WAVE 2 WAVE

Connect for Life™

COMMAND LINE INTERFACE (CLI)

Customer User Manual

DOC-0009 Rev1.0

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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 Wave2Wave 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 WAVE2WAVE CLI

The Wave2Wave 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 Wave2Wave 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 Adminstrators (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
[Italicized text]	Represents a variable – for which you substitute a value. The nature of the variable is written within the brackets.	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.
{Italicized in curly bracket}	Optional variable	
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 bard
---------------^
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.

The Default login and password for the Super User is:

Login: SuperUser

Password: superuser

Note: It is recommended that upon initial login, the super user should change password to prevent unauthorized logins.

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	*[command]* ?	
Options	?	All the main commands are displayed, in alphabetical order, with a short description.
	[command] ?	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 *[command]* – activates command

activate no *[command]*– deactivates command

Where *command* 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). *e.g.,* activate reetries ^
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** *[parameter]* - activates log command **activate no log** *[parameter]* – deactivates log command Where *parameter* is a mandatory parameter for command **activate log**.	
Options	**activate log** *[parameter]*	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 *[parameter]*	
	activate no log both	Disables a previous activate log both command
Privilege level	SuperUser	

alarm

Description

An Alarm is generated when a failure or fault is detected by the ROME.

The severity of the fault is indicated in the alarms list (see **alarms show** below).

When an Alarm is **clear**ed (resolved) it is removed from the alarms list.

Related Commands

None

Syntax

alarm *command [parameter]*

Where *command* can be: acknowledge, clear, show, unacknowledge.

Where *parameter* is a mandatory parameter for commands **alarm acknowledge, unacknowledge**, and **alarm clear**.

Options

alarm acknowledge *[seqId]*	Acknowledges an alarm. The alarm state (Ackstate) changes from **N/A** to **ACK** (Acknowledged – owned).
e.g., **alarm** acknowledge 38	Acknowledges alarm #38.
alarm clear *[seqId]*	Deletes an alarm from the list.
e.g., **alarm** clear 88	Deletes alarm #88.
e.g., **alarm** clear *	Deletes all alarms from the alarms list.
alarm show	Shows all outstanding alarms.
alarm unacknowledge *[seqId]*	Un-Acknowledges an alarm. The alarm state (Ackstate) changes from **ACK** (Acknowledged – owned) to **UNACK** (Unacknowledged)
e.g., **alarm** unacknowledge 38	Un-Acknowledges alarm #38.

Privilege level

All

alias

Description

An alias enables you to customize the text used to enter any specific command – usually a complex one.

For example, typing **clr** could be set to perform the command **connection clear all.**

Each ROME comes with the following default aliases.

- **cc** connection show connected
- **cp** connection show pending
- **ce** connection set command-execution enable
- **pc** port show connected
- **c*** connection clear pending *

These aliases can be edited.

Related Commands

None

Syntax

alias *[alias] '[command]'*

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).*

*Where command is an optional parameter for the command **alias [alias]**.*

Note: *[command]* can be enclosed in either a pair of single quotes *('command')* or in a pair of double quotes ("*command*")

Note: The max number of aliases allowed is 32. Each alias and command combination is allowed to be maximum of 1024 characters.

Options

alias	Displays the list of the current aliases.
alias *[alias] '[command]'*	Creates a new alias.
e.g., **alias** dt 'show date'	Typing **dt** displays the same result as typing **show date**.
alias *[alias]*	Deletes the specified alias
e.g., **alias** dt	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** *[command]*	
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]'* *where [Message] is the message to send to all logged users.*
Options	**broadcast** *'[Message]'* *e.g.,* **broadcast** 'Do not use Server MRS_2 within the next 2 hrs'
Privilege level	All

cat

Description	Prints the contents of a file.
Related Commands	write
Syntax	**cat** *[Filename]* *where [Filename] is the filename to be displayed.*
Options	**cat** *[Filename]*

e.g., **cat** logEvt.txt	Displays the contents of the logEvt.txt file.

Privilege level	All

clear

Description	Clears various ROME parameters.	
Related Commands	None	
Syntax	**clear** *[parameter]* *Where [parameter] can be*: **log security, screen, or radius-server**.	
Options	**clear** log security	Clears the security log table.
	clear screen	Clears the screen.
	clear radius-server *[IpAddress] [port] [type]*	Deletes the entry of the Radius server. The Radius server identifier is its IP address + Port. All parameters are mandatory. Where: *[IpAddress]* is the RADIUS server IP address *[port]* is the RADIUS server port *[type]* is the RADIUS server type (authentication/accounting)
	e.g., **clear radius-server** 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 *[SeqId]*	
Options	**connection clear** pending * or **connection clear** pending all	Deletes all the Pending requests in the Pending Connection Queue. Alias: **c***
	connection clear pending *[SeqId]* *e.g.*, **connection clear** pending 6	Deletes a specific connection. 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.

Tandem Simplex Any to Any Connect any East simplex port to any West simplex port within patch panel A or Matrix A (ports 1-128). Connect any East simplex port within patch panel B or Matrix B to any simplex port within patch panel B or Matrix B (ports 129-256)

Duplex East to West Connect any duplex port in patch panel A, to any duplex port in patch panel B.

Related Commands

connection set command-execution; connection disconnect; connection show pending

Syntax

connection create 1ae*[East Port #]* **to** 1a**w***[West Port #]*

connection create 1be*[East Port #]* **to** 1b**w***[West Port #]*

Where *East/West Port #* are the physical port names.

connection create *[Patch Panel Name, Port#1]* **to** *[Patch Panel Name, Port#2] e.g.* **connection create A10 to B210, connection create A10 to A25**

Where *Logical Port Name A and Logical Port name B* are the Logical port names – provided that the ROME has a logical ports table (LPN)

Options

e.g., Tandem Simplex Connection **connection create** *1a*e100 to 1aw110	Creates a simplex connection between east port 100 on patch panel A of unit 1 to west port 110 on patch panel A of unit 1
e.g., Tandem Simplex Connection Loopback **connection create** *1b*e135 to 1bw140	Creates a simplex connection between east port 135 on patch panel B of unit 1 to West port 140 on patch panel B of unit 1
e.g., Tandem Duplex Connection **connection create** *a*100 to a110	Creates a duplex connection between port 100 on patch panel A of unit 1 to port 110 on patch panel A of unit 1
e.g., Tandem Duplex Connection **connection create** *b*135 to b145	Creates a duplex connection between port 135 on patch panel B of unit 1 to port 145 on patch panel B of unit 1

	e.g., Duplex East to West Connection *e.g.,* **connection create** A25 to B145 Physical ports can be connected within the same patch panel (A to B) only	Creates a duplex connection between A25 on patch panel A of unit 1 to port B145 on patch panel B of unit 1
Restrictions		
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

connection disconnect 1ae*[East Port #]* **to** 1a**w***[West Port #] [sync]*

connection disconnect 1be*[East Port #]* **to** 1b**w***[West Port #] [sync]*

Where *East/West Port #* are the physical port names.

connection disconnect *[Patch Panel Name, Port1#]* **from** *[Patch Panel Name, Port2#] e.g.* **connection disconnect A10 from B210, connection disconnect A10 from A25**

Where *Logical Port Name A* and *Logical Port name B* are the Logical port names – provided that the ROME is configured to work in Duplex Fiber mode.

connection disconnect range 1ae10 *[East Port #]* **to 1ae15** *[East Port #]*

connection disconnect range 1aw10 *[West Port #]* **to 1aw15** *[West Port #]*

connection disconnect range *[Patch Panel Name, Port1#]* **from** *[Patch Panel Name, Port2#] e.g.* **connection disconnect range A10 to A20, connection disconnect range B135 from B145**

Options

connection disconnect *[port1]* from *[port2]*	Disconnects one pair of named ports.
e.g., Tandem Simplex Connection **connection disconnect** 1be3 from 1bw4	Disconnects east port 3 on patch panel B of unit 1 from west port 4 on patch panel B of unit1
e.g., Tandem Duplex Connection **connection disconnect** A3 from A4	Disconnects port 3 on patch panel A of unit 1 from port 4 on patch panel A of unit1
e.g., East to West Duplex **connection disconnect** A10 from B135	Disconnects port 10 on patch panel A of unit 1 from port 135 on patch panel B of unit1

connection disconnect range *[port1]* to *[port2]*	Disconnects all ports within the designated range
e.g., **connection disconnect** range 1ae3 to 1ae25	Disconnects all connected ports from 1ae3 to 1ae25
e.g., **connection disconnect** range all	Disconnect all connected ports

Privilege level Super User, System Administrator

connection set command-execution

Description	**Connection set command-execution** [*enable/disable*]. 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** *[enable/disable]*	
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** *[Status]* *where [Status] can be*: **connected** or **pending**,	
Options	**connection show** *connected*	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 *pending*	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

Use this command in order to upload or download files to/from the ROME.

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**.

Related Commands

set ftp

Syntax

ftp *[command] [filename]*

where [command] can be: **get file** or **put fname**

and where [filename] is the filename of the file to download or upload.

Options

ftp get file *[filename]*	Download a regular file to the flash file system, from the Home Directory of the FTP server application.
e.g., **ftp get file** test.txt	Downloads file test.txt to the flash file system, from the Home Directory of the FTP server application.
ftp put fname *[filename]*	Uploads a regular file to the home directory of the FTP server application.
e.g., **ftp put fname** test.txt	Uploads a file test.txt to the home directory of the FTP server application.

Privilege level

Super User

help

Description	Displays additional help.	
Syntax	**help** *[parameter]* *where [parameter] is either* **edit** or **inventory**.	
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** *[parameter]*	
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 • 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}* *where {user} is optional and indicates the specific user to logout.*	
Options	**logout force** *{user}*	Disconnects all the sessions of the specified user.
	e.g., **logout force** user88	Disconnects all the sessions of **user88**.
	e.g., **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** *[portID] [parameter] [state]*	
Options	**port set** *[port]* **oper_status** *[state]*	Sets the named port to the Disabled/Enabled state – this state indicates that this port is malfunctioning and should not be used.
	e.g., **port set** 1bw3 **oper_status** disable	Port 1bw3 is port disabled state.
	port set *[portID]* **name** *[name]*	Sets a name for the named port
	e.g., **port set** 1ae100 **name** Office2	Port 1ae100 is assigned the name Office2.
	port set *[portID]* **admin-status** *[state]*	Sets the named port to an Unlocked/Locked state. A **Locked** state indicates that a provisioning operator has preserved this port for future use. An **Unlocked** state releases a port in the locked state
	e.g., **port set** 1bw50 **admin-status** locked	Port 1bw50 has been reserved for future use and to prevent a change in provisioning.
	port set *[portID]* **role** *[state]* *e.g.,* **port set** 1bw50 **role** test	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.
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	**port show**	Shows the complete table of ports 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 *[port1]* to *[port2]*	Shows only the defined range of ports.
	e.g., **port show** 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 *(e.g., **C:\Users\SuperUser**)*
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** *[parameter]*

where [parameter] can be **adminState, authentication-order,connection-type, imageswap, ipParams, name, unpack image.**

Options

set board adminState	Enable/disable the board.
set board authentication-order *[authentication type]*	Sets the method by which user name and password will be authenticated. The authentication methods are as follows: • **Local** – by the ROME (local) • **Radius** – by an external Radius server • **First-radius** – Radius + ROME, where Radius is the primary.
e.g., **set board** authentication-order local	Sets the user authentication to be done locally – by the ROME user DB.
e.g., **set board** authentication-order radius	Sets the user authentication to be done by the Radius server only.
e.g., **set board** 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 *[device]*	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** *[username]* **passwd** *[password]* **serverIp** *[server ip]*	
Options	*[Username]*	The username can be up to 15 characters
	[Password]	The password can be up to 12 characters
	[server ip]	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)

Examples

set radius-server 192.168.10.12 mySecret 1812 accounting 4

The settings of this Radius server are as follows:

Address:	192.168.10.12
Password:	mySecret
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:

- 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 *[offset hrs]*	Sets the hr offset from the NTP.
e.g., **set time** ntp TZ -3.5	Sets the time to **-3.5** hrs from the NTP time.
set time ntp default *[name]*	Sets the default NTP server parameters.
e.g., **set time** ntp default nist1-ny.ustiming.org	
set time ntp server *[name]*	Sets an NTP.
e.g., **set time** ntp server tock.nap.com.ar	
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 *[seconds]*	
Options	**set cli** session timeout *[seconds]*	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.
	e.g., **set cli** session timeout *300*	Telnet sessions will end after 5 minutes of no activity. Setting timeout at 0 results in disabling the timeout.
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** *[parameter]*	
	where [parameter] can be: ***board, date, files algo, and log***.	
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 *[parameter]*	Displays the specified log file.
	e.g., **show** log events	Displays the log of all the events.
	e.g., **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** *[parameter]*	
Options	*e.g.,* **stty** rows *[10..256]*	Sets the terminal height in rows. Available value is 10 to 256.
	e.g., **stty** columns *[20..255]*	Sets the terminal width in characters. Available value is 20 to 255.
	e.g., **stty** columns 40 hardwrap	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:

- Super User
- Security Administrator
- System Administrator

Related Commands

users show

Syntax

users access *[username] [access level]*

Where *[username]* can be any existing user name.

Where *[access level]* is a mandatory parameter that indicates the new access level.

Options

users access *[username]* SecurityAdmin	Changes user rights to Security Administrator.
users access *[username]* SysAdmin	Changes user rights to System Administrator.
users access *[username]* SuperUser	Changes user rights to Super User, having all Operations and Permissions. *Note:* 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: • Super User • Security Administrator • System Administrator	
Related Commands	users show	
Syntax	**users add** *[username] [password] [access level]*	
Options	**users add** *[username] [password] [access level]*	Adds a user, by name, password, and access level.
	e.g., **users add** FredAndrews 1209FredAndrews System Administrator	Adds a user named Tech_2, with password 1209tech – with the access level of a System Administrator. 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** *[username]*	
Options	**users delete** *[username]*	Deletes the defined user from the database.
	e.g., **users delete** 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** *[username]*	
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** *[username]*	
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]*

[newPassword]

[newPassword]

[currentPassword]

e.g., **user password** User_1

1234567

1234567

5678912

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** *{Parameter}* *where {Parameter}* is an optional parameter and can be disconnected or logged.	
Options	**users show**	The following details are displayed for each user: • 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	

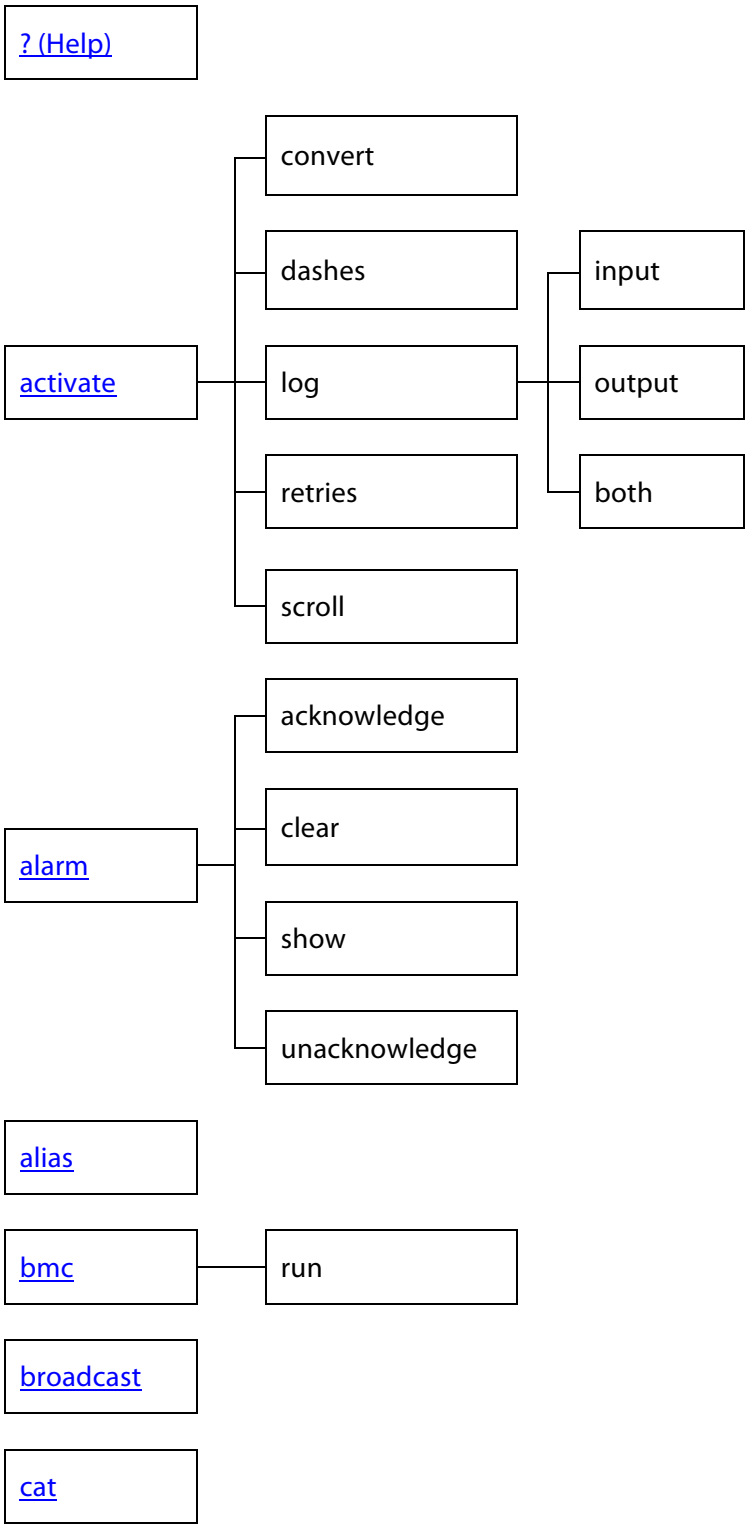
whoami

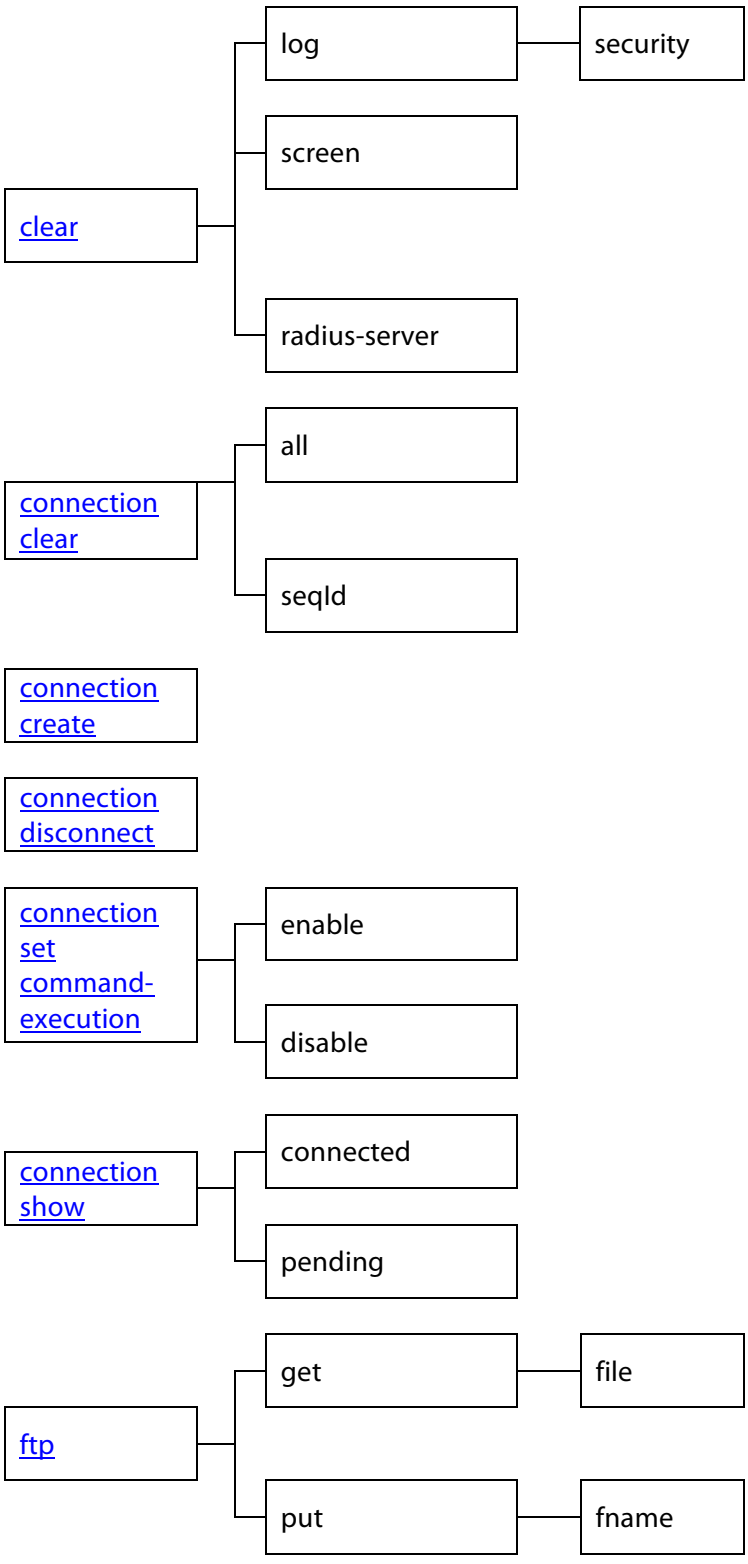
Description	Displays the user and user group details of the operating user – the one whose login credentials are being used.
Related Commands	None
Syntax	**whoami**
Options	**whoami**
Privilege level	All

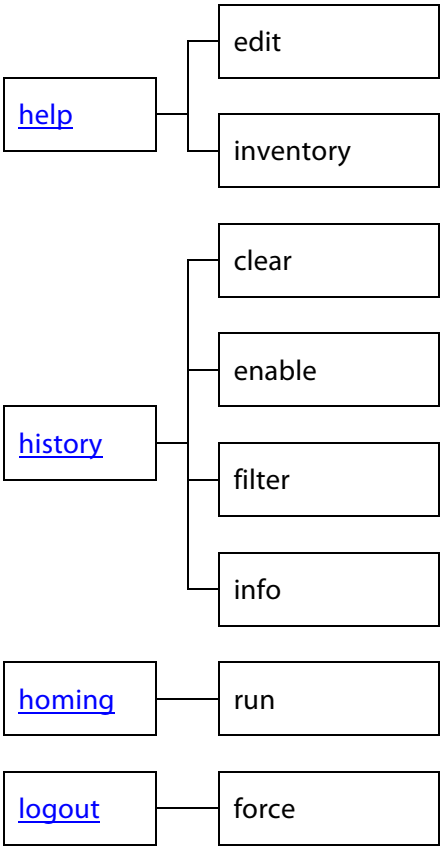
write

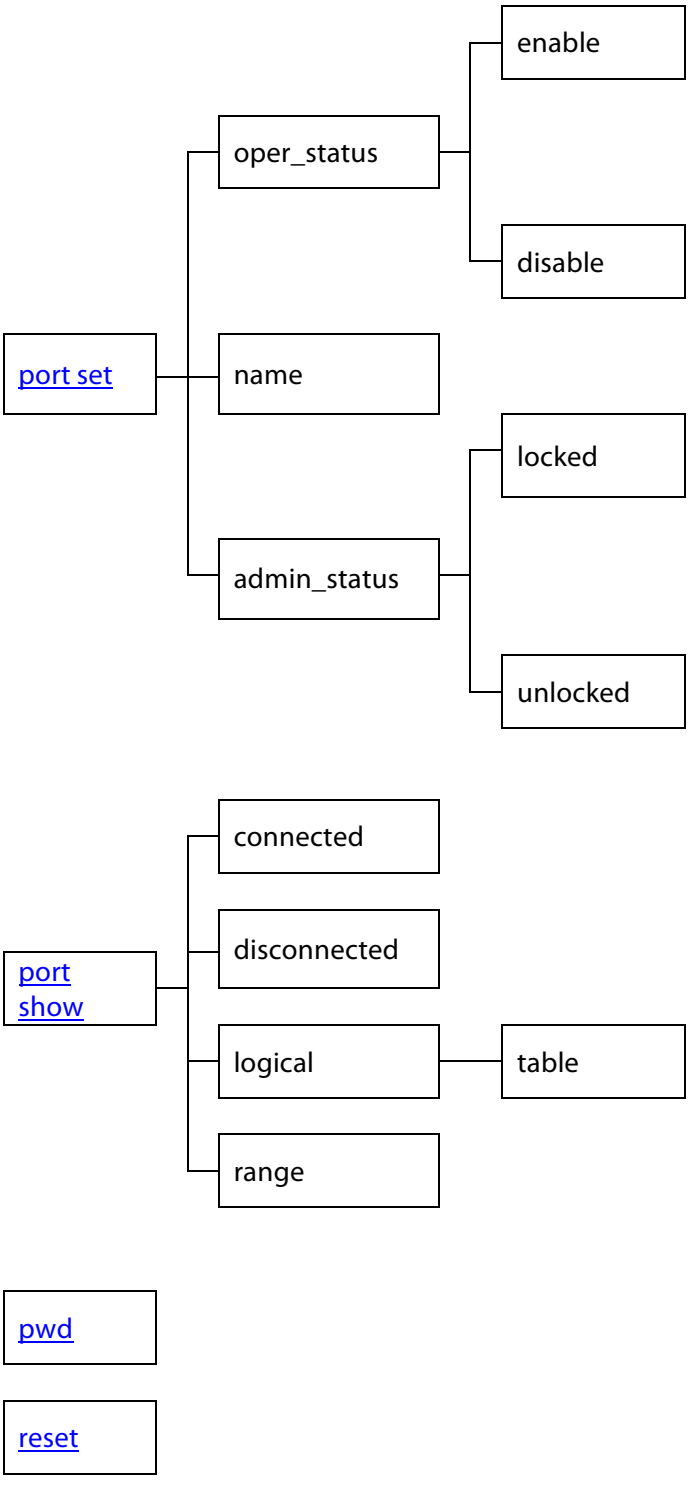
Description	Send a message to a specified user, who is logged on.	
Related Commands	broadcast	
Syntax	**write** *[recipient] [message]*	
Options	**write** *[recipient] [message]*	
	write User_1 "Please call me when you get this…"	If User_1 is logged on, he/she will receive the notification.
Privilege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

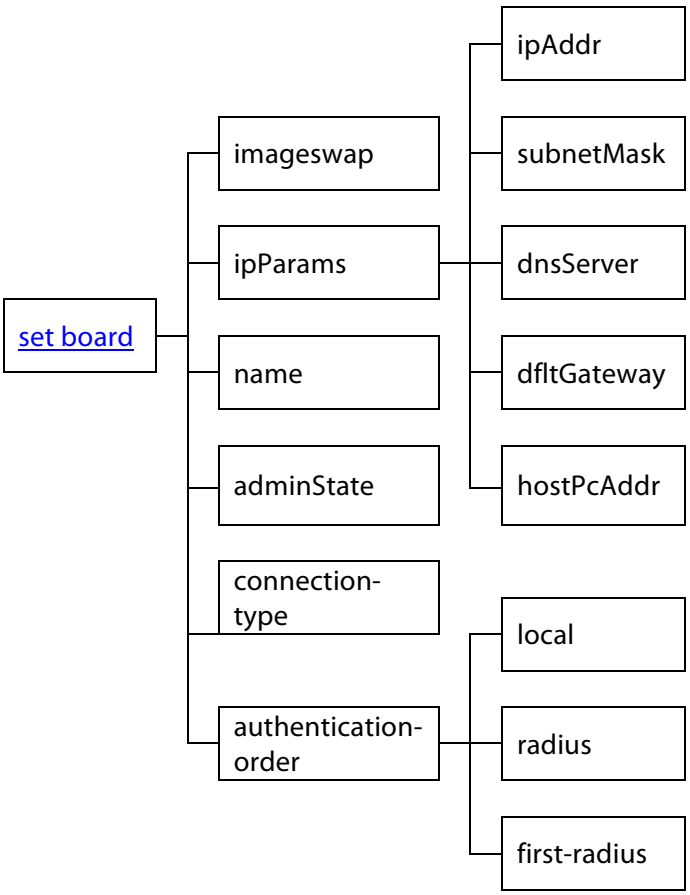
APPENDIX A - CLI COMMANDS TREE




log
security
screen
clear
radius-server
all
connection clear
seqld
connection create
connection disconnect
connection set command-execution
enable
disable
connection show
connected
pending
get
file
ftp
put
fname

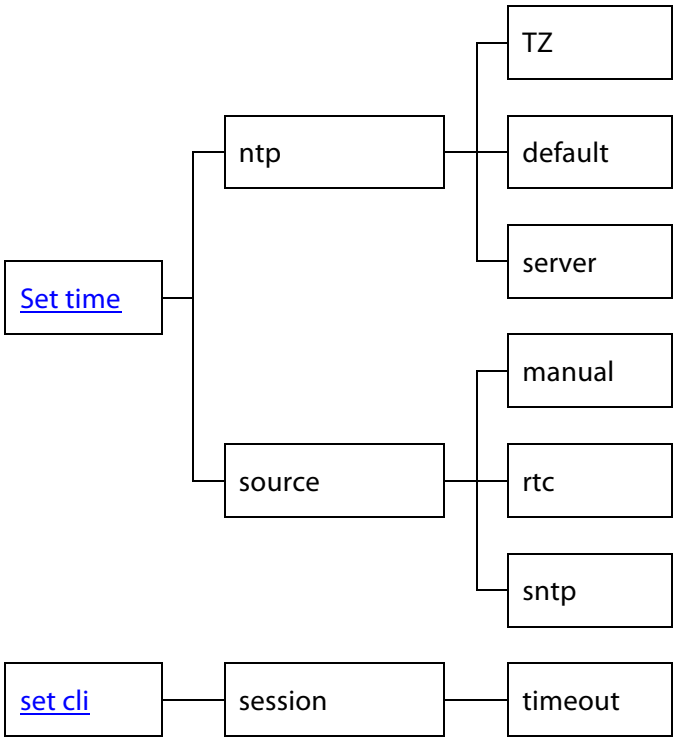

help
edit
inventory
history
clear
enable
filter
info
homing
run
logout
force

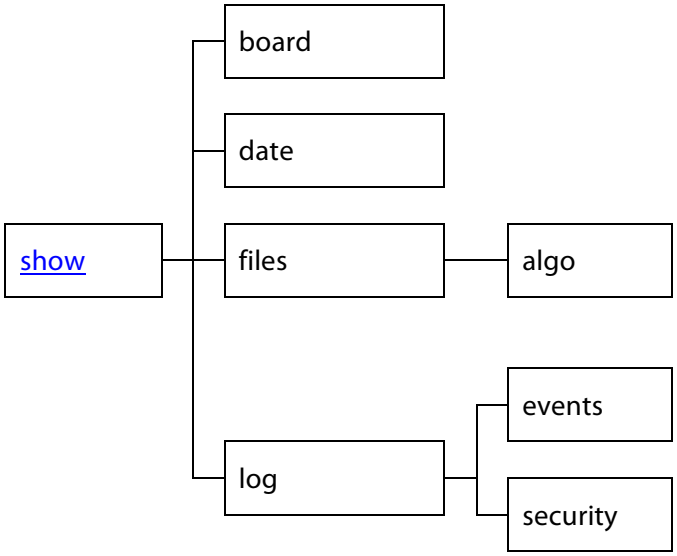

enable
oper_status
disable
port set
name
locked
admin_status
unlocked
connected
port show
disconnected
logical
table
range
pwd
reset

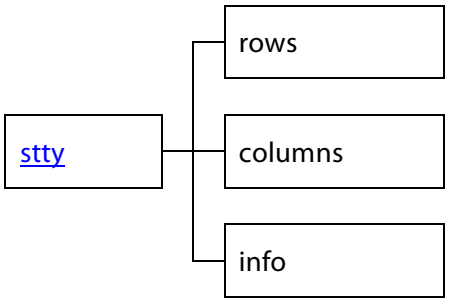


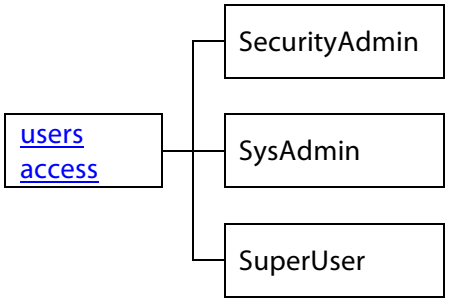
set ftp

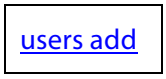
set radius-server

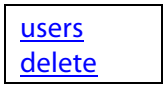

TZ
ntp
default
server
Set time
manual
source
rtc
sntp
set cli
session
timeout

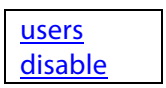

board
date
show
files
algo
events
log
security

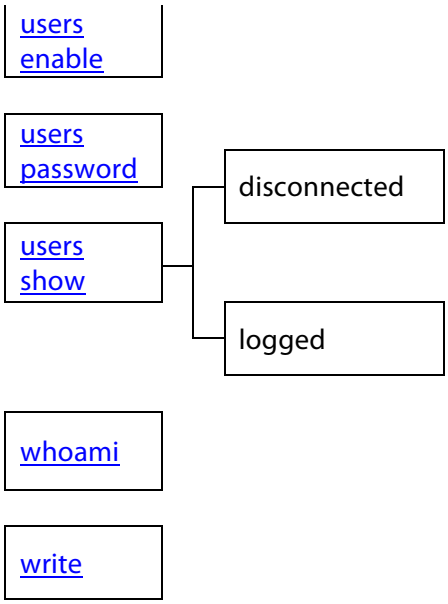

rows
stty
columns
info


SecurityAdmin
users access
SysAdmin
SuperUser


users add


users delete


users disable


users enable
users password
users show
disconnected
logged
whoami
write