

Power IQ® Version 4.1.0

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.

Release Status:

Power IQ Release 4.1.0 is a General Availability (GA) release.

Very Important Notes:

- Customers that use LDAP for authentication will need to “repair” LDAP setup after upgrade to enable users to authenticate. The repair finds the DN of each user and stores that information in the database. Power IQ needs the DN of each user to be able to authenticate in Power IQ 4.1 and later. Your LDAP server configuration, Bind DN and Base DN are retained. Your Bind Password is not retained, and you must enter it to run the repair. Go to <http://www.raritan.com/help/power-iq/v4.1.0/en/#29301> for details .
- While the upgrade is an easy GUI install, it may take a couple of hours for large environments
- The OpenSSL S/MIME option for encrypted backups is no longer supported since it does not reliably handle backups exceeding 2 GB. Any user that had previously used OpenSSL S/MIME for backups should update the encryption settings.

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

- 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.

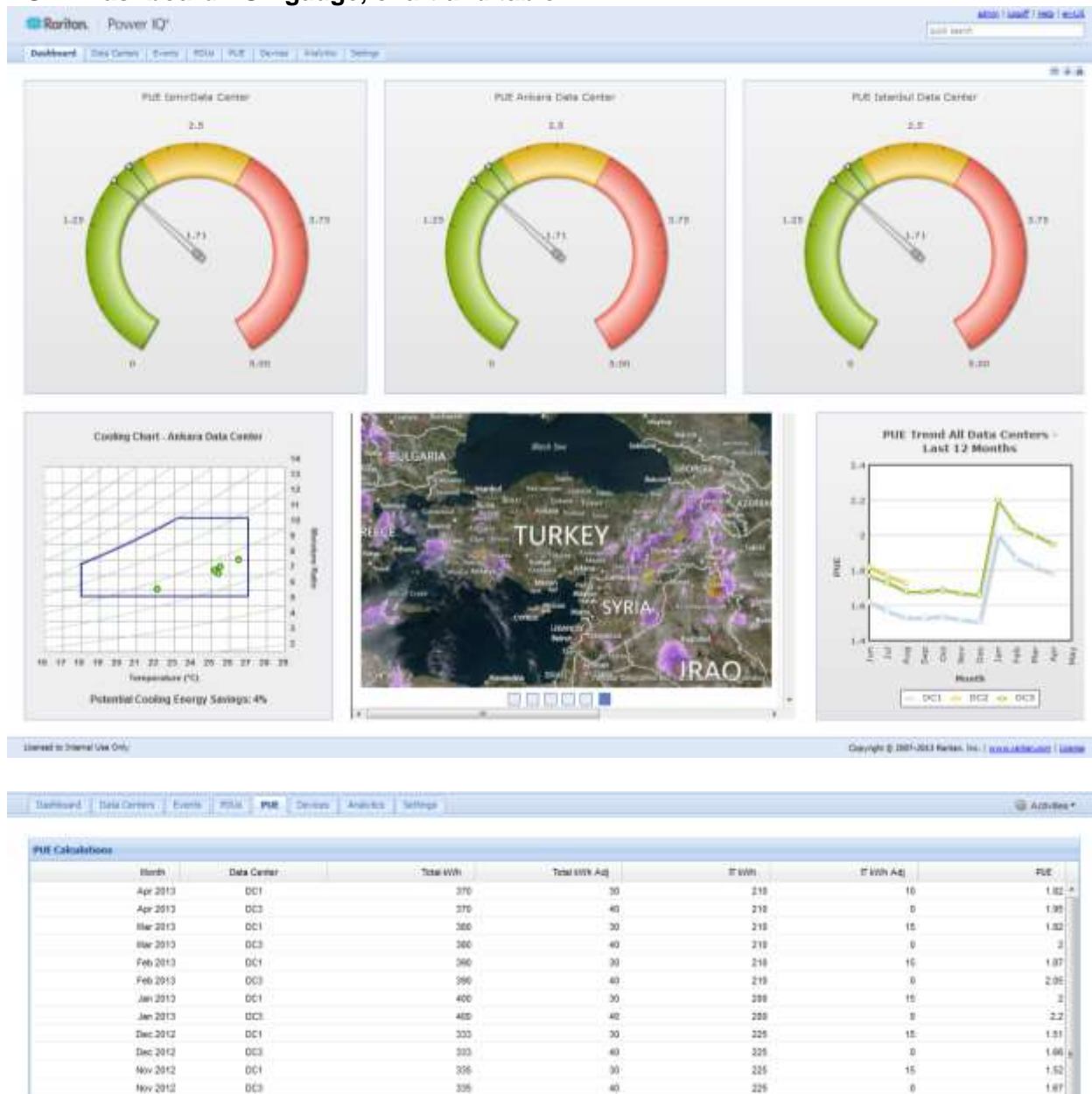
Special Notes for Customers upgrading to 4.1.0 from any release prior to 4.0.0

- There are changes to release 4.0.0 that carry forward to 4.1.0.
 - 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 4.1.0 virtual machine data store should be set to at least 160 GB.

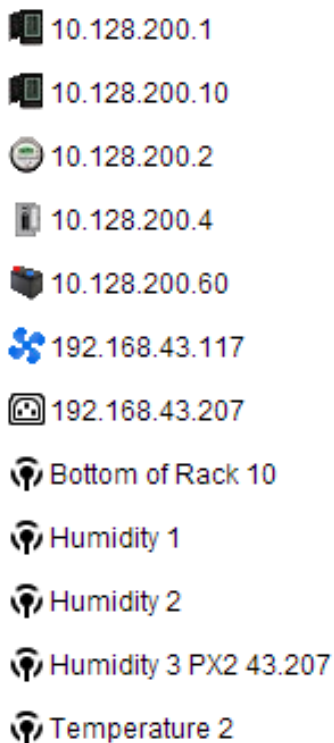
Power IQ 4.1.0 contains the following improvements from release 4.0.2:

- **PUE** - Dashboard PUE gauge, chart and table
- **New Data Center Objects** - Collect power data from new facility objects – Floor PDU, Power Panel, Floor UPS, CRAC, Standalone Meters with new icons in the data center tab. Note each Floor PDU, Panel, UPS and CRAC use 5 license units.
- **Sensor as Independent Object** – Temperature, humidity and other sensors are now individual objects that can be moved to any location in the data center structure.
- **Dynamic Plugin** - Enhancements to allow for collecting data from new objects or via a Modbus to SNMP gateway. Support for Environmental Sensors, KW-HR and many other usability enhancements.
- **Change PDU IP Address** - Ability to modify PDU IP address on Power IQ without losing historical data via csv import and API.
- **Facilities Charts** – These charts enable you to chart the new facilities objects in R4.1.0.
- **New icons** – New Data Center Tree icons for the rack PDU, sensors, UPS, Floor PDU, Panel and Meter.
- **PDU Tab Updates** – New column for Type and Dynamic Plugin
- **LDAP** – Ability to perform bulk user import, searches, and other enhancements
- **New ODBC View** - IT Device Roll-Up Readings via ODBC
- **Updated PDU Smart Page** – Merged older PDU Details page and Smart Page
- **Official Support for Chrome and Internet Explorer 10**












PUE - Dashboard PUE gauge, chart and table



- **New Data Center Objects** - Collect power data from new facility objects – Floor PDU, Standalone Meter, Power Panel, UPS, and CRAC. Find everything faster in the Data Centers tab with new icons.



Dynamic Plugin - Enhancements to allow for collecting data from new objects or via a Modbus to SNMP gateway. Support for Environmental Sensors, KW-HR and many other usability enhancements.

Dashboard	Data Centers	Events	PDU's	PUE	Devices	Analytics	Settings
Dynamic Plugins							
Add  Remove 				View Log 			
Name	Description	Type	PDU System OID	Model	PDU Count		
 acme_3phase_floo...	Acme Electronics Floor PDU (3phase)	Floor PDU	1.3.6.1.4.1.9999.1		4		
 acme_3phase_floo...	Acme Electronics Floor PDU (3phase)	Floor PDU	1.3.6.1.4.1.9999.1	FPDU-circuit-poles-only	2		
 acme_3phase_floo...	Acme Electronics Floor PDU	Floor UPS	1.3.6.1.4.1.9999.60		1		
 acme_remote_pow...	Acme Electronics Remote Power Panel	Power Panel	1.3.6.1.4.1.9999.40		2		
 acme_remote_pow...	Acme Electronics Remote Power Panel	Power Panel	1.3.6.1.4.1.9999.40	RPP-circuit-poles-only	1		
 acme_sam	Acme Electronics StandAlone Powe...	Standalone Meter	1.3.6.1.4.1.9999.20		2		
 bbuster_pm710_cu...	Raleigh Panel #2 - Babel Buster/Sch...	Standalone Meter	1.3.6.1.4.1.3815.2.2.2.1		1		
 chatsworth_plugin	Chatsworth TS1009368 24 Outlet	Rack PDU	0.10.43.6.1.4.1		0		
Page 1 of 1						Displaying Plugins 1-8 of 8	

Change PDU IP Address - Ability to modify PDU IP address on Power IQ without losing historical data via csv import and API.

Dashboard | Data Centers | Events | **PDUs** | PUE | Devices | Analytics | Settings

Upload new PDU IP addresses

CSV File:

change.csv

Browse...

Cancel

Begin Import

	A	B
1	PDU Old IP	PDU New IP
2	192.168.43.207	192.168.33.207
3	192.168.43.208	192.168.33.208
4	192.168.43.209	192.168.33.209
5	192.168.43.210	192.168.33.210
6	192.168.43.211	192.168.33.211

Power IQ 4.1.0 contains the following software updates based on customer reported items:

- 53646 PIQ Vulnerability - CVE 2013-1899
- 53153 Unite Eagle system report temperature correctly
- 52925 Health check restart poller after exception
- 52784 Dynamic Plugin - missing line readings for 3 Phase PDUs
- 52617 User seeing devices that he doesn't have permission
- 52129 Unable to Control Power for a Device Group
- 51849 PIQ is experiencing heavy load
- 51781 Update PDU health during each poll.
- 51239 Device search/filter issue when PDU Label set to name.
- 51060 Server Technology traps not acknowledged
- 50563 Cannot export PDU listing
- 50368 PDU readings in 4.02 are different than 3.12
- 49931 Selecting PDUs from more than one PDU page in Upgrade Plan causes PIQ to hang
- 49860 Support MeasureLogic DTS 310 ES meter via Dynamic Plugin
- 49835 Mouse over on Trending lines show empty box and Java Error
- 49834 PIQ 3.1.2-2 cannot see outlets on slave unit in master/slave setup - APC 8865
- 49611 License could not be validated
- 49560 Error when importing IT Device to outlet association CSV Import
- 49181 Add Tripp Lite PDU3VN and PDU3VSR to the certified list.
- 48847 New Rittal PDU + Sensors support

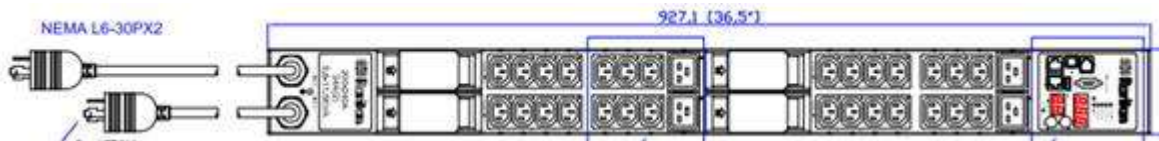
- 48691 Add PDU CSV Import to update PDU credentials considers license count
- 48409 Display PDU serial number for PX2 in PIQ PDU Details page
- 47642 Dynamic plugin: Add support for converting SNMP String objects to Java Integers
- 47293 cooling chart error (Not displaying)
- 46288 Dynamic plugin: Add support for kwh readings
- 45660 Eaton: eAM004 PDU support (3 phase) - Support for 2nd Model
- 45618 Scheduled task issue by changing time zone
- 45348 TM environmental sensor support
- 44733 Dynamic plugin: add support for outlet pole voltage
- 44374 PIQ User DN Prefix/Suffix example for using LDAP Distinguished Name Authentication
- 42284 Performance tool to recreate live database situations.
- 21872 Display "Voltage" for a PDU

Power IQ 4.0.0 and 4.1.0 contain 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 PDUs 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.

Existing Power IQ 4.0.0, 4.0.1 and 4.0.2 Customers:

The upgrade is free for customers with a valid software maintenance agreement. Download the Power IQ 4.1.0-x software upgrade bin file named power-iq-v4.1.0-x.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 4.1.0 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 4.1.0 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 4.1.0 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:

- Chrome 30
- Mozilla Firefox v7 – v24
- Internet Explorer v8, v9 and v10
- Safari v5.1.7

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 & 5.4 - Vendor Agnostic Power Control with Configuration Sync

dcTrack Compatibility:

- Release 3.0, 3.0.1 and 3.1

Important Notes:

- 41904 - The OpenSSL S/MIME option for encrypted backups is no longer supported since it does not reliably handle backups exceeding 2 GB.
- 49451 - In PIQ R4.0, we changed how current was charted on the dashboard. In R4.1, we've reverted it to chart current the same way that it did in R3.1.
- 49927 - If a Power IQ has been configured for LDAP, prior to 4.1 and if non-LDAP (local) users exist on that system then the user may have an expectation that those users will not be able to login after the 4.1 upgrade however, they will be able to.
- 50368 - For PDU's that do not provide a voltage reading, PIQ has the ability to use a default value. There's not always a reliable way to detect whether the PDU is single phase or three phase though so it's possible that PIQ may use an incorrect default voltage value for the PDU. If this happens, you can manually assign the value using by editing the PDU Details.
- 50430 - When IP Address Change is applied via CSV, a manual rescan will fail right afterwards.

- 50895 - If the user adds a daily or monthly PUE Gauge to Power IQ before either a daily or monthly PUE rollup has occurred, the needle on the gauge will point to straight to the right (zero degrees) and you will not see a reading above the needle. Once there's data, the gauge will show it.
- 51446 - Some PDU's do not include the sensor name\number when sending a trap (event). When this happens PIQ will show the Sensor as "unknown" in the event detail, for example: Sensor "unknown": humidity is under warning threshold
- 52247 - This release introduces a new Sensors in the EDM feature that allows temperature, humidity, etc... sensors to be placed anywhere in the EDM, such as rooms and racks. On upgrade to R4.1.0, the sensors will appear on the same EDM node as the PDU to which they are attached. Please refer to the user's guide for details on how the sensors will act when a PDU is added to, moved with, or removed from the EDM.
- 52772 - IT Device readings are only created for devices connected to Raritan PDU's. To be accurate, both the PDU's and Power IQ must have data buffering enabled. If a user failed to provide the SNMP write string for the PDU, it's possible for data buffering to be enabled in PIQ, but not on the PDU. When this happens, PIQ will report a degraded status for the PDU and the IT Device readings will be inaccurate.
- 52977 - When disassociating outlets from a Device via the Rest API, the user should use the "/api/v2/outlets" resource instead of the "/api/v2/devices" resource. The reason is that passing empty arrays, e.g. [], are not supported at this time.
- 53551 - To move sensors within the EDM, we suggest using drag and drop as opposed to removing and re-associating. Otherwise, the sensor auto-association feature on PIQ may attempt to add the sensor back to the PDU's parent node.
- 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 initiated actions that trigger a rescan – such as PDU firmware upgrade or bulk configuration will temporarily throw off last hour charts and gauges. The system will normalize after an hour.
- 47723 - Importing PDUs may fail on multi-core box in a certain rare 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.
- 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 backup immediately after installing a new SSL certificate since restoring a backup 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.
- 34029 – Adding first license can only be done in English
- 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 4.1.0

November 4, 2013

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