Power IQ® Version 4.0.2

These release notes contain important information regarding the release of this product, so please read them carefully. We strongly recommend you read the entire document.

Applicability:

This firmware release is applicable for both the Power IQ virtual appliance and the hardware appliance and we strongly recommend all customers upgrade to this release due to the Ruby on Rails vulnerability fix.

Release Status:

Power IQ Release 4.0.2 is a General Availability (GA) release.

Special Note for All Customers:

Raritan suggests the following practice to minimize the risk of loss data and system downtime:

- **Don't use encrypted back-ups for restoration to 4.0.0, 4.0.1 or 4.0.2** until you have upgraded to 4.0.2 and applied hotfix-49324.bin. The hotfix is posted on raritan.com where the 4.0.2 software is posted.
- If running a VM:
    - Check with your VM group if your instance is backed up by them, the back-up frequency and retention duration.
- If you are running a HW appliance or you don't want to rely on your VM instance backup, we recommend:
    - Set up to have your nightly backups automatically moved to an ftp server; or manually move to a local computer each day.
    - Restore backups to a "cold standby system" at your desired frequency. Important note: set the polling interval on "cold standby system" to 1 hour and **make sure "stored buffer data retrieval" is not enabled.**
    - Spot check the "cold standby system".
    - Note: your license permits you to have a cold standby system.

Special Notes for Customers upgrading to 4.0.2 from any release prior to 4.0.0

- There are changes to release 4.0.0 that carry forward to 4.0.2.
    - The Rest API changed. Please read the API guide before upgrading as this provides guidance for customers who are upgrading.
    - Storage of "PDU Sensor Readings" file is disabled by default to improve performance. These are a recording of every poll made each day stored in a CSV file. This does not impact charts or what is stored in the SQL database. Click PDU tab > Activities > Download PDU Sensor Readings to see the files. If you want to use these files, re-enable the option in Settings > Power IQ Settings > select "Store raw readings in CSV files on disk" after upgrading.
- Customers need to create and use an unencrypted database backup as part of the upgrade process. This is also called out in the upgrade guide.
- For customers running Power IQ on a VMware® virtual machine. The new power IQ 4.0.2 virtual machine data store should be set to at least 160 GB.

Power IQ 4.0.2 contains the following corrections & improvements from release 4.0.1:

Issue	Summary
48790	Security vulnerability fix in the underlying platform
48878	Lost ADMIN credential in Power IQ - dcTrack integration. When updating PDU's via the REST API, if the ipmi_password field is not included in the request, Power IQ will no longer clear out the password.
49002	On Rest API, make Metasearch fields reverse compatible (Also used for Power IQ - dcTrack integration)
48778	Power IQ showing "Application Error" for some ServerTech CDU's

48846	Support for TM environmental support
47828	Support for Geist outlet power control
46737	Support for Rittal PDU + Sensors support
47087	Plugin changes to support new OID's on the Tripp Lite PDU3VN and PDU3VSR PDU's
49236	In R4.0.0 and R4.0.1, the ODBC interface had a few columns that were not reverse compatible with R3.x. This is fixed in R4.0.2. In addition, the new PDUs.OutletNumber column was renamed to PDUs.PDUOutletNumber to preserve the dcTrack integration with Power IQ.

Power IQ 4.0.1 contains the following corrections from release 4.0.0:

- Fixed - 4.0 Power IQ VM fails to install with data store sizes of 91-106 GB & 161-166GB; It will install but might not generate back-ups with data stores of 107-120GB and 167-190GB. CR #48043
- Fixed - fails to generate a support connection. CR#47927

Power IQ 4.0.0 contains the following API Changes

REST API

In Power IQ R4.0, changes were made to the system and REST API to provide granular data for the PDU inlets, better performance, allow for power control, and to make it easier to get rollup data. Specifically,

- PDU Unit Level readings were replaced with more granular inlet level readings. This allows Power IQ to support PDU's with more than one inlet, such as the one shown below.
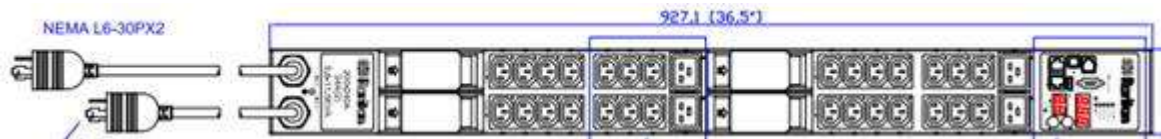
- A new inlet id field was added to lines and line readings so that users can determine which lines and line readings are associated with which inlets.
- Each of the rollup levels (monthly, daily and hourly) were given their own routes such that users no longer have to specify query parameters. The routes also provide better performance.
- New data points were exposed including voltage at the inlet pole level.
- Power Control was added to the REST API.

The WS-API Programming Guide provides guidance for customers upgrading to R4.0. Refer to the Chapter 1 section titled "Guidance for Customers Upgrading from Previous Releases" for more information.

ODBC

The ODBC interface on Power IQ R4.0 remains reverse compatible with prior releases. Power IQ R4.0 introduces some new views for inlets that provide more granular inlet level data and new views for rollups that return data faster than the existing view. Refer to the Power IQ user's guides for more details.

Power IQ 4.0.0 contains the following improvements from release 3.1.3:

- Support for Raritan's Data Warehouse (Enterprise Power IQ). See Enterprise Power IQ release notes for more detail.
- Enhanced Polling Performance – Ability to poll more PDUs or Poll at finer grain samples from a single Power IQ.
- Enhanced GUI Performance – HTML5 is used on the Smart Rack and PDU pages for faster page loading. Also due to an HTML5 browser issue with IE7 & IE8, Power IQ will sense if you are using IE7 or IE8 and if true will load the data first and provides you an option to click to load the per out let and device quick charts. This allows the data to load quickly and the charts can follow.

- Support for IPv6 – PDU Addresses, Power IQ address, CSV import, Access Control, Network and SNMP Diagnostics, Static Routes and ODBC.
- PX1 Environmental reading are taken at the sample rate when polling in stored buffer data retrieval mode (requires PX 1.6 firmware which will not be GA until 2013).
- Native support for Multi-Inlet Devices.
- Rest Webservice API now supports power control function which means it completely covers all functions of the SOAP API. All new integrations are recommended to us the Rest API since is more functional than the SOAP API and will be where all future enhancements will be made.
- Admin exposed configuration setting for tuning polling for a WAN network
- RSS feature was removed.
- Single Sign on to Launch PX2s and EMXs (PX1s already worked) – Useful to see webcam images and drill down. PX2 PDUs require firmware version 2.4.0.5-39592 or higher to function properly for Single Sign On
- Plugin Enhancements
  - Support for NTI Enviromux device - 46868
  - Support for Geist Aggregator Model GDC-03HT008R-AGGR03 – 46187
  - Corrected Daisy Chained HP PDU's display of Power data - 41988
  - Updated Geist EM8/GM6 and EM8/GM3 plugin   to calculate power and display circuit breaker readings

Power IQ 4.0.0 contains the following corrections from release 3.1.3:

Issue	Summary
46770	Line Reading discrepancy for ServerTech Sentry Switched CDU
46618	Modify default SNMP configuration settings in effort to reduce LostComm occurrences
46444	output-perl.log can grow until it fills the /var/oculan partition
46394	PIQ 3.1.2 Ruby Errors on login page
46370	Upgrade from 2.0.1 to 3.1.2 fails
46146	hostname will not redirect to IP when not entering HTTPS causing cert error
45658	Change boot fsck options to not drop to shell on bootup
45579	Filter for Custom Fields 1 & 2 requested in PDU list view
45342	Rack Smart View Improved Labels
44370	Remove invalid 'Sample interval' values on Polling Settings page
44273	PX1 outlet data log collector code not respecting 'poller_configuration.max_columns_per_request' value
43957	Dashboard Health bar links are not applying filter and displays all PDUs
43917	FAQ: Missing Date in Sensor Chart Export Data
43780	The charts and reports in Analytics go missing after a while.
43323	The system is currently performing maintenance operations and will return to service shortly
42625	Bad entry in the database causes a broken line in the KW graphical report
42284	BPerformance tool to recreate live database situations.
41597	Launch option is now available on a PX2

Existing Power IQ 4.0.0 & 4.0.1 Customers:

The upgrade is free for customers with a valid software maintenance agreement. Download the Power IQ 4.0.2-8 software upgrade bin file named power-iq-v4.0.2-8.bin from http://www.raritan.com/support/power-iq/. The upgrade bin file can be installed via the Power IQ web client. In the Settings tab, click Software Upgrades, then click Browse to upload the upgrade bin file. Contact tech@raritan.com if you have any questions. Contact your reseller or sales@raritan.com to buy a contract if yours has expired.

Existing Power IQ 2.0.1, 2.1.0, 2.1.1 3.0.0, 3.0.1, 3.1, 3.1.1, 3.1.2 & 3.1.3 Customers:

Release 4.0.2-8 requires a new install due to the upgrade of CentOS and a change in the file structure. Your current Configuration and Data can be backed up (use an unencrypted back-up) and restored to the new 4.0.2-8 system. This upgrade should take less than 30 minutes. The upgrade is free for customers with a valid software maintenance agreement. Click http://www.raritan.com/support/power-iq/   Then login to the customer portal (at the top right of this support page) to gain access to the Release 4.0.2 upgrade material. Access is limited to customers covered by a valid software maintenance agreement. Contact customer service at customerservice@raritan.com if you have problems with login. Contact tech@raritan.com if you have any technical questions. Contact your reseller or sales@raritan.com to buy a contract if yours has expired.

Existing Customers with Releases Prior to 2.0.1:

Your system must first be upgraded to 2.0.1. Please see the release upgrade path - **http://www.raritan.com/support/power-iq/**. Then read the appropriate release notes. Contact **tech@raritan.com** if you have any questions.

Five Device Evaluation Versions

Cannot be upgraded. You must download the new release and configure a new virtual appliance. You can back-up your system and restore it to the new system.

Browser Compatibility:

- Mozilla Firefox v7 - v16
- Internet Explorer v7, v8 & v9
- Safari v5.1

PX Compatibility:

- PX1 – Release 1.3.5 or higher
- PX2 – Release 2.0 or higher

CC-SG Compatibility:

- Release 5.1, 5.2 & 5.3 - Vendor Agnostic Power Control with Configuration Sync

dcTrack Compatibility:

- Release 2.6.1 & 3.0

Important Notes:

- 46208 – commas cannot be used as data values in a comma separated value (CSV) file import.   Example: if you want add PDUs via CSV import the name, contact, location, username, and password values cannot contain commas.
- 46233 – If scroll bars don't display on certain pages while using Internet Explorer, try disabling Internet Explore "compatibility mode".
- 43902 – user imitated actions that triggers a rescan – such as PDU firmware upgrade or bulk configuration with temporarily throw off last hour charts and gauges.   The system will normalize after an hour.
- CR47723 - Importing PDUs may fail on multi-core box in a certain race conditions. Check if all PDUs are displayed in Power IQ and correctly discovered information about all PDUs. If all PDUs are not displayed and discovered restart the poller (Settings > Power IQ Settings>Save Poller Setting) or wait 15 minutes, then reimport PDU csv file.
- Release 4.0 disables storage of sensor readings in CSV files by default. If you wish to use these files, re-enable the option in Settings > Power IQ Settings.
- Power IQ has always disabled HTML Dashboard widgets by default. If you wish to use these widgets, enable the option in Settings > Power IQ Settings.

- Geist environmental sensors need to be given unique names before the Geist PDU is added to Power IQ. You will need to delete the PDU to resolve if added without first ensuring unique names. This will result in the loss of recorded data.
- CR 40384 – Air Pressure support when connected to a PX1. Readings are presented in kPa when they should be Pa. PX1 firmware version 1.5.1 and higher corrects this.
- Always create a new back-up immediately after installing a new SSL certificate since restoring a back-up with the old certificate will not provide a confirmation when a restore is complete.
- The capacity gauge will be red until you enter capacities for the object.
- CR34029: Adding first license can only be done in English
- CR 48907: PDU CSV export contains zero (0) reading power values instead of null values when a particular reading wasn't available.
- There are two known issues with PX1 SNMP traps – Both are fixed in PX 1.4 or later. The following provides the current work around and the description of the impact.
- We recommend that you perform all outlet control operations from the Power IQ web client, CC-SG clients or the API. If you perform a power control operation from the PX web client, the correct outlet will be switched, but the event listed in the Event tab will always state the name of outlet one.
- We recommend that you include either the word Temperature or Humidity in your PX sensor label for your environmental sensors. This will ensure that event descriptions are more informative.

Release Notes: Power IQ 4.0.2

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