Current Firmware Release Notes

CPI recommends that all eConnect PDU customers upgrade to the current firmware version.

Release Versions 1.23.126 & 2.23.126:

Upgrade Procedure:

- Download the zip file from the website.
- Unzip “924-300520-001-20151016.zip”
- Save “cpipack-20151016-svn6014.bin” and “cpipack2-20151016-svn6014.bin” to a USB flash drive in the root folder. Make sure there are no other files with “.bin” extension in the root folder.
- Plug the USB flash Drive into the USB port on the PDU and use the LCD menu to perform the firmware upgrade.
- Confirm the PDU new firmware version after the PDU reboots:
    - Firmware version: 1.23.126 or 2.23.126

BUG FIXES

- Fixed an issue where Daisy Chains were unable to upgrade secondary members for certain chain lengths and firmware versions
- Fixed an issue where making use of the daisy chain “clone” settings feature would fail to copy over the “Sum Amps” setting
- Fixed an issue where the primary PDU would not fire off a warning alarm or send emails for the link count falling below the specified threshold.

Previous Firmware Release History:

Versions 1.23.112 and 2.23.112: (Released on 9-23-2015)

BUG FIXES

- Fixed an issue where setting the “Role Change” checkbox would trigger a “Warning” alarm
- Fixed an issue where the primary web GUI would not update to show loss of daisy chain connectivity if the daisy chain contained so many members
- Fixed an issue with the LUA scripts which occasionally caused loss of functionality in the Web GUI
- Fixed an issue with environmental thresholds where certain Celsius values were not being saved correctly

NEW FEATURES

- Added in the ability for daisy chain failover to be triggered by loss of Ethernet connectivity on the primary

Versions 1.23.74 and 2.23.74: (Released on 8-4-2015)

NEW FEATURES

- Released a new version SNMP design that allows for easier access to data from PDUs on a daisy chain.

DETAILS

The Unity SNMP design is the second revision of the SNMP design for the eConnect PDU. One of the compelling features for the eConnect PDU is the ability for the units to be daisy chained together. The main PDU in the chain (Primary) is the gateway for each of the PDUs in the chain.

The current SNMP design requires users to fetch a field (PDUMap) that contains a list of all the PDUs in the chain. The user then has to set the selector field (PDUSelect) to retrieve that data associated with the PDU.

This design for data retrieval can create problems in the data center if there are multiple data collectors running.

1. Access to the chain must be synchronized. This limits data collection systems in terms of how fast they can retrieve data from the PDUs in the chain.
2. Possible for incorrect data. The data collection system must ensure that the PDUSelect field is set to the correct PDU or it may retrieve incorrect data.
3. Multiple SNMP Gets must be issued for data. Much of the data that is requested will be requested together as a collection.
4. Additionally data collection systems must implement the SNMP Set function instead of having to only implement the SNMP Get function.

A PDU is composed of a number of conceptual elements within it. They are:

- Configuration – Information about how the PDU is configured.
- System Information – General system level information about the PDU.
- Input Lines – Information about the input lines for a PDU.
- Branch(es) – Information about the branch(es) in the PDU.
- Outlet(s) – Information about the outlet(s) in the PDU.
- Sensor(s) – Information about the sensor(s) in the PDU.

Within the Unity design, the Configuration elements only apply to the Primary PDU and Alternate PDU in the PDU Chain.

The other conceptual elements are translated into SNMP tables. The SNMP Tables are:

- PDU Table – This table identifies all of the PDUs associated with the Primary PDU. The table contains columns that describe each PDU and its abilities to the user.
- PDU Line Table – This table identifies all of the Input Lines for the PDU Chain.
- PDU Branch Table – This table identifies all of the Branches for the PDU Chain.
- PDU Outlet Table – This table identifies all of the outlets for the PDU Chain.
- PDU Sensor Table – This table identifies all of the sensors for the PDU Chain.

Version 1.22.182: (Released on 2-13-2015)

NEW FEATURES

- Added Support for using the PDU Selector in SNMP requests rather than having to perform SNMP SET operations to retrieve data from PDUs in a daisy chain. (See Details below)
- Added support for a new LCD.

DETAILS

PDU Selector

The SNMP OIDs currently used by the eConnect PDU are composed of two parts:

1. The base OID. The base OID is 1.3.6.1.4.1.30932.1.1.
2. The functional OID. The functional OID are at most the last 3 digits in the request OID.

EX:
Outlet 1 Current OID = 1.3.6.1.4.1.30932.1.1.3.5.1

Base OID: 1.3.6.1.4.1.30932.1.1
Function OID: 3.5.1

The PDU Selector design adds an additional part to the OID schema. The new part would be the PDU Selector Field.

EX:
Outlet 1 Current OID = 1.3.6.1.4.1.30932.1.1.3.5.1.65432

Base OID: 1.3.6.1.4.1.30932.1.1
Function OID: 3.5.1
PDU Selector: 65432

If a PDU Selector value is not specified, then the Primary PDU in the PDU Chain will utilize the original method of PDU Selection.

The following would be the workflow for accessing the data from a PDU chain using this method.

1. Retrieve OID .1.3.6.1.4.1.30932.1.1.5.2 (pduMap) to retrieve a list of all the valid values for the PDU Selector. The values in the OID are space separated.
2. For each value in the pduMap field, request the value for the PDU by appending the value to the end of the OID.

EX:

1. Retrieve OID .1.3.6.1.4.1.30932.1.1.5.2 = “4567 8975 2356 9087 1032”
2. Iterate over each PDU and retrieve XY Branch Current
    a. Retrieve OID .1.3.6.1.4.1.30932.1.1.3.1.1.4567 = “1000”
    b. Retrieve OID .1.3.6.1.4.1.30932.1.1.3.1.1.8975 = “9900”
    c. Retrieve OID .1.3.6.1.4.1.30932.1.1.3.1.1.2356 = “2000”
    d. Retrieve OID .1.3.6.1.4.1.30932.1.1.3.1.1.9087 = “2500”
    e. Retrieve OID .1.3.6.1.4.1.30932.1.1.3.1.1.1032 = “1200”

Version 1.22.1: (Released on 7-25-2014)

NEW FEATURES

- Improved PDU boot up sequencing.
- Improved firmware upgrade for Standalone and Daisy-chained PDUs.
- Improved remote firmware upgrade capability.

Version 1.21.215: (Released on 6-12-2014)

NEW FEATURES

- Bootloader revised to use a second image of the PDU kernel for use if the primary image is corrupt.
- Web GUI now displays the bootloader revision number on the administration page of a master/standalone PDU.
- Web GUI properly handles empty log directories when log files are exported.
- The LCD display now shows the bootloader revision number on the 'info' page. The Outlet Groups now show total power.
- Changed the Export Logs page to show files by selected folders which speeds page loading.

BUG FIXES

- A display page issue is fixed when exporting logs if logging had never been turned on, or the current log folder has no file.
- If the PDU time has been previously synched with a time server and the user time is different than PDU time, then the user is no longer redirected to the admin advanced page to change time.

Version 1.21.116: (Released on 3-21-2014)

NEW FEATURES

- Total current for 3-phase PDUs is hidden on both on the LCD display and Web GUI since direct summation is not a valid operation. Single phase PDU total current is still displayed.
- Temperature alarm emails are sent in units of Fahrenheit or Celsius according to the PDU's configuration.
- Blank authenticated usernames are allowed (i.e., anonymous login) for SMTP.

BUG FIXES

- The problem of not sending alarm notifications during very early stages of the PDU boot process has been fixed.
- Better internal detection and correction of stuck threads.
- Fixed hang scenario if the system time is changed under certain circumstances.
- Handle the case when user incorrectly configures SMTP port to 0.
- Only terminate dead sessions after a timed-out command at of least 5 minutes.

Version 1.21.24: (Released on 1-13-2014)

NEW FEATURES

- The LCD display font size was increased for better readability.
- The Master and Second PDU algorithms were revised for better fail-over and resume operation if a network connection is lost and then subsequently restored.
- Terminology displayed on the web GUI was modified to be consistent with accepted industry standards.
- Line input currents are now displayed in addition to the branch currents on both the LCD display and web GUI.
- Outlet currents are now displayed on the LCD display for Monitored Pro (P4) and Switched Pro (P6) models.
- If an alarm or warning is triggered for any outlet, the outlet currents are shown in red or yellow respectively on the LCD or web GUI.
- The web GUI now shows linked PDUs underneath the appropriate master in a more intuitive device tree representation.
- Branch labels were changed to reflect Delta (XY, YZ, ZX) and Wye configuration (XN,YN,ZN). For 6 breaker units, a number indicates the breaker set (XY1,YZ1 etc).

Version 1.17.232: (Released on 5-31-2013)

BUG FIXES

- The time Synchronization feature generates copious error messages when there is no time server or if it has problem sync'ing the time. After 6 months of logging errors it could fill up the storage and prevent any further webgui logins, network service reconfiguration and firmware upgrade. Fixed by keeping in the error log only the last error, therefore not allowing it to grow.
- Fixed branch and outlet currents to not show 0 if the load exceeds 21A.