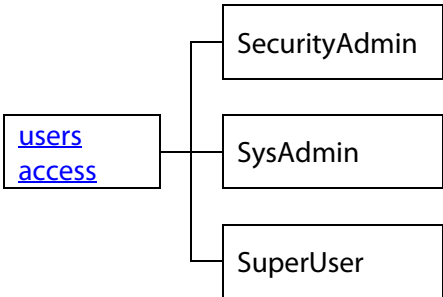
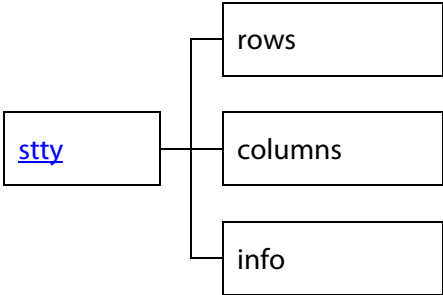
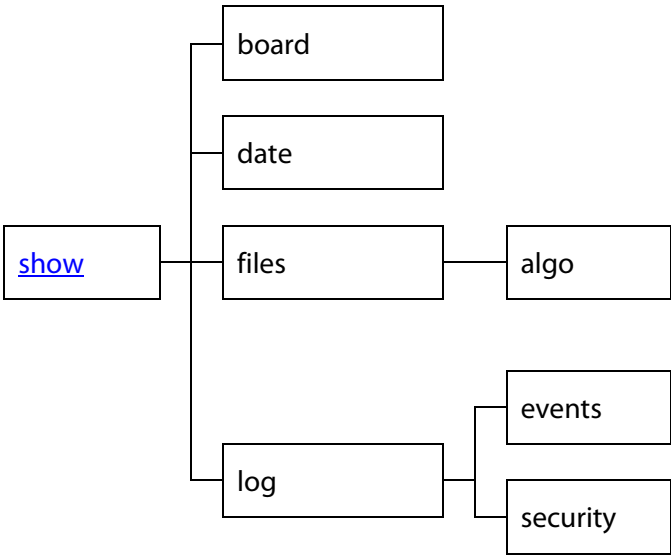
[reset](#)



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