

# Command Line Interface (CLI) User Manual

Reference Sales Model EA-XXXX, 14667-001  
Regulatory Model K-XXXX  
Reference Sales and Regulatory Model  
LX-XXXXX, PX-XXXXX, 36720-701

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**CHATSWORTH  
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## Introduction

This manual provides a list of commands for accessing the Chatsworth Products (CPI) eConnect® PDU, Networked RFID Electronic Lock Kit, or Networked Electronic Access Control Swinghandle Kit with Smart Card Authentication using Command Line Interface (CLI).

CLI allows direct connection of a computer to an eConnect PDU or Networked RFID Electronic Lock Kit for configuration and control using command line scripts.

The following eConnect Part Numbers and Series support CLI:

| Part Numbers | Series   | Branch Monitoring | Outlet Monitoring | Outlet Control | Lock Control |
|--------------|--|-------------------|-------------------|----------------|--------------|
| EA-6xxx-x    | <a href="#">Switched Pro eConnect PDU</a>          | X                 | X                 | X              | X            |
| EA-5xxx-x    | <a href="#">Switched eConnect PDU</a>              | X                 |                   | X              | X            |
| EA-4xxx-x    | <a href="#">Monitored Pro eConnect PDU</a>         | X                 | X                 |                | X            |
| EA-3xxx-x    | <a href="#">Monitored eConnect PDU</a>             | X                 |                   |                | X            |
| 14667-001    | <a href="#">Networked RFID Electronic Lock Kit</a> |                   |                   |                | X            |

For the models listed above, CLI requires an eConnect PDU with eConnect Controller 4 (MCM4) or a Networked RFID Electronic Lock Kit with firmware version 5.3.xxx or later. Download firmware (version 5.3.xxx or later) here: [chatsworth.com/en-us/resources/design-tools/software](https://chatsworth.com/en-us/resources/design-tools/software)

| Part Numbers          | Series   | Branch Monitoring | Outlet Monitoring | Outlet Control | Lock Control |
|-----------------------|--|-------------------|-------------------|----------------|--------------|
| L6-xxxxx,<br>P6-xxxxx | <a href="#">Switched Pro eConnect PDU</a>  | X                 | X                 | X              | X            |
| L5-xxxxx,<br>P5-xxxxx | <a href="#">Switched eConnect PDU</a>  | X                 |                   | X              | X            |
| L4-xxxxx,<br>P4-xxxxx | <a href="#">Monitored Pro eConnect PDU</a>   | X                 | X                 |                | X            |
| L3-xxxxx,<br>P3-xxxxx | <a href="#">Monitored eConnect PDU</a>   | X                 |                   |                | X            |
| 36720-701             | <a href="#">Networked Electronic Access Control Swinghandle Kit with Smart Card Authentication</a> |                   |                   |                | X            |

For the models listed above, CLI requires an eConnect PDU with eConnect Controller 2/3 (MCM2 or MCM3) or a Networked Electronic Access Control Swinghandle Kit with firmware version 4.13.xxx or later. Download firmware (version 4.13.xxx or later) here: [chatsworth.com/en-us/resources/design-tools/software](https://chatsworth.com/en-us/resources/design-tools/software)

## Legal Information

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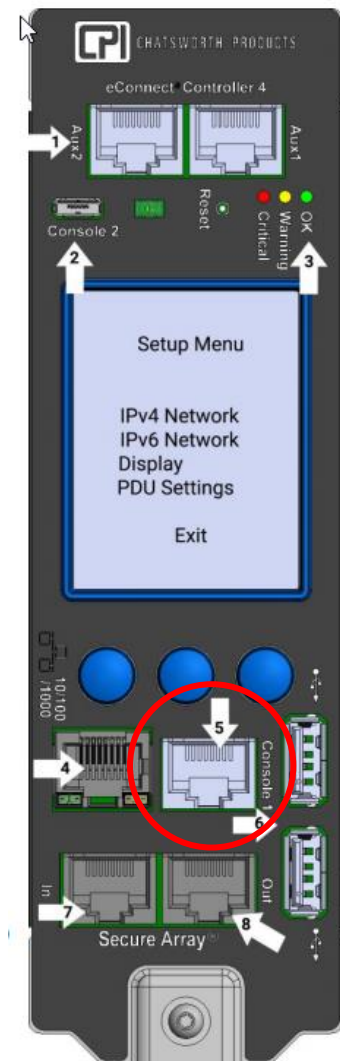
## Connecting the PDU and Computer

### eConnect PDU with Controller 4 (MCM4) or RFID Electronic Lock Kit

- Use Console 1 (Arrow 5).
- Connect a YOST cable with an RJ45 (8P8C) connection (ordered separately).

### eConnect PDU with Controller 2/3 (MCM 2/3) or Networked Electronic Access Control Swinghandle Kit

- Use In/IO/IO port.
- Use [CPI's Serial Setup Cable \(P/N 35941-131\)](#) (ordered separately)



## Command Syntax

Command syntax is the format in which a command should be entered in the CLI. Commands include the name of the command, keywords, and arguments. Keywords are alphanumeric strings that are used literally. Arguments are placeholders for values that a user must supply. Keywords and arguments may be required or optional.

Specific conventions convey information about syntax and command elements. The table below describes these conventions.

| Symbol/Text            | Function  | Notes   |
|------------------------|---|---|
| { } (curly brackets)   | Indicate a choice of argument.  |   |
| [] (square brackets)   | Indicate a required argument.   |   |
| X.X.X.X                | Indicates that you must enter a dotted decimal IP address.            |   |
| <cr> (carriage return) | Indicates the end of available keywords and arguments.                |   |
| -                      | Indicates that no changes are to be made to the associated parameter. | e.g., User update, '-' indicates no change to: <u>'password'</u> or <u>'cardid'</u> |

## Command Modes

The CLI is divided into different command modes (User, Elevated, and Admin Modes) and will impact available commands dependent on the mode you are currently in. Entering a question mark (?) at the CLI prompt defines a list of commands available for each command mode.

When you log in to the CLI, you are in User Mode. User Mode contains only commands that allow you to view information about the operation of the PDU. To use commands that write changes to the PDU you must enter Elevated Mode. Lastly, the Admin Mode enables commands that allow you to change / control functions that should only be available to specific users and are used infrequently.

| Command Mode  | Access Method                                  | Prompt           | Exit Method  |
|---------------|--|------------------|--|
| User Mode     | Log in.  | PDU Name (ID) :  | Use the <b>quit</b> , <b>logout</b> or <b>exit</b> command to end the session.   |
| Elevated Mode | User Mode, use the <b>elevate</b> command.     | PDU Name (ID) #  | Use the <b>exit</b> command to return to User Mode. Use the <b>quit</b> or <b>logout</b> command to end the session.     |
| Admin Mode    | Elevated Mode, use the <b>elevate</b> command. | PDU Name (ID) \$ | Use the <b>exit</b> command to return to Elevated Mode. Use the <b>quit</b> or <b>logout</b> command to end the session. |



## Base Commands

The following pages cover syntax for Base Commands:

- elevate
- logout
- help
- quit
- exit
- history
- script
- support

### elevate

Elevates the security level of the CLI.

|                    |  |
|--------------------|--|
| Syntax             | <b>elevate</b>   |
| Syntax Description | This command has no arguments.   |
| Defaults           | No default.  |
| Command Modes      | User Mode, Elevated Mode   |
| Usage Guidelines   | In Admin mode, no higher security states exist.<br>Commands 'help' and '?' display commands available at each level.   |
| Examples           | <pre>PDU Name(0): elevate Ok:Entering Elevated Mode.  PDU Name(0)# elevate Ok:Entering Admin Mode.  PDU Name(0)\$ elevate <b>OK: In Admin, no higher security states exists.</b></pre> |
| Related Commands   | <b>quit</b><br><b>exit</b><br><b>help</b><br><b>?</b>  |

## logout

Closes an active command line session of the PDU.

|                    |                                      |
|--------------------|--------------------------------------|
| Syntax             | <b>logout</b>                        |
| Syntax Description | This command has no arguments.       |
| Defaults           | No default.                          |
| Command Modes      | User Mode, Elevated Mode, Admin Mode |
| Usage Guidelines   |                                      |
| Examples           | PDU Name (0) : logout<br>Bye!        |
| Related Commands   | <b>exit</b><br><b>quit</b>           |

## help

Displays a brief description of the help system.

|                    |   |
|--------------------|---|
| Syntax             | <b>help</b>   |
| Syntax Description | This command has no arguments.  |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | <p>The help command provides a brief description of the context-sensitive help system, which functions as follows:</p> <ul style="list-style-type: none"><li>• To list all commands available for a command mode, enter a question mark (?) or <b>help</b> at the system prompt.</li><li>• To obtain a list of commands that begin with a character string, enter the abbreviated command entry immediately followed by a question mark (?). This form of help is called word help, because it lists only the keywords or arguments that begin with the abbreviation you entered.</li><li>• To list the keywords and arguments associated with a command, enter a question mark (?) in place of a keyword or argument on the command line. This form of help is called command syntax help, because it lists the keywords or arguments that apply based on the command, keywords, and arguments you have already entered.</li></ul> |
| Examples           | <pre>PDU-1(0): met? metrics          Get real time metrics data about the PDU  PDU-1(0): metrics ? EAS              Electronic Access System metrics branch           Branch, or Circuit, metrics environmental    Environmental sensor metrics line             Line, or Phase, metrics outlet           Outlet, or Receptacle, metrics  PDU-1(0): elevate OK:Entering Elevated Mode PDU-1(0)# elevate OK:Entering Admin Mode PDU-1(0)\$ list ? array            Lists the PDUs connected on the SecureArray. groups           List groups defined for the target PDU users            Lists the Users on the PDU. PDU-1(0)\$</pre>  |
| Related Commands   |   |

## quit

User is logged out of the session.

|                    |                                      |
|--------------------|--------------------------------------|
| Syntax             | <b>quit</b>                          |
| Syntax Description | This command has no arguments.       |
| Defaults           | No default.                          |
| Command Modes      | User Mode, Elevated Mode, Admin Mode |
| Usage Guidelines   |                                      |
| Examples           | W11 K61 Dev(0): quit<br>Bye!         |
| Related Commands   | <b>logout</b><br><b>exit</b>         |

## exit

Exits an elevated security state. Decreases the security level by one.

|                    |   |
|--------------------|---|
| Syntax             | <b>exit</b>   |
| Syntax Description | This command has no arguments.  |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | If logged in as User, user is logged out and the session terminated.<br>If logged in as Elevated or Admin, security role moves to the next lower level.               |
| Examples           | PDU Name(0)\$ exit<br>PDU Name(0)#<br><br>PDU Name(0)# exit<br>PDU Name(0):<br><br>PDU Name(0): exit<br>Bye!<br><br>User is logged out and the session is terminated. |
| Related Commands   | <b>quit</b><br><b>logout</b>  |

|  |  |
|--|--|
|  |  |
|--|--|

## history

Provide a history of commands that have been entered.

|                    |   |
|--------------------|---|
| Syntax             | <b>history {size   show   enable   disable}</b>   |
| Syntax Description | <pre>size          set the size of the history buffer show          show the history buffer enable        enable history disable       disable history</pre>  |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   |   |
| Examples           | <pre>PDU Name(0): history enable  OK:History is now enabled PDU Name(0): PDU Name(0): history size 25 size ----- 25  OK:History size is now at 25 commands PDU Name(0):  PDU Name(0)\$ history show command command id ----- history show 1 history size 2 elevate 3       25  OK:Complete PDU Name(0)\$  PDU Name(0)# history disable  OK:History is now disabled PDU Name(0)# history show PDU Name(0)#</pre> |
| Related Commands   |   |

## script

Executes a script of CLI commands

|  |  |   |
|--|--|---|
| Syntax                                       | <b>script [usb   network [http   tftp ]   scrFile   fileOut   fetchOutFile]</b>  |   |
| Syntax Description                           | <p><b>fileOut</b> <i>logfile</i> *</p> <p><b>usb</b> <i>filename</i></p> <p><b>network http/ftp</b> <i>URL filename</i></p> <p><b>network tftp</b> <i>IPaddress filename</i></p> <p><b>scrFile</b> <i>filename</i></p> <p><b>script fetchOutFile</b> *</p>   | <p>Log file name *</p> <p>Script file is from USB connected to PDU</p> <p>HTTP/FTP location, script file name</p> <p>TFTP IP Address, script file name</p> <p>This command is used to run scripts that already exist and are stored on the microSD card (MCM4 only).</p> <p>Copies the current script logfile to a USB thumb drive, creating (if needed) folder /scriptLogs/ for <i>logfile</i> *</p> |
| Defaults                                     | No default.  |   |
| Command Modes                                | User Mode,<br>It's a good practice to assume the script is running from <b>User</b> mode, inserting <b>elevate</b> commands where needed.  |   |
| Usage Guidelines                             | <p>Script files are text files.</p> <p>A carriage return (enter) must be at the end of each command.</p> <p>The script uses most of the CLI commands included in this document.</p> <p>The script may have any extension, as long as it is a text file (txt, sh, etc.)</p> <p>* The '<b>fileOut</b>' and '<b>fetchOutFile</b>' commands MAY NOT be included in a command script.</p> |   |
| Examples                                     | <pre>PDU-1(0): script fileOut k30.log.a.txt OK: Complete PDU-1(0): script network tftp 192.111.222.333 script.2.txt Script: /tmp/script.2.txt - Complete. OK: Complete PDU-1 0): script fetchOutFile OK: Complete</pre>  |   |
| See Appendix E for more examples of scripts. |  |   |
| Related Commands                             | <b>elevate</b>   |   |

## support

Displays information needed by the support team.

|                    |  |
|--------------------|--|
| Syntax             | <b>support</b>   |
| Syntax Description | This command has no parameters.  |
| Defaults           | No default.  |
| Command Modes      | User Mode, Elevated Mode, Admin Mode   |
| Usage Guidelines   | Provides specific information for support team.<br>Information obtained will be from the PDU connected to the serial cable.  |
| Examples           | <pre>W07 K61(0): support 0 Name:                               Value: ----- MCM ID:                             29999 Serial Number:                       110000003699999999 Model Number:                        K61-6D526-40L-72A Installed FW Ver.:                   5.2.766.0 MAC Address:                         00:0e:d3:2e:04:7e        Contact Technical &amp; Sales Support for questions about:        * Products Installation       * Consultation Services       * Product Orders       * Distributors &amp; Resellers  United States Toll Free: 1-800-834-4969 International: 1-818-739-3400  Contact us at www.chatsworth.com for additional information on Products, Data Center Solutions, Downloads and Training.  OK:Complete</pre> |
| Related Commands   |  |

## Secure Array® Commands

The following pages cover syntax for Secure Array Commands:

- attach
- list array
- mode

### attach

To connect to a specific PDU from a primary PDU on the Secure Array for the purpose of executing monitoring and maintenance commands on that PDU.

|                    |   |
|--------------------|---|
| Syntax             | <b>attach [pduID]</b>   |
| Syntax Description | <b>pduID</b> The pduID is in the output of the <b>mode</b> or <b>list array</b> commands.   |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | The id must be between 0 and 47. 0 will always identify the primary   |
| Examples           | <pre> PDU-1(0): mode This pdu cabinet name pduID role selectorID ----- - * Lab Cab A PDU-1 0 Pri 28779 Lab Cab A PDU-2 1 Sec 5848 OK:Complete  PDU-1(0): list array FW Vers. cabinet description name pduID selectorID ----- 5.2.766 Lab Cab A Main PDU-1 0 28779 5.2.766 Lab Cab A Backup2 PDU-2 1 5848  PDU-1(0)# attach 1 Name: admin Password: *****  OK:Complete  PDU-2(1): mode This pdu cabinet name pduID role selectorID ----- Lab Cab A PDU-1 0 Pri 28779 * Lab Cab A PDU-2 1 Sec 5848 OK:Complete PDU-2(1): </pre> |
| Related Commands   | <b>mode</b><br><b>list array</b>  |



|  |  |
|--|--|
|  |  |
|--|--|

## list array

Lists the PDUs connected on the Secure Array.

|                    |   |
|--------------------|---|
| Syntax             | <b>list array</b>   |
| Syntax Description | This command has no parameters  |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | <p>The user <b>MUST</b> be connected to the currently active primary PDU on the SecureArray. If connected to a Secondary or Alternate PDU, the command will list only the one PDU directly connected.</p> <p>The selectorID is a permanent identifier of each PDU.</p> <p>Use either the command <b>list array</b> or <b>mode</b> to display the pduID which is used in several other commands.</p> |
|                    | <pre>PDU-1 K61(0): list array FW Vers.          cabinet description      name      pduID selectorID ----- 5.2.766 Lab Cab A      Main                PDU-1 K61 0 28779 5.2.766 Lab Cab A      Backup2             PDU-2 K30 1 5848 5.2.766 Lab Cab A      Linux1              PDU-3 K41 2 74951 4.12.766 Lab Cab A      Backup9             PDU-4 P6   3 58968</pre>                                |
| Related Commands   | <b>mode</b>   |

## mode

Lists the mode of the PDUs on the Secure Array.

|                    |   |
|--------------------|---|
| Syntax             | <b>mode</b>   |
| Syntax Description | This command has no parameters<br>  |
| Defaults           | No default.   |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | Use either the command <b>list array</b> or <b>mode</b> to display the pduID which is used in several other commands.   |
| Examples           | <pre>PDU-1(0): mode This pdu      cabinet   name      pduID    role      selectorID ----- *           Lab Cab A      PDU-1 K61  0         Pri       28779            Lab Cab A      PDU-2 K30  1         Sec       5848            Lab Cab A      PDU-3 K41  2         Sec       74951            Lab Cab A      PDU-4 P6   3         Sec 58968</pre> |
| Related Commands   | <b>config securearray mode</b><br><b>list array</b>   |

## Backup Commands

The following pages cover syntax for Backup Commands:

- archive-cfg
- restore-cfg
- clone
- pull

## archive-cfg

Archive the current configuration into various channels.

|                    |   |
|--------------------|---|
| Syntax             | <b>archive-cfg [usb   network   file [local   uSD]] [dest path]</b>   |
| Syntax Description | <p><b>usb</b> <i>filepath</i> Will save the configuration information to a USB drive to a file named '<i>filepath</i>'</p> <p><b>network</b> <i>IP filename</i> Will save the configuration locally and then TFTP the information to the provided '<i>tftp server</i>' '<i>filename</i>'.</p> <p><b>file local</b> <i>filename</i> Will save the configuration locally to the PDU</p> <p><b>file uSD</b> <i>filename</i> Will save the configuration to the internal microSD card (MCM4 units only)</p> |
| Defaults           | No default.   |
| Command Modes      | Elevated Mode, Admin Mode   |
| Usage Guidelines   | <p>USB: . If '<i>filepath</i>' is only a file name, a folder will be created on the usb with the file within.</p> <p><b>usb drive &gt; internal &gt; cfg_archive &gt; '<i>filename</i>'</b></p>   |
| Examples           | <pre>PDU-1(0)# archive-cfg file uSD config.012320.arc Archiving to microSD Card: Complete  PDU-1(0)# archive-cfg network tftp 192.999.000.00 tft.323.arc Archiving to an tftp server file: Complete  PDU-1(0)# archive-cfg file local fri.local.arc Archiving to local file: Complete  PDU-1(0)# archive-cfg file USB fri.01.arc Archiving to USB: Complete</pre>   |
| Related Commands   | <b>restore-cfg</b>  |

## restore-cfg

Restore the current configuration from a specified channel.

|                    |   |
|--------------------|---|
| Syntax             | <b>restore-cfg [usb   network   file [local   uSD]] [dest path]</b>   |
| Syntax Description | <p><b>usb</b> <i>filepath</i> Will restore the configuration information from a USB drive to a file named '<i>filepath</i>'</p> <p><b>network</b> <i>IP filename</i> Will PULL the configuration from the provided '<i>tftp server filename</i>', then restore the configuration.</p> <p><b>file local</b> <i>filename</i> Will restore the configuration locally to the PDU</p> <p><b>file uSD</b> <i>filename</i> Will restore the configuration from the internal microSD card (MCM4 units only)</p> |
| Defaults           | No default.   |
| Command Modes      | Elevated Mode, Admin Mode   |
| Usage Guidelines   | <p>USB: If '<i>filepath</i>' is only a file name, a folder will be created on the usb with the file within.</p> <p><b>usb drive &gt; internal &gt; cfg_archive &gt; '<i>filename</i>'</b></p>   |
| Examples           | <pre>PDU-1 (0)# restore-cfg   file          Restore config from an archive file   network       network "[ http/ftp   tftp ]"   usb          Restore a config archive from a USB thumb drive. PDU-1(0)# restore-cfg file   local        Local (on PDU) file   uSD         Restore config from the microSD Card PDU-1(0)# restore-cfg file uSD   &lt;string&gt;    filename:    eg: config_021419.arc PDU-1(0)# restore-cfg file uSD config_sd.arc  Restoring from microSD Card: Complete</pre>          |
| Related Commands   | <b>archive -cfg</b>   |

## clone

Clones the settings or users from the primary PDU to a SecureArray member PDU

|                    |   |  |
|--------------------|---|--|
| Syntax             | <b>clone config SecureArray pduID configGroup</b><br><b>clone users pduID</b>   |  |
| Syntax Description | <b>config SecureArray pduID configGroup</b>   | Clone the specified configuration group settings from the primary PDU (unit connected via serial cable) to the specified pduID |
|                    | <b>users pduID</b>  | Clone the users from the primary PDU (unit connected via serial cable) to the specified pduID.                                 |
| Defaults           | No default.   |  |
| Command Modes      | Admin Mode  |  |
| Usage Guidelines   | <i>configGroup</i> options:<br>1 - Branch Voltage Thresholds<br>2 - Branch Current Thresholds<br>3 - Outlet Reset Delays<br>4 - Outlet ON Delays<br>5 - Outlet Current Thresholds<br>6 - Temperature Thresholds<br>7 - Humidity Thresholds<br>8 - Temperature Unit<br>9 - Trap Interval<br>10 - Sum Amps Setting<br>11 - Out-of-Service Setting<br>12 - Notification Specifications<br>13 - Logging Settings<br>999 - 'ALL' Config Settings |  |
| Examples           | <pre>PDU-1(0)\$ clone config SecureArray 11 1</pre> <p>Cloning the requested config settings.: Complete</p> <pre>PDU-1(0)\$</pre> <pre>PDU-1(0)\$ clone users 4</pre> <p>: Complete</p> <pre>PDU-1(0)\$</pre>   |  |
| Related Commands   | <b>list array</b><br><b>mode</b><br><b>pull</b>   |  |

## Administrative Commands

The following pages cover syntax for Administrative Commands:

- firmware
- reboot
- reset
- timezone

### firmware

Command used to upgrade the firmware on the PDU.

|                    |   |  |
|--------------------|---|--|
| Syntax             | <b>firmware [usb]</b><br><b>firmware network [http]</b><br><b>firmware network [tftp]</b><br><b>firmware securearray</b><br><b>firmware saProgress</b>  |  |
| Syntax Description | <b>usb</b><br><br><b>network [http   tftp]</b><br><br><b>securearray</b><br><br><b>saProgress</b>   | Will upgrade firmware from the USB thumb drive plugged into the PDU.<br><br><b>{IP Address IPAddress fileName fileName}</b><br><br>Push firmware out to the PDUs on the Secure Array.<br><br><b>If firmware update in progress, show current FW version(s), Update state and Progress for attached PDUs.</b> |
| Default            | No default.   |  |
| Command Modes      | Admin Mode  |  |
| Usage Guidelines   | The <b>firmware</b> command runs ' <i>silent</i> '. This translates into there being no updates or indication that the fw update is running unless the <b>saProgress</b> command is entered at the Primary PDU. The system will reboot after the fw update has been applied. However, the Web UI for the Primary PDU will display the progress on Administrative > Upgrade Firmware > Upgrade Linked PDUs |  |
| Examples           | <pre>PDU-1(0)\$ firmware usb Updating FW from USB Device: Running</pre>   |  |
| Related Commands   | <b>reboot</b>   |  |

## reboot

Reboots the PDU. Outlets will maintain their state.

|                    |   |
|--------------------|---|
| Syntax             | <b>Reboot</b> {pdusel [pduID]}                        |
| Syntax Description | <b>pdusel:</b> The pduID that is to reboot.           |
| Defaults           | No default.   |
| Command Modes      | Admin Mode  |
| Usage Guidelines   | Command operates on a single PDU, specified by pduID. |
| Examples           | <pre>PDU-1 (0)\$ reboot 0</pre>                       |
| Related Commands   | <b>Firmware</b>                                       |

## reset

Resets a system's specific setting to factory defaults.

|                    |  |
|--------------------|--|
| Syntax             | <b>reset</b> {pdusel [pduID] <b>optflag</b> [1=>net   2=>config   4=>users   7=>all]}  |
| Syntax Description | <b>pdusel:</b> The pduID that is to reset its config.<br><b>optflag:</b> 1 => Network   2 => System   4 => User   7 => All   |
| Defaults           | No default.  |
| Command Modes      | Admin Mode   |
| Usage Guidelines   | Command operates on a single PDU, specified by pduID. The ' <b>reset</b> ' can be applied to the 'Network', 'System', 'User' or a combination of those. e.g. A value of '7' would tell the PDU to reset all settings. See eConnect User Manual for default settings. |
| Examples           | <pre>PDU-1 (0)# reset 12 6 OK: Complete</pre>  |
| Related Commands   |  |

## timezone

Resets a system's specific setting to factory defaults.

|        |  |
|--------|--|
| Syntax | <b>timezone</b> [ <b>list</b> ][ <b>reset</b> ][ <b>show</b> ] |
|--------|--|

|                    | <b>timezone configure <i>ID</i></b>   |
|--------------------|---|
| Syntax Description | <i>ID</i> : Integer, numerical identifier for the desired timezone for system configuration. Options are available in the output of the “timezone list” command   |
| Defaults           | No default.   |
| Command Modes      | Admin Mode  |
| Usage Guidelines   | Command operates on the local PDU. This command will set the PDU system to use the desired time zone for syslog messages related to interactions and events taking place on the PDU or the PDU’s controlled SecureArray.  |
| Examples           | <pre>PDU Name(0)\$ timezone reset Resetting time zone back to UTC. OK: Complete  PDU Name(0)\$ timezone configure 6 Successfully configured time zone for: Central Standard/Daylight Time (CST/CDT) UTC-6:00/-5:00 OK: Complete  PDU Name(0)\$ timezone show Currently configured time zone: Central Standard/Daylight Time (CST/CDT) UTC-6:00/-5:00 OK: Complete</pre> |

## Access Control Commands

The following pages cover syntax for the Access Control Commands:

- list users
- list groups
- user add
- user update
- user remove
- radius-server
- radius-card
- ldap-user
- sslcert



## list users

Lists the users of the PDU.

|                    |  |
|--------------------|--|
| Syntax             | <b>list users</b>  |
| Syntax Description | This command has no arguments.   |
| Defaults           | No default.  |
| Command Modes      | Admin Mode   |
| Usage Guidelines   | This command only lists the users that exist on the local (physically attached) system.  |
| Examples           | <pre>PDU-1 K61(0)\$ list users cardid  group  loginid ----- 0       Admin  admin         Admin  aug25a         User   aug25b         Viewer aug25c 111333aaa99 Cabinet aug25d  OK:Complete PDU-1(0)\$ attach 9  OK:Complete PDU-12 K40(9)\$ list users cardid  group  loginid ----- 0       Admin  admin         User   pdu12User  OK:Complete PDU-12 K40(9)\$</pre> |
| Related Commands   | <b>attach</b><br><b>user add</b><br><b>user update</b><br><b>user remove</b>   |

## list groups

Lists the groups of the PDU.

|                    |  |
|--------------------|--|
| Syntax             | <b>list groups</b>   |
| Syntax Description | This command has no parameters   |
| Defaults           | This command has no default settings.  |
| Command Modes      | Admin Mode   |
| Usage Guidelines   | This command only lists the groups that exist on the local (physically attached) system. |
| Examples           | <pre>PDU-1 (0): list groups  0 : Admin 1 : Cabinet 2 : User 3 : Viewer  PDU-1 (0):</pre> |
| Related Commands   | <b>user add</b><br><b>user update</b>  |

## user add

Adds a new user to the PDU and assigns them to a group.

|                    |   |
|--------------------|---|
| Syntax             | <b>user add {userid} {groupid} {password} {confirmpassword} {cardid}</b>  |
| Syntax Description | <b>userid</b> : Create a new user named ' <i>userid</i> '<br><b>groupid</b> : Admin, Cabinet, User or Viewer<br><b>password</b> : New user's ' <i>password</i> '<br><b>confirmpassword</b> : Confirm new user's ' <i>password</i> '<br><b>cardid</b> : ' <i>cardid</i> ' – Enter '-' for no access card |
| Defaults           | No defaults.  |
| Command Modes      | Admin Mode  |
| Usage Guidelines   | Value for password must equal confirm password.   |
| Examples           | <pre>PDU-1(0)\$ user add testuser1 Admin test123 test123 1234567890  User testeruser1 added. OK.  PDU-1(0)\$ user add testview1 Viewer cpi123 cpi999 9090999  NOT_OK:Passwords do not match  PDU-1(0)\$ user add testview1 Viewer cpi123 cpi123 9090999  OK:Complete</pre>                              |
| Related Commands   | <b>list users</b><br><b>list groups</b><br><b>user update</b><br><b>user remove</b>   |

## user update

Updates an existing user on the PDU.

|                    |  |
|--------------------|--|
| Syntax             | <b>user update [userid] [groupid <i>group</i>] [password <i>password</i>]<br/>[confirmpassword <i>password</i>] [cardid <i>cardid</i>]</b>   |
| Syntax Description | <b>userid</b> : User ID to update<br><b>groupid</b> : Change user to ' <i>group</i> '<br><b>password</b> : Enter '-' if unchanged<br><b>confirmpassword</b> : Enter '-' if unchanged<br><b>cardid</b> : ' <i>cardid</i> ' – Enter '-' if unchanged or no access card |
| Defaults           | No defaults.   |
| Command Modes      | Admin Mode   |
| Usage Guideline    |  |
| Examples           | <pre>PDU-1 (0): user update testuser1 Cabinet - - -<br/><br/>User testeruser1 updated.<br/>OK.<br/><br/>PDU-1 (0):</pre>   |
| Related Commands   | <b>list users</b><br><b>list groups</b><br><b>user add</b><br><b>user remove</b>   |

## user remove

Removes an existing user from the PDU.

|                    |  |
|--------------------|--|
| Syntax             | <b>user remove [userid]</b>  |
| Syntax Description | This command has no parameters   |
| Defaults           | No defaults.   |
| Command Modes      | Admin Mode   |
| Usage Guidelines   |  |
| Examples           | <pre>PDU-1 (0): user remove testuser1  User testeruser1 removed. OK.  PDU-1 (0):</pre> |
| Related Commands   | <b>list users</b><br><b>list groups</b><br><b>user add</b><br><b>user update</b>       |

## radius-server

Sets up a RADIUS server to use for authentication and authorization of users.

|                    |  |
|--------------------|--|
| Syntax             | <b>radius-server [enable enable]</b><br><b>radius-server [ipv6 enable]</b><br><b>radius-server [secret testing123]</b><br><b>radius-server [rserv{1:2:3} IP Address{1:2:3} Port{1:2:3} #]</b><br><b>radius-server [test {username password}]</b>                         |
| Syntax Description | <b>enable</b> {0-disable   1-enable}<br><b>ipv6</b> {0-disable   1-enable}<br><b>secret</b> {testing123}<br><b>rserv1</b> {IP Address1} {Port1 #}<br><b>rserv2</b> {IP Address2} {Port2 #}<br><b>rserv3</b> {IP Address3} {Port3 #}<br><b>test</b> {username} {password} |
| Defaults           | <b>rserv{1:2:3} port{1:2:3}</b> (0 sets to default 1812).  |
| Command Modes      | Admin Mode   |
| Usage Guidelines   |  |
| Examples           | PDU-1 (0): radius-server rserv1 192.168.150.25 2000<br>PDU-1 (0): radius-server ipv6 1<br>PDU-1 (0): radius-server rserv2 192.168.150.30 0<br>PDU-1 (0): radius-server enable 1<br>OK:Radius Server Enabled: Service restarted to reflect changes.                       |
| Related Commands   | <b>radius-card</b>   |

## radius-card

Sets up a radius server to use for authentication and authorization of cards.

|                    |   |
|--------------------|---|
| Syntax             | <b>radius-card [enable enable]</b><br><b>radius-card [ipv6 enable]</b><br><b>radius-card [secret testing123]</b><br><b>radius-card [RServ{1:2:3} IP Address{1:2:3} Port{1:2:3} #]</b><br><b>radius-card [test {cardid}]</b>                                 |
| Syntax Description | <b>enable</b> {0-disable   1-enable}<br><b>ipv6</b> {0-disable   1-enable}<br><b>secret</b> {testing123}<br><b>RServ1</b> {IP Address1} {Port1 #}<br><b>RServ2</b> {IP Address2} {Port2 #}<br><b>RServ3</b> {IP Address3} {Port3 #}<br><b>test</b> {cardid} |
| Defaults           | <b>RServ{1:2:3} port{1:2:3}</b> (0 sets to default 1812).   |
| Command Modes      | Admin Mode  |
| Usage Guidelines   |   |
| Examples           | PDU-1 (0): radius-card RServ1 192.168.150.25 2000<br>PDU-1 (0): radius-card ipv6 1<br>PDU-1 (0): radius-card RServ2 192.168.150.30 0<br>PDU-1 (0): radius-card enable 1<br>OK:Radius Card Enabled: : Service is restarted to reflect changes.               |
| Related Commands   | <b>radius-server</b>  |

## ldap-user

Sets up an LDAP server to use for authentication and authorization of users.

|                    |   |
|--------------------|---|
| Syntax             | <b>ldap-user [enable enable]</b><br><b>ldap-user [uri ipaddress:port ldapdomain searchfield]</b><br><b>ldap-user [test username ldappassword]</b>   |
| Syntax Description | <b>enable</b> {0-disable}<br><b>uri</b> {IP Address:Port #} {ldapdomain} {Search Field}<br><b>IP Address:</b> ldap://192.168.123.52<br>ldap://192.168.123.52:389<br><b>ldapdomain:</b> For domain myLDAP.com<br>dc=myLDAP,dc=com<br><b>Search Field:</b> Field Name of 'Username'<br>gecos<br><b>test</b> {username} { ldappassword}  |
| Defaults           | No defaults.  |
| Command Modes      | Admin Mode  |
| Usage Guidelines   |   |
| Examples           | <pre>PDU-1 (0)\$ ldap-user uri ldap://192.168.123.52:389 dc=myLDAP,dc=com gecost *** Until a successful 'ldap-user test ...' is performed     this change will not impact the currently enabled     settings.  OK: LDAP Server URI will be set ----- PDU-1 (0)\$ ldap-user enable 0 OK: LDAP Authentication Disabled **** LDAP Service restarted to reflect changes. ****</pre> |
| Related Commands   |   |



## sslcert

Identifies the SSL certificate currently in use and allows the user to 'enable'/'disable' the use of a custom certificate.

The creation and installing of a custom SSL certificate is NOT covered by this command..

|                    |  |
|--------------------|--|
| Syntax             | <b>sslcert [enable enable]</b><br><b>sslcert [status]</b>  |
| Syntax Description | <b>enable</b> {0-Manufacture Default Cert}<br><b>status</b>  |
| Defaults           | 0-Manufacture Default Cert   |
| Command Modes      | Admin Mode   |
| Usage Guidelines   | This command is only intended for reverting a PDU back to using the default manufacturing certificate.   |
| Examples           | <pre>PDU-1 (0)\$ sslcert status Customer defined certificate Enabled:  OK: Complete  PDU-1 (0)\$ sslcert enable 0 Default manufacture certificate now in use: HTTP(S) Service restarting to reflect changes.  OK: Complete  PDU-1 (0)\$ sslcert status Default manufacture certificate now in use:  OK: Complete</pre> |
| Related Commands   |  |

## Configuration Commands

The following pages cover syntax for Configuration Commands:

- `config-get`
- `config-set`

## config-get

Get current configuration data for the PDU.

|                    |   |
|--------------------|---|
| Syntax             | <b>config-get</b> { <i>configuration-group</i> } { <i>configuration-item</i> } [ <i>occurrence</i> ] {pduID}  |
| Syntax Description | <b>configuration-group</b> : sub-menu of the config command<br><b>configuration-item</b> : sub-menu of the configuration-group<br><b>occurrence</b> : specified occurrence of the configuration-item if applicable<br><b>pduID</b> : Index of the PDU to grab configuration value from<br><br>Note: please refer to <a href="#">Appendix A</a> for a list of all configuration groups/items |
| Defaults           | No defaults.  |
| Command Modes      | Elevated Mode, Admin Mode   |
| Usage Guidelines   | Numerical based configuration items that have an associated unit will also have that unit displayed along with the numerical value, e.g.: 5.00 Amps. Each configuration group requires a minimum command menu level and user security level for access. Please refer to APPENDIX A for this information.  |
| Examples           | <pre>PDU Name Test(0):config-get PDU pdu-name 0 Value:PDU "Test" Name  PDU Name Test(0):config-get branch-thresholds max-voltage 1 0 Value:215.0 Volts</pre>  |
| Related Commands   | See <b>Appendix A</b>   |

## config-set

Get current configuration data for the PDU.

|                    |   |
|--------------------|---|
| Syntax             | <b>config-set</b> { <i>configuration-group</i> } { <i>configuration-item</i> } [ <i>occurrence</i> ] {pduID} { <i>new-value</i> }   |
| Syntax Description | <b>configuration-group</b> : sub-menu of the config command<br><b>configuration-item</b> : sub-menu of the configuration-group<br><b>occurrence</b> : specified occurrence of the configuration-item if applicable<br><b>pduID</b> : Index of the PDU to grab configuration value from<br><b>new-value</b> : value to assign to the specified configuration-item<br><br>Note: please refer to <a href="#">Appendix A</a> for a list of all configuration groups/items |
| Defaults           | No defaults.  |

|                  |   |
|------------------|---|
| Command Modes    | Elevated Mode, Admin Mode   |
| Usage Guidelines | <p>When setting configuration items that are numbers, such as thresholds, be sure to input them in the same way they would be input in the WebGUI. When setting configuration items that are alphanumeric strings, be sure to use the <b>help menu</b> for which strings can have spaces and which cannot. For values that will use spaces, be sure to wrap the entire string in quotations. For values that need to use quotation marks, you will need to escape these characters with a backslash.</p> <p>Each configuration group requires a minimum command menu level and user security level for access. Please refer to APPENDIX A for this information.</p> |
| Examples         | <pre>PDU Name Test(0):config-set PDU pdu-name 0 "Test \"PDU\" Name" OK:Complete  PDU Name Test(0):config-set branch-thresholds max-voltage 1 0 215.0 Volts OK:Complete</pre>  |
| Related Commands | See <b>Appendix A</b>   |

## Control Commands

The following pages cover syntax for Control Commands:

- control
- ogroup

### control

Control certain PDU functionalities

|                    |   |
|--------------------|---|
| Syntax             | <b>control</b> { <i>control-item</i> } { <i>occurrence</i> } {pdulID} { <i>action</i> }   |
| Syntax Description | <b>control-item</b> : sub-menu of control command<br><b>occurrence</b> : specified occurrence of the control-item to apply control action<br><b>pdulID</b> : id of PDU to perform control action against<br><b>action</b> : action to be performed on the control-item's occurrence |
| Defaults           | No defaults.  |
| Command Modes      | Elevated Mode, Admin Mode   |
| Usage Guidelines   | The outlet control will accept a comma-delimited list of outlets to interact with all at once, or the argument of "0" for controlling all outlets at once.  |
| Examples           | <pre>PDU Name Test(0):control outlet 0 0 Off PDU Name Test(0):control outlet 1,2,3,4 0 On PDU Name Test(0):control EAS front 0 open</pre>   |
| Related Commands   | See <b>Appendix D</b>   |

### ogroup

Manage and control outlet groups functionalities.

|                    |  |
|--------------------|--|
| Syntax             | <b>ogroup</b> { <i>ogroup-item</i> } { <i>occurrence</i> } {groupID} { <i>actions</i> }  |
| Syntax Description | <b>ogroup-item</b> : sub-menu of ogroup command<br><b>occurrence</b> : specified occurrence of the ogroup-item if applicable<br><b>groupID</b> : id of Group to perform action against<br><b>actions</b> : specify actions to control the ogroup outlets |
| Defaults           | No defaults.   |

|                  |   |
|------------------|---|
| Command Modes    | Base Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines | The ogroup manages and control outlet groups functionality. All ogroup-items will have an ability to specify groupID. Ogroup has elements of configuration, control and metrics functionality for outlet groups.  |
| Examples         | <pre> PDU Name Test(0)\$ ogroup list ID      Name ----- 1       TestGroup-11 2       TestGroupName-1 3       MyGroupName  OK:Complete  PDU Name Test(0) \$ ogroup view 2 Cabinet:  Outlet #:      Outlet Name:      PDU:      Type: ----- Desk Cabinet  3  Outlet  3          MCM4 K6 DPD(0)  Mon/Ctrl Desk Cabinet  4  Outlet  4          MCM4 K6 DPD(0)  Mon/Ctrl Desk Cabinet 48  Outlet 48          MCM4 K6 DPD(0)  Mon/Ctrl  OK:Complete  PDU Name Test(0)\$ </pre>  |
| Related Commands | <p><b>add</b>        Add an empty outlet group.</p> <p><b>cntl</b>        Control all the outlets in the group.</p> <p><b>del</b>         Delete an outlet group.</p> <p><b>list</b>        List all the control outlet groups.</p> <p><b>outlet-add</b> Add an outlet to the group.</p> <p><b>outlet-del</b> Delete an outlet from the group.</p> <p><b>rename</b>      Rename an outlet group.</p> <p><b>reset</b>       Reset (Toggle On/Off) all the outlets in the group.</p> <p><b>view</b>        View all the outlets in a group.</p> |

## Metrics Commands

The following pages cover syntax for Metrics Commands:

- metrics
- alarms

### metrics

Get real time metrics data about the PDU.

|  |  |
|--|--|
| Syntax   | <b>metrics</b> { <i>metrics-group</i> } { <i>metrics-item</i> } { <i>occurrence</i> } { <i>pduID</i> }   |
| Syntax Description   | <p><b>metrics-group</b>: sub-menu of the metrics command</p> <p><b>metrics-item</b>: sub-menu of the metrics-group</p> <p><b>occurrence</b>: specified occurrence of the metrics-item</p> <p><b>pduID</b>: index of PDU to get metrics from</p> <p>Note: please refer to <b>Appendix B</b> for a list of all metrics groups/items</p>  |
| Defaults   | No defaults.   |
| Command Modes  | User Mode, Elevated Mode, Admin Mode   |
| Usage Guidelines   | <p>A metrics item with an associated unit will have the unit displayed along with the value formatted to match the Web User Interface.</p> <p>All metrics-groups will have an “all” metrics-item option to display the values for all the associated metrics for that group.</p> <p>Also, all metrics-items will have the ability to specify occurrence “0” which supports getting the metrics for all applicable occurrences.</p>   |
| Examples (MCM2/MCM3)<br>See: <a href="#">Connecting the PDU and Computer</a> | <pre>PDU Name Test(0): metrics outlet current 1 0 Value:1.23 Amps  PDU Name Test(0): metrics environmental humidity 1 0 Value:27.44%  PDU-22(0)\$ metrics branch all 0 0 Branch 1: {0.00 A, 210.9 V, 0.000 kVA, 0.00, 0.00 kVAh} Branch 2: {0.00 A, 210.7 V, 0.000 kVA, 0.00, 0.00 kVAh} Branch 3: {0.00 A, 210.0 V, 0.000 kVA, 0.00, 0.00 kVAh} Branch 4: {0.00 A, 210.8 V, 0.000 kVA, 0.00, 5.42 kVAh} Branch 5: {0.00 A, 209.8 V, 0.000 kVA, 0.00, 0.00 kVAh} Branch 6: {0.00 A, 209.5 V, 0.000 kVA, 0.00, 0.00 kVAh}</pre> |
| Examples (MCM4)  | <pre>PDU-22(0)\$ metrics branch all 0 0 Branch 1: {0.00 A, 210.9 V, 0.000 kVA / 0.00 kW, 0.00, 0.00 kVAh / 0.00 kWh} Branch 2: {0.00 A, 210.7 V, 0.000 kVA / 0.00 kW, 0.00, 0.00 kVAh / 0.00 kWh} Branch 3: {0.00 A, 210.0 V, 0.000 kVA / 0.00 kW, 0.00, 0.00 kVAh / 0.00 kWh} Branch 4: {0.00 A, 210.8 V, 0.000 kVA / 0.00 kW, 0.00, 5.42 kVAh / 0.00 kWh} Branch 5: {0.00 A, 209.8 V, 0.000 kVA / 0.00 kW, 0.00, 0.00 kVAh / 0.00 kWh} Branch 6: {0.00 A, 209.5 V, 0.000 kVA / 0.00 kW, 0.00, 0.00 kVAh / 0.00 kWh}</pre>    |

|                     |                       |
|---------------------|-----------------------|
| Related<br>Commands | See <b>Appendix B</b> |
|---------------------|-----------------------|



## alarms

Get the active alarms for the PDU.

|                    |   |
|--------------------|---|
| Syntax             | <b>alarms</b> {alarms-group} {alarms-item} {occurrence} {pduID}   |
| Syntax Description | <b>alarms-group</b> : sub-menu of the alarms command<br><b>alarms-item</b> : sub-menu of the alarms-group<br><b>occurrence</b> : specified occurrence of the alarms-item<br><b>pduID</b> : index of PDU to get alarms of<br><br>Note: please refer to <b>Appendix C</b> for a list of all alarms groups/items |
| Defaults           | No defaults.  |
| Command Modes      | User Mode, Elevated Mode, Admin Mode  |
| Usage Guidelines   | A value of "0" means the alarm is currently not active. A value of "1" means the alarm is currently active.   |
| Examples           | <pre>PDU Name Test(0): alarms environmental min-temperature 1 0 Value:1  PDU Name Test(0): alarms branch max-voltage 1 0 Value:0</pre>  |
| Related Commands   | See <b>Appendix C</b>   |

## Appendix A – Configuration Settings

| <b>Configuration-Group</b> | <b>Menu Level</b> | <b>Security Group</b> | <b>Configuration-Item</b>   |
|----------------------------|-------------------|-----------------------|---|
| <b>EAS</b>                 | Elevated          | Cabinet               | door-alarm-time   |
|                            |                   |                       | lock-front-enable   |
|                            |                   |                       | lock-open-time  |
|                            |                   |                       | lock-rear-enable  |
|                            |                   |                       | wave-read-comp  |
|                            |                   |                       | poweriq-lock  |
|                            |                   |                       | card-trap-host41  |
|                            |                   |                       | card-trap-host42  |
|                            |                   |                       | card-trap-host61  |
|                            |                   |                       | card-trap-host62  |
| card-trap-port             |                   |                       |   |
| <b>LDAP</b>                | Admin             | Admin                 | base-dn   |
|                            |                   |                       | enable  |
|                            |                   |                       | ldap-server-addr  |
| <b>PDU</b>                 | Elevated          | User                  | aux-mode  |
|                            |                   |                       | cabinet-ID  |
|                            |                   |                       | link-count  |
|                            |                   |                       | link-count-change   |
|                            |                   |                       | out-of-service  |
|                            |                   |                       | pdu-description   |
|                            |                   |                       | pdu-name  |
|                            |                   |                       | secure-array-role   |
|                            |                   |                       | share-role  |
|                            |                   |                       | sum-amps  |
|                            |                   |                       | temp-format   |
|                            |                   |                       | <b>alarms-emails<br/>-or-<br/>alarms-syslog<br/>-or-<br/>alarms-traps</b> |
| branch-curr-min            |                   |                       |   |
| branch-curr-warn-max       |                   |                       |   |
| branch-curr-warn-min       |                   |                       |   |
| branch-volt-max            |                   |                       |   |
| branch-volt-min            |                   |                       |   |
| branch-volt-warn-max       |                   |                       |   |
| branch-volt-warn-min       |                   |                       |   |
| cardscan-fail              |                   |                       |   |
| cardscan-pass              |                   |                       |   |
| config-change              |                   |                       |   |
| door-event                 |                   |                       |   |
| door-extended-open         |                   |                       |   |
| fw-update                  |                   |                       |   |
| humid-max                  |                   |                       |   |
| humid-min                  |                   |                       |   |
| humid-warn-max             |                   |                       |   |
| humid-warn-min             |                   |                       |   |
| lock-event                 |                   |                       |   |
| login                      |                   |                       |   |
| outlet-curr-max            |                   |                       |   |
| outlet-curr-min            |                   |                       |   |
| outlet-curr-warn-max       |                   |                       |   |
| outlet-curr-warn-min       |                   |                       |   |
| outlet-toggle              |                   |                       |   |
| secure-array-change        |                   |                       |   |
| system-reboot              |                   |                       |   |
| temp-max                   |                   |                       |   |
| temp-min                   |                   |                       |   |
| temp-warn-max              |                   |                       |   |
| temp-warn-min              |                   |                       |   |
| <b>branch-thresholds</b>   | Elevated          | User                  |   |
|                            |                   |                       | max-voltage   |
|                            |                   |                       | min-current   |

| <b>Configuration-Group</b> | <b>Menu Level</b> | <b>Security Group</b> | <b>Configuration-Item</b> |
|----------------------------|-------------------|-----------------------|---------------------------|
|                            |                   |                       | min-voltage               |
|                            |                   |                       | warn-max-current          |
|                            |                   |                       | warn-max-voltage          |
|                            |                   |                       | warn-min-current          |
|                            |                   |                       | warn-mix-voltage          |
| <b>http</b>                | Elevated          | User                  | http-enabled              |
|                            |                   |                       | http-port                 |
|                            |                   |                       | https-enabled             |
|                            |                   |                       | https-port                |
|                            |                   |                       | custom-cert-enable        |
|                            |                   |                       | cert-priv-key-password    |
|                            |                   |                       | fetch-enabled             |
|                            |                   |                       | fetch-authtoken           |
| <b>network-ipv4</b>        | Elevated          | User                  | auto-dns-enabled          |
|                            |                   |                       | backup-dns                |
|                            |                   |                       | default-gateway           |
|                            |                   |                       | dhcp-enabled              |
|                            |                   |                       | enabled                   |
|                            |                   |                       | ip-address                |
|                            |                   |                       | primary-dns               |
|                            |                   |                       | secondary-dns             |
|                            |                   |                       | subnet-mask               |
| <b>network-ipv6</b>        | Elevated          | User                  | auto-dns-enabled          |
|                            |                   |                       | backup-dns                |
|                            |                   |                       | default-gateway           |
|                            |                   |                       | dhcp-enabled              |
|                            |                   |                       | enabled                   |
|                            |                   |                       | global-enabled            |
|                            |                   |                       | ipv6-address              |
|                            |                   |                       | link-local-enabled        |
|                            |                   |                       | prefix-length             |
|                            |                   |                       | primary-dns               |
|                            |                   |                       | secondary-dns             |
| <b>outlet</b>              | Elevated          | User                  | description               |
|                            |                   |                       | name                      |
|                            |                   |                       | on-delay                  |
|                            |                   |                       | reset-time                |
| <b>outlet-groups</b>       | Elevated          | User                  | name                      |
| <b>outlet-thresholds</b>   | Elevated          | User                  | max-current               |
|                            |                   |                       | min-current               |
|                            |                   |                       | warn-max-current          |
|                            |                   |                       | warn-min-current          |
| <b>radius</b>              | Admin             | Admin                 | backup-card-server        |
|                            |                   |                       | backup-card-server-port   |
|                            |                   |                       | backup-server             |
|                            |                   |                       | backup-server-port        |
|                            |                   |                       | card-shared-secret        |
|                            |                   |                       | enable                    |
|                            |                   |                       | enable-card               |
|                            |                   |                       | ipv6-card-enable          |
|                            |                   |                       | ipv6-enable               |
|                            |                   |                       | primary-card-server-      |
|                            |                   |                       | primary-card-server-port  |
|                            |                   |                       | primary-server            |
|                            |                   |                       | primary-server-port       |
|                            |                   |                       | secondary-card-server     |
| secondary-card-server-port |                   |                       |                           |
| shared-secret              |                   |                       |                           |
| <b>sensor-thresholds</b>   | Elevated          | User                  | max                       |
|                            |                   |                       | min                       |
|                            |                   |                       | warn-max                  |
|                            |                   |                       | warn-min                  |
| <b>sensors</b>             | Elevated          | User                  | name                      |
|                            |                   |                       | auth-method               |

| <b>Configuration-Group</b> | <b>Menu Level</b> | <b>Security Group</b> | <b>Configuration-Item</b> |
|----------------------------|-------------------|-----------------------|---------------------------|
| <b>smtp</b>                | Elevated          | User                  | enable-tls                |
|                            |                   |                       | enabled                   |
|                            |                   |                       | from-email-addr           |
|                            |                   |                       | password                  |
|                            |                   |                       | receive-port              |
|                            |                   |                       | send-port                 |
|                            |                   |                       | server-address            |
|                            |                   |                       | start-tls                 |
|                            |                   |                       | to-email-addr1            |
|                            |                   |                       | to-email-addr2            |
|                            |                   |                       | to-email-addr3            |
| <b>snmp</b>                | Elevated          | User                  | username                  |
|                            |                   |                       | auth-algo                 |
|                            |                   |                       | auth-password             |
|                            |                   |                       | context-name              |
|                            |                   |                       | enabled                   |
|                            |                   |                       | host-only-access          |
|                            |                   |                       | ipv4-host1                |
|                            |                   |                       | ipv4-host2                |
|                            |                   |                       | ipv4-host3                |
|                            |                   |                       | ipv6-host1                |
|                            |                   |                       | ipv6-host2                |
|                            |                   |                       | ipv6-host3                |
|                            |                   |                       | priv-algo                 |
|                            |                   |                       | priv-password             |
|                            |                   |                       | query-port                |
|                            |                   |                       | read-comm                 |
|                            |                   |                       | security-level            |
|                            |                   |                       | trap-host1-ipv4           |
|                            |                   |                       | trap-host1-ipv6           |
|                            |                   |                       | trap-host2-ipv4           |
| trap-host2-ipv6            |                   |                       |                           |
| trap-host3-ipv4            |                   |                       |                           |
| trap-host3-ipv6            |                   |                       |                           |
| trap-port                  |                   |                       |                           |
| usm-username               |                   |                       |                           |
| write-comm                 |                   |                       |                           |
| <b>ssh</b>                 | Elevated          | User                  | ssh-enabled               |
|                            |                   |                       | ssh-port                  |
| <b>time-servers</b>        | Elevated          | User                  | ntpserver1                |
|                            |                   |                       | ntpserver2                |

## Appendix B – Metrics

| <b>Metrics-Group</b> | <b>Metrics-Item</b> |
|----------------------|---------------------|
| <b>EAS</b>           | door-status         |
|                      | error-status        |
|                      | force-status        |
|                      | lock-status         |
|                      | ready-status        |
|                      | tamper-status       |
| <b>branch</b>        | current             |
|                      | energy              |
|                      | power               |
|                      | power-factor        |
|                      | voltage             |
| <b>environmental</b> | humidity            |
|                      | temperature         |

| <u>Metrics-Group</u> | <u>Metrics-Item</u> |
|----------------------|---------------------|
| <b>line</b>          | current             |
| <b>outlet</b>        | current             |
|                      | energy              |
|                      | power               |
|                      | power-factor        |
|                      | status              |
|                      | voltage             |

## Appendix C – Alarms

| <u>Alarms-Group</u> | <u>Alarms-Item</u>   |
|---------------------|----------------------|
| branch              | max-current          |
|                     | max-voltage          |
|                     | min-current          |
|                     | min-voltage          |
|                     | warn-max-current     |
|                     | warn-max-voltage     |
|                     | warn-min-current     |
| environmental       | warn-min-voltage     |
|                     | max-humidity         |
|                     | max-temperature      |
|                     | min-humidity         |
|                     | min-temperature      |
|                     | warn-max-humidity    |
|                     | warn-max-temperature |
| outlet              | warn-min-humidity    |
|                     | warn-min-temperature |
|                     | max-current          |
|                     | min-current          |
|                     | warn-max-current     |
|                     | warn-min-current     |

## Appendix D – Control

| <u>Control-Item</u> | <u>Actions</u> |
|---------------------|----------------|
| outlet              | On             |
|                     | Off            |
|                     | Reset          |
| EAS                 | open           |

## Appendix E – Script Examples

Script: (saved as text file script.4.txt)

```
elevate
elevate
list users
user add testuser User userpw userpw -
user add testview Viewer viewerpw viewerpw -
user add testcab Cabinet cabinetpw cabinetpw 123abc99911
list users
user remove testcab
list users
```

## Log file (saved as script.4.log)

```
PDU-1(0): script usb
  <string>          Script file name.
PDU-1(0): script usb script.4.txt
Executing CLIScript_execution(): /tmp/script.4.txt
-----
Welcome to CPICLI!
CPICLI is a Chatsworth command line interface
Type 'help' at any time
or press '?' or TAB to get completion or help.
-----
PDU-1(0): >elevate
OK:Entering Elevated Mode
PDU-1(0)#
PDU-1(0)# elevate
OK:Entering Admin Mode
PDU-1(0)$
PDU-1(0)$ list users
cardid  group  loginid
-----
0       Admin  admin

OK:Complete
PDU-1(0)$
PDU-1(0)$ user add testuser User userpw userpw -
OK:Complete
PDU-1(0)$ user add testview Viewer userpw userpw -
OK:Complete
PDU-1(0)$ user add testcab Cabinet cabinetpw cabinetpw 123abc99911
OK:Complete
PDU-1(0)$
PDU-1(0)$ list users

cardid          group  loginid
-----
0               Admin  admin
-               User   testuser
-               Viewer testview
123abc99911    Cabinet testcab

OK:Complete
PDU-1(0)$
PDU-1(0)$ user remove testcab
OK:Complete
PDU-1(0)$
PDU01(0)$ list users
cardid  group  loginid
-----
0       Admin  admin
-       User   testuser
-       Viewer testview

OK:Complete
PDU-1(0)$
```