

# Command Line Interface (CLI) User Manual

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

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**CHATSWORTH  
PRODUCTS**

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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 5.2.xxx or later. Download firmware (version 5.2.xxx or later) here: [www.chatsworth.com/en-us/resources/design-tools/software](http://www.chatsworth.com/en-us/resources/design-tools/software)

Part Numbers	Series	Branch Monitoring	Outlet Monitoring	Outlet Control	Lock Control
L6-xxxxx, P6-xxxxx	<a href="#">Switched Pro eConnect PDU</a>	X	X	X	X
L5-xxxxx, P5-xxxxx	<a href="#">Switched eConnect PDU</a>	X		X	X
L4-xxxxx, P4-xxxxx	<a href="#">Monitored Pro eConnect PDU</a>	X	X		X
L3-xxxxx, 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 4.12.xxx or later. Download firmware (version 4.12.xxx or later) here: <https://www.chatsworth.com/en-us/resources/design-tools/software>

## Legal Information

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## Connecting the PDU and Computer

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<p><b>eConnect PDU with Controller 4 (MCM4) or RFID Electronic Lock Kit</b></p> <ul style="list-style-type: none"> <li>• Use Console 1 (Arrow 5).</li> <li>• Connect a YOST cable with an RJ45 (8P8C) connection (ordered separately).</li> </ul>	<p><b>eConnect PDU with Controller 2/3 (MCM 2/3) or Networked Electronic Access Control Swinghandle Kit</b></p> <ul style="list-style-type: none"> <li>• Use In/IOIO port.</li> <li>• Use <a href="#">CPI's Serial Setup Cable (P/N 35941-131)</a> (ordered separately)</li> </ul>
	

## 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	From 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	From 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. Commands help and ? display commands available at each level.
Examples	<pre>PDU Name(0): elevate 0k:Entering Elevated Mode.  PDU Name(0)# elevate 0k:Entering Admin Mode.  PDU Name(0)\$ elevate</pre>
Related Commands	<b>quit</b> <b>exit</b> <b>help</b> <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	<pre>PDU Name(0): logout Goodbye!</pre>
Related Commands	<b>exit</b> <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 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	<pre>U11 K61 Dev(0): quit Bye!</pre>
Related Commands	<b>logout</b> <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. If logged in as Elevated or Admin, security role moves to the next lower level.
Examples	<pre>PDU Name(0)# exit PDU Name(0)#  PDU Name(0)# exit PDU Name(0):  PDU Name(0): exit Bye!</pre> <p>User is logged out and the session is terminated.</p>
Related Commands	<b>quit</b> <b>logout</b>

## history

Provide a history of commands that have been entered.

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



## support

Displays information needed by the support team.

Syntax	<b>support {mode}</b>
Syntax Description	0 Output the support details for the active PDU
Defaults	No default.
Command Modes	User Mode, Elevated Mode, Admin Mode
Usage Guidelines	Provides specific information for support team. 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:        110000000369999999 Model Number:         K61-6D526-40L-72A Installed FW Ver.:    5.2.766.0      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
- config securearray
- config securearray mode
- notify securearray

## 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> <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 
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> <b>list array</b>

## config securearray

To configure the Secure Array specific settings.

Syntax	<b>config securearray {sharerole[0   1]   count[0-48]}</b>
Syntax Description	<p><b>sharerole n</b> 1 Enables : 0 Disables the share role option for the securearray</p> <p><b>count n</b> A value of 0-48. Sets the number of systems in the SecureArray to send notifications for. Leave blank for the current number of connected PDUs.</p>
Defaults	A <u>count</u> without any parameters will set to the number of currently active PDUs.
Command Modes	Elevated Mode, Admin Mode
Usage Guidelines	
Examples	<pre> PDU-1(0)# config secu?   securearray PDU-1(0)# config securearray   count          Sets the number of system in SecureArray                   to send notifications   .   mode           Sets the mode of the PDU on the                   SecureArray.   sharerole      share role option for the securearray PDU-1(0)# config securearray count &lt;int&gt;           0 - 48 PDU-1(0)# config securearray count 3  OK:Complete PDU-1(0)# config securearray sharerole &lt;int&gt;           Enables (1) / Disables (0) PDU-1(0)# config securearray sharerole 1  OK:Complete PDU-1(0)# </pre>
Related Commands	<p><b>notify securearray</b></p> <p><b>config securearray mode</b></p> <p><b>mode</b></p>

## config securearray mode

Sets the mode of the PDU on the Secure Array.

Syntax	<b>config securearray mode {(p)primary   (a)lternate   (s)econdary}</b>
Syntax Description	<p><b>(p)primary</b> Set the current PDU as the primary on the Secure Array.</p> <p><b>(a)lternate</b> Set the current PDU as an alternate on the Secure Array.</p> <p><b>(s)econdary</b> Set the current PDU as a secondary on the Secure Array.</p>
Defaults	No default.
Command Modes	Elevated Mode, Admin Mode
Usage Guidelines	This command will change the mode of the currently selected PDU.
Examples	<pre> W05 K61 CLI(0): elevate  OK:Entering Elevated Mode PDU-1(0)# mode This pdu array mode cabinet name pduID selectorID ----- * Primary Lab PDU-1 0 909090   Secondary Lab PDU-2 1 81818 OK:Complete PDU-1(0)# attach 1 Name: admin Password: *****  OK:Complete PDU-2(1): config securearray mode alternate  OK:Complete PDU-2(1): mode This pdu array mode cabinet name pduID selectorID ----- * Primary Lab PDU-1 0 909090   Alternate Lab PDU-2 1 81818 OK:Complete PSU-1(2): attach 0 PDU-1(0): mode This pdu array mode cabinet name pduID selectorID ----- * Primary Lab PDU-1 0 909090   Alternate Lab PDU-2 1 81818 OK:Complete PDU-1(0)# </pre>
Related Commands	<b>attach mode</b>

## notify securearray

Set notification events specific to the Secure Array.

Syntax	<b>notify securearray {countchange   rolechange}</b>
Syntax Description	<code>countchange</code> Modifies the Link Count change setting <code>rolechange</code> Modifies the Role Change setting <b>1</b> Enables the respective setting <b>0</b> Disables the respective setting
Defaults	No default.
Command Modes	Elevated Mode
Usage Guidelines	
Examples	<pre>PDU-1(0)# config PDU link-count-change Value:1 PDU-1(0)# config PDU role-change Value:0 PDU-1 CLI(0)# notify securearray rolechange 1 OK:Complete PDU-1(0)# config PDU role-change Value:1 PDU-1 (0)# notify securearray rolechange 0 OK:Complete PDU-1 (0)# notify securearray countchange 0 OK:Complete PDU-1 (0)# config PDU role-change Value:0</pre>
Related Commands	<b>config PDU link-count-change</b> <b>config PDU role-change</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 [http   tftp]   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 http</b> <i>url filename</i> Will save the configuration locally and then POST the information to the provided http/ftp '<i>url</i>' '<i>filename</i>'.</p> <p><b>network tftp</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>usb drive &gt; internal &gt; cfg_archive &gt; '<i>filename</i>'</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 [http   tftp]   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 http</b> <i>url filename</i> Will PULL the information from the provided http/ftp '<i>url</i>' '<i>filename</i>', then restore the configuration'.</p> <p><b>network tftp</b> <i>IP filename</i> Will PULL the configuration from the provided '<i>tftp server</i>' '<i>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>usb drive &gt; internal &gt; cfg_archive &gt; '<i>filename</i>'</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> <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: 1 - Branch Voltage Thresholds 2 - Branch Current Thresholds 3 - Outlet Reset Delays 4 - Outlet ON Delays 5 - Outlet Current Thresholds 6 - Temperature Thresholds 7 - Humidity Thresholds 8 - Temperature Unit 9 - Trap Interval 10 - Sum Amps Setting 11 - Out-of-Service Setting 12 - Notification Specifications 13 - Logging Settings 999 - 'ALL' Config Settings
Examples	<pre>PDU-1(0)# clone config SecureArray 11 1 Cloning the requested config settings.: Complete PDU-1(0)# PDU-1(0)# clone users 4 : Complete PDU-1(0)#</pre>
Related Commands	<b>list array</b> <b>mode</b> <b>pull</b>

## pull

Pull the settings from a PDU on the same network to the serial connected PDU.

Syntax	<b>pull config</b> { IP-Address } { parameter }
Syntax Description	<b>config</b> Pull the specified configuration settings from the specified PDU to the currently active PDU. <b>IP-Address</b> Specify the IP address of the PDU to pull configuration data from in the format XXX.XXX.XXX.XXX <b>parameter</b> Specify one of the configuration groups to pull into the local PDU. Use the built-in help menu to see what options there are for configuration groups.
Defaults	No default.
Command Modes	Admin Mode
Usage Guidelines	Branch-Current-Thresholds Branch related current alarm thresholds Branch-Voltage-Thresholds Branch related voltage alarm thresholds Humidity-Thresholds Humidity related alarm thresholds Logging-Settings Datalog and Syslog server related settings Notification-Specifications Specification on how to notify for specific alarms Out-Of-Service Out-of-service PDU's do not activate alarms Outlet-Current-Thresholds Outlet related current alarm thresholds Outlet-On-Delays Delay to turn on outlets after power-up Outlet-Reset-Delays Delay to turn outlet on after it has been reset. Sum-Amps Displaying of branch current totals Temperature-Thresholds Temperature related alarm thresholds Temperature-Unit Temperature unit to use, either C or F Trap-Interval Interval between recurring traps for active alarms
Examples	<pre>PDU-1(0)# pull config 192.211.432.101 Temperature-Unit OK:Successfully applied the Temperature-Unit settings.</pre>
Related Commands	<b>clone config</b>

## Administrative Commands

The following pages cover syntax for Administrative Commands:

- firmware
- reboot
- reset

## firmware

Command used to upgrade the firmware on the PDU.

Syntax	<b>firmware [usb]</b> <b>firmware network [http]</b> <b>firmware network [tftp]</b> <b>firmware file</b> <b>firmware securearray</b> <b>firmware sftp []</b> <b>firmware scp []</b> <b>firmware saProgress</b>	
Syntax Description	<b>usb</b>  <b>network [http   tftp]</b>  <b>File</b>  <b>securearray</b>  <b>saProgress</b>	Will upgrade firmware from the USB thumb drive plugged into the PDU.  <b>{IP Address IPAddress fileName fileName}</b>  <b>{srcPath srcPath}</b>  Push firmware out to the PDUs on the Secure Array.  <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	PDU-1(0)❯ firmware usb Updating FW from USB Device: Running	
Related Commands	<b>reboot</b>	

## reboot

Reboots the PDU. Outlets will maintain their state.

Syntax	<b>reboot</b>
Syntax Description	This command has no arguments.
Defaults	No default.
Command Modes	Admin Mode
Usage Guidelines	
Examples	<code>PDU-1 (0)# reboot</code>
Related Commands	<b>firmware</b>



## reset

Resets a system's specific setting to factory defaults.

Syntax	<b>reset {pdusel [pdulD] optflag [1=&gt;net   2=&gt;config   4=&gt;users   7=&gt;all]}</b>
Syntax Description	<b>pdusel:</b> The pduID that is to reset its config. <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 'reset' 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	

## Access Control Commands

The following pages cover syntax for Administrative Commands:

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

## 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> <b>user add</b> <b>user update</b> <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> <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 new user named ' <i>userid</i> ' <b>groupid</b> : Admin, Cabinet, User or Viewer <b>password</b> : New user's ' <i>password</i> ' <b>confirmpassword</b> : Confirm new user's ' <i>password</i> ' <b>cardid</b> : ' <i>cardid</i> ' – Enter '0' for no access card
Defaults	No defaults.
Command Modes	Admin Mode
Usage Guidelines	<b>Value for password must equal confirm password.</b>
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> <b>list groups</b> <b>user update</b> <b>user remove</b>

## user update

Updates an existing user on the PDU.

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

## radius-server

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

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

## ldap-user

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

Syntax	<b>ldap-user [enable enable]</b> <b>ldap-user [uri ipaddress port ldapdomain]</b> <b>ldap-user [test username ldappassword]</b>
Syntax Description	<b>enable</b> {0-disable   1-enable} <b>uri</b> {IP Address} {Port #} {ldapdomain} <b>IP Address:</b> ldap://192.168.123.52 ldaps://192.168.123.52 <b>ldapdomain:</b> <i>For domain myLDAP.com</i> cn=users,dc=myLDAP,dc=com <b>test</b> {username} { ldappassword}
Defaults	No defaults.
Command Modes	Admin Mode
Usage Guidelines	
Examples	PDU-1 (0): ldap-user enable 1 OK:LDAP Authentication Enabled: : Service restarted to reflect changes. PDU-1 (0): ldap-user uri ldap://192.168.123.52 2500 cn=users,dc=myLDAP,dc=com
Related Commands	

## Configuration Commands

The following pages cover syntax for Configuration Commands:

- `config`

## config

Get current configuration data for the PDU.

Syntax	<b>config</b> { <i>configuration-action</i> } { <i>configuration-group</i> } { <i>configuration-item</i> } [ <i>occurrence</i> ] [ <i>new-value</i> ]
Syntax Description	<b>configuration-action</b> : either “get” or “set” based on intended action <b>configuration-group</b> : sub-menu of the config command <b>configuration-item</b> : sub-menu of the configuration-group <b>occurrence</b> : specified occurrence of the configuration-item if applicable <b>new_value</b> : used only with the “set” action. New value applied to configuration-item  Note: please refer to <a href="#">Appendix A</a> for a list of all configuration groups/items
Defaults	No defaults.
Command Modes	User Mode, Elevated Mode, Admin Mode
Usage Guidelines	When requesting configuration items that have currently been unset, a value of “” will be returned, unless the item is a number, in which case a 0 will be returned. 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. 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 WebUI.
Examples	<pre>PDU Name Test(0):config get PDU pdu-name Value:PDU Name Test  PDU Name Test(0):config get branch-thresholds max-voltage 1 Value:215.0 Volts  PDU Name Test(0):config set branch-thresholds max-voltage 1 215.0 Volts OK:Complete</pre>
Related Commands	See <b>Appendix A</b>

## 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>
Syntax Description	<p><b>metrics-group</b>: sub-menu of the metrics command  <b>metrics-item</b>: sub-menu of the metrics-group  <b>occurrence</b>: specified occurrence of the metrics-item</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	<pre>PDU Name Test(0): metrics outlet current 1 Value:1.23 Amps  PDU Name Test(0): metrics environmental humidity 1 Value:27.44%  PDU-22(0)# metrics branch all 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>
Related Commands	See <b>Appendix B</b>

## alarms

Get the active alarms for the PDU.

Syntax	<b>alarms</b> {alarms-group} {alarms-item} {occurrence}
Syntax Description	<b>alarms-group</b> : sub-menu of the alarms command <b>alarms-item</b> : sub-menu of the alarms-group <b>occurrence</b> : specified occurrence of the alarms-item  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(): alarms environmental min-temperature 1 Value:1  PDU Name Test(): alarms branch max-voltage 1 Value:0</pre>
Related Commands	See <b>Appendix C</b>

## Appendix A – Configuration Settings

<u>Configuration-Group</u>	<u>Configuration-Item</u>
<b>EAS</b>	door-alarm-time
	lock-front-enable
	lock-open-time
	lock-rear-enable
<b>LDAP</b>	base-dn
	enable
	ldap-server-addr
	ldap-server-port
<b>PDU</b>	aux-mode
	cabinet-ID
	link-count
	link-count-change
	out-of-service
	pdu-description
	pdu-name
	role-change
	secure-array-role
	share-role
	sum-amps
temp-format	
<b>alarms-emails</b> <b>-or-</b> <b>alarms-syslog</b> <b>-or-</b> <b>alarms-traps</b>	branch-curr-max
	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	

<u>Configuration-Group</u>	<u>Configuration-Item</u>
	secure-array-change
	system-reboot
	temp-max
	temp-min
	temp-warn-max
	temp-warn-min
<b>branch-thresholds</b>	max-current
	max-voltage
	min-current
	min-voltage
	warn-max-current
	warn-max-voltage
	warn-min-current
	warn-max-voltage
<b>http</b>	http-enabled
	http-port
	https-enabled
	https-port
<b>network-ipv4</b>	auto-dns-enabled
	backup-dns
	default-gateway
	dhcp-enabled
	enabled
	ip-address
	primary-dns
	secondary-dns
<b>network-ipv6</b>	subnet-mask
	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>	description
	name
	on-delay
	reset-time
	state
<b>outlet-groups</b>	name
<b>outlet-thresholds</b>	max-current
	min-current
	warn-max-current



<b><u>Configuration-Group</u></b>	<b><u>Configuration-Item</u></b>
	warn-min-current
<b>radius</b>	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>	max
	min
	warn-max
	warn-min
<b>sensors</b>	name
<b>smtp</b>	auth-method
	enable-tls
	enabled
	from-email-addr
	password
	receive-port
	send-port
	server-address
	start-tls
	to-email-addr1
	to-email-addr2
	to-email-addr3
username	
	context-name
	enabled
	host-only-access
	ipv4-host1
	ipv4-host2
	ipv4-host3
	ipv6-host1
	ipv6-host2
	ipv6-host3
	priv-algo
priv-password	

<b><u>Configuration-Group</u></b>	<b><u>Configuration-Item</u></b>
<b>snmp</b>	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>time-servers</b>	ntp
	rfc

## Appendix B – Metrics

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

## Appendix D – 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)$
```