

Power IQ® DCIM Monitoring Version 6.0

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

Applicability

This firmware release is applicable for both the virtual appliance and the hardware appliance. We strongly recommend that all customers upgrade to this release.

Release Status

Power IQ Release 6.0 is a General Availability (GA) release.

Software Enhancements in Power IQ 6.0

Release 6.0 contains the following software enhancements:

- Dashboard Technology Refresh
- Electronic Card Reader Access Control
- Bulk PDU Configuration Updates
- Email Notifications via JSON over HTTP/HTTPS
- Improved Raritan iPDU Management
- Enhanced Multi-Vendor Support
- Granular Role-Based Permissions
- Ability to Change Administrator Username
- Server Performance Monitoring
- New Time Mismatch Event for Raritan Facility Items

Dashboard Technology Refresh

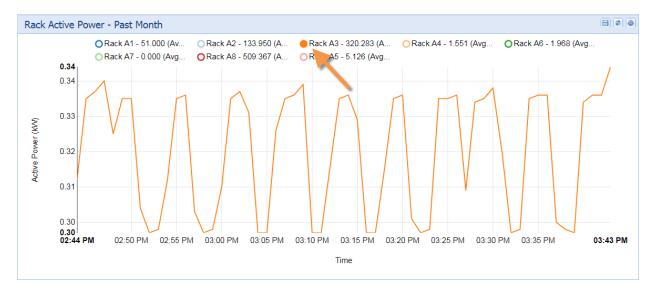
The dashboards have been updated and refreshed in Power IQ 6.0 for an elegant, modern design that implements the same HTML5 charting library as dcTrack. The new charts enable you to interact with your data in ways that unlock deeper insights.

The new line chart displays a color-coded legend as you mouse over from left to right, easily showing you all the readings for a specific time.



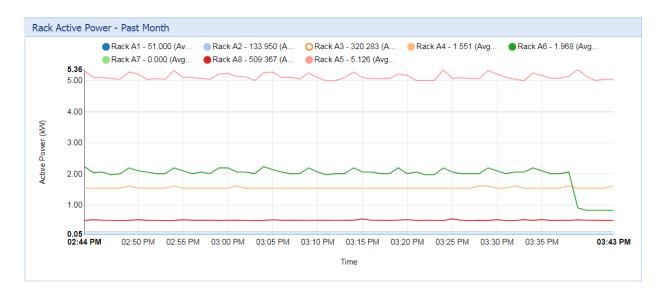


To focus on the data from a single series, simply double-click the corresponding marker in the chart. This will also automatically adjust the y-axis for a more granular look at the data.

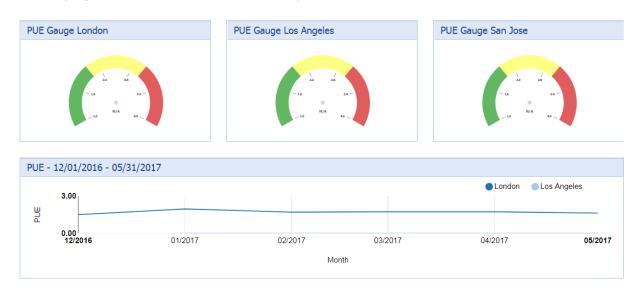


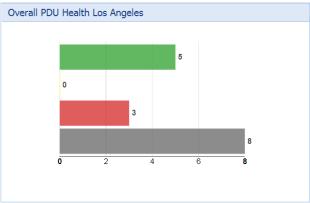
Click the marker to return to the default view. From there, to hide a series, single-click the corresponding marker:





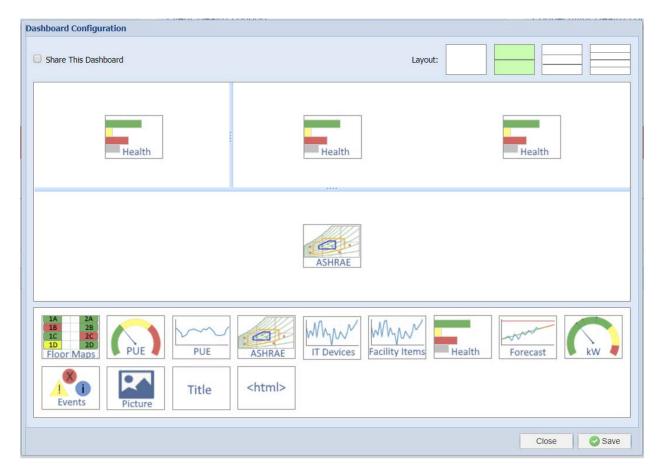
The PUE gauges and bar charts have also been updated:







Creating an informative dashboard is easier than ever with new widget icons that better reflect the type of chart:



Electronic Card Reader Access Control

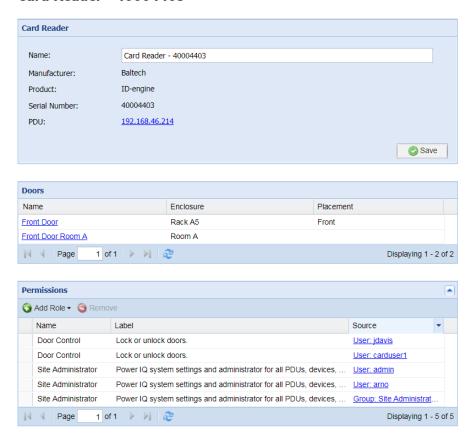
Power IQ 6.0 and above support electronic access control via RFID cards and card readers.

Card readers are added to Power IQ via discovery. Upon polling, discoverable card readers that are attached to supported devices are added to the Power IQ database. Once in the system, card readers can be associated with doors.

The card reader smart page provides information on a reader's name, manufacturer, serial number, doors it is associated with, and permissions.



Card Reader - 40004403



Card readers can be decommissioned and recommissioned by 1) decommissioning or recommissioning the facility item where the card reader is attached respectively, or 2) unplugging the card reader from the facility item.

Cards can be assigned to users in the Card Access Control panel under Settings > Authorization and Authentication > Card Access Control. The panel lists card assignment details, including the card number, status, first and last name, user login, and user email. Users with the Site Administrator role and above have permissions to create, deactivate, and reactivate cards and to edit card assignments.





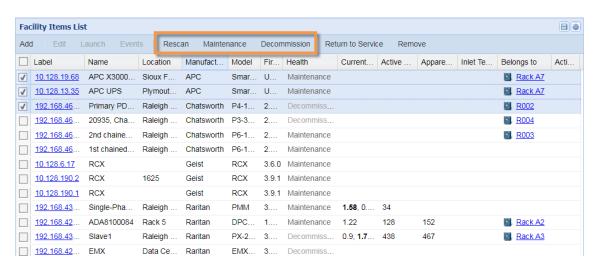
Note: Card reader access management is supported for Raritan PX2 firmware version 2.5.20 and above or EMX firmware version 2.5.0 and above only.

Bulk PDU Configuration Updates

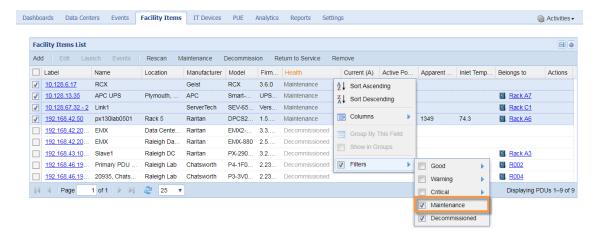
Power IQ 6.0 makes it faster and easier than ever to perform common tasks, such as PDU rescanning, decommissioning, and maintenance.

In the Facility Items tab, Maintenance has been added as a Health status. Additional options for rescanning, maintenance mode, and decommissioning also have been added to make it easier for you to update your facility items' statuses.

Simply select the facility items that you want to update and click the appropriate link. The task will start, and once complete, the Facility Items List will update.

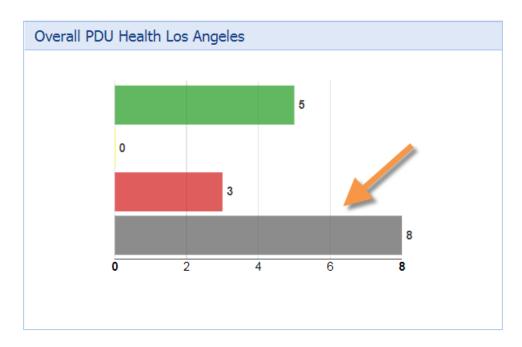


In the Facility Items List, you can filter by a Health status of Maintenance to see facility items in Maintenance Mode:





Facility items in Maintenance mode also show (in gray) in the health charts on the dashboard. Click the gray Maintenance bar to show those items in the Facility Items List.



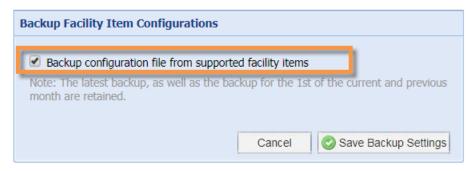
Improved Raritan iPDU Management

Cloning and Restoring Facility Item Configuration

Users can clone facility item configuration files in Power IQ to easily roll back or restore configurations in bulk in case of PDU failures or incorrect configuration updates.

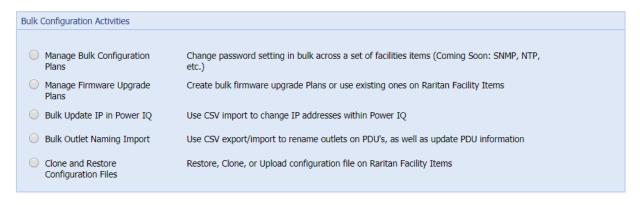
When enabled, backups are made automatically as part of the scheduled database backup. The most recent backup, as well as the backups from the first days of the current and previous months, will be retained, for a total of three backup files.

To enable or disable this feature, check or uncheck the "Backup configuration files from supported facility items" checkbox under Settings > Power IQ Settings > Backup Facility Item Configurations.





To clone and restore PDU configurations, in the Facility Items tab, select Activities > Bulk Configuration Activities to access the new Bulk Configuration Activities page.



Next

Select Clone and Restore Configuration Files to access the Bulk PDU Configuration page, where you can view your saved plans as well as plans in progress.

In Power IQ 6.0, upon planning a new roll out or editing an existing plan, you can now choose to use a backup PDU configuration file created by Power IQ to configure your PDUs. If you selected a configuration file that was a backup of a facility item, by default that facility item will be added to the selected PDUs list when running the plan.

The screenshot below shows the three available PDU backup files sorted by their IP addresses.

Backup Files Uploaded Files Upload File ■ Name ▲ V IP Address Location Type Manufacturer Model Data C **192.168.42.193 (3)** 192.168.42.193 192.168.42.193 Rack PDU Raritan PX-3370 Los Anc Unknown 192.168.42.193 192.168.42.193 Unknown Rack PDU Raritan PX-3370 Los Anç 192.168.42.193 192.168.42.193 Unknown Rack PDU Raritan PX-3370 Los Anc 192.168.42.201 (3) 192.168.42.201 192.168.42.201 Glass-Lab, Raleigh Rack PDU PXE-1493 Raritan 192.168.42.201 192.168.42.201 Glass-Lab, Raleigh Rack PDU Raritan PXE-1493 192.168.42.201 192.168.42.201 Glass-Lab, Raleigh Rack PDU PXE-1493 Raritan 192.168.42.202 (3) 192.168.42.202 192.168.42.202 Glass-Lab Rack PDU Raritan PX2-1475C-A0

Choose a PDU Configuration File

Continue Please select a configuration file before continuing

Select the desired configuration file, choose the PDUs you want to update, and then start the roll out to execute the plan.



PDUs.

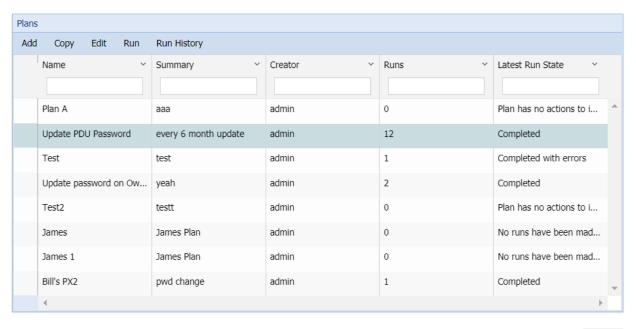
Note: Users can backup and restore PDU configuration files for Raritan PX1, PX2, PX3, and EMX devices only.

Changing the Administrator Password for Facility Items

Site Administrators can change the administrator password (used by Power IQ to poll facility items) on Raritan facility items in bulk, provided they have the current password.

Changing the administrators for multiple Raritan facility items requires creating a new bulk configuration plan or editing an existing plan for updating the password, verifying the old and new passwords, selecting the desired facility items, and then running the plan to update the facility items with the new password.

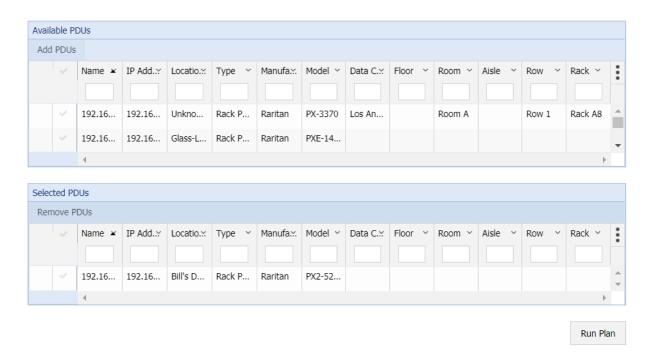
To change the admin password from the Bulk Configuration Activities page, select Manage Bulk Configuration Plans to get to the Plans page.



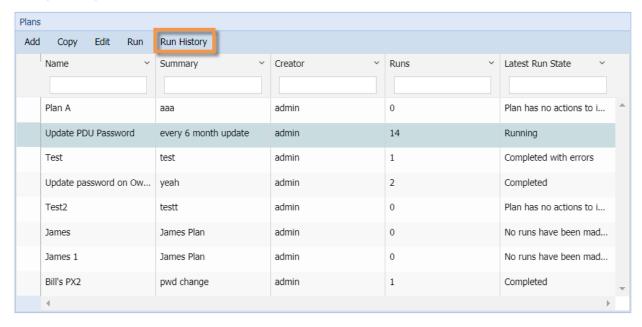
Select the plan you would like to run, and on the next page, enter your desired password. Then, select the PDUs whose passwords you want to change. Run the plan to update the passwords on the selected

Next



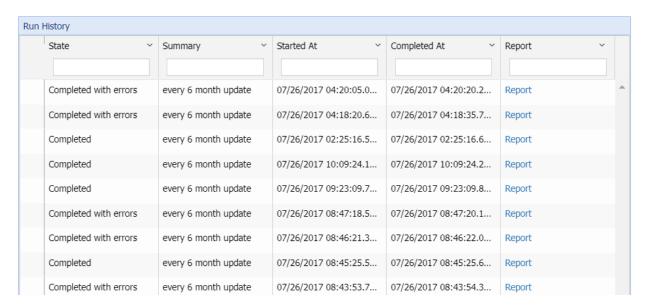


After running the plan, simply return to the Plans page and click Run History to view the plan's run history and reports for each time it has been run.



Reports can be filtered by state, summary, and start and completion dates and times.





Reports can also be exported to PDF and then emailed and shared with your team or compliance organization.

Report for Update PDU Password

Summary: every 6 month update

Created By: admin

Actions

Title	Description
Update Password	Bulk update password for the facility items selected on the plan

Summary

	Facility Items				
Started At	Completed At	Run By	Count	Updated	Failed
07/26/2017 02:25:16.525 PM	07/26/2017 02:25:16.602 PM	admin	1	1	0

Details

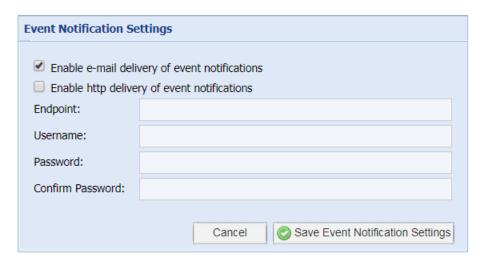
Facility Item	Message Time Message		
192.168.43.177			
	07/26/2017 02:25:16.549 PM	Waiting to run	
	07/26/2017 02:25:16.561 PM	Started tasks	
	07/26/2017 02:25:16.575 PM	Password change completed	



Email Notifications via JSON over HTTP/HTTPS

In Power IQ 6.0, you can now receive event notifications via JSON over HTTP or HTTPS through an endpoint that you choose and configure. This enhancement will help you eliminate an email server as a bottleneck for notifications.

In the Settings tab, select Appliance Administration > Power IQ Settings. Check/uncheck the "Enable HTTP delivery of event notifications" checkbox to enable/disable event notifications via JSON. You also need to provide the endpoint (required), username (optional), and password (optional).



Only Site Administrators can enable or disable event notification settings within Power IQ. The endpoint is required, but username and password are optional to allow you to set up basic authentication for your endpoint (if preferred).

You can send events using the same format as when retrieving them via the API. For more information, see the Power IQ API Guide.

Enhanced Multi-Vendor Support

Power IQ 6.0 allows users to natively manage the full line of APC® UPS products, no additional user configuration required. This release further extends Power IQ's out-of-the-box support for a wide range of APC facility items, including rack PDUs, transfer switches, and APC Netbotz devices.

Sunbird supports products from over 50 manufacturers either natively or via dynamic plugin without the need to purchase additional modules. Over 100 plugins can be downloaded or requested free of charge from Sunbird's Addons website: http://addons.sunbirddcim.com/.

Granular Role-Based Permissions

In Power IQ, existing roles have been modified to provide more granular control over role-based permissions. The Create Reports and Dashboards role has been divided into two roles: Create Analytics



and Create Dashboards. The ability to create event notification filters has been removed from the Event Manager role and made into its own role: Create Event Notifications.

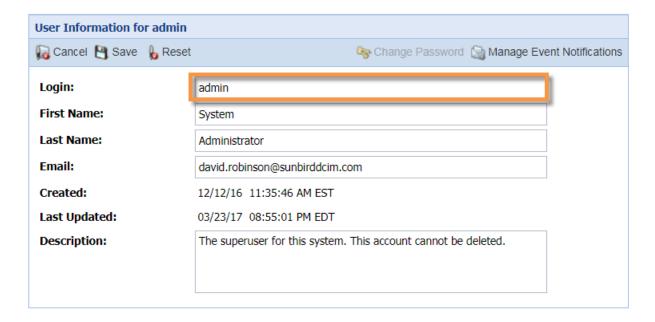
The tables below summarize the new roles:

Role	Tasks	Applies to
Create Analytics	Create Analytics role has permission to: • Create reports and charts in the Analytics tab.	Global only, applied in Settings > User Accounts page. The information a user can include or view in a report or chart is based on View permissions. A user with this role also needs
		the View role, or another role that includes View permission.
Create Dashboards	Create Dashboards role has permission to: • Create dashboards in the Dashboards tab.	Global only, applied in Settings > User Accounts page. The information a user can include or view in a dashboard is based on View permissions. A user with this role also needs the View role, or another role that includes View permission.
Create Event Notifications	Create Event Notifications role has permission to: • View the Manage Event Notifications screen. • Create event notification filters.	Global only, applied in Settings > User Accounts page. A user with this role also needs the Event Manager role to view the Events tab.
Event Manager	 Event Manager role has permission to: View the Events tab. View and clear events. View events in the Smart views. View Floor Maps in the Dashboard. 	Global only, applied in Settings > User Accounts page.

Ability to Change Administrator Username

Administrators can change the default admin account username under Settings > Authorization and Authentication > User Accounts. Select the admin user account and click the Edit icon.





Server Performance Monitoring with Power IQ

Power IQ 6.0 introduces server monitoring for the CPU, memory, and other performance indicators and makes this data available to third-party monitoring systems.

The SNMP agent works out of the box and is enabled by default, without additional configuration required. It listens for incoming requests on the default SNMP UDP port 161.

The table below summarizes performance indicators from the MIB-II Host Resources MIB that are exposed by the SNMP agent:

Category	Object Name
System Information (e.g., sysUpTime, Number of users, Number of system processes)	hrSystem
Device Information (e.g., Device types, Processors, NICs)	hrDevice: hrDeviceTable
CPU Utilization/Processor Load	hrDevice: hrProcessorTable
Network and Partition Table Information	hrDevice: hrNetworkTable, hrPartitionTable
Memory and Disk Usage	hrStorage
Running processes	hrSWRun, hwSWRunPerf
Installed software	hrSWInstalledTable

New Time Mismatch Event for Raritan Facility Items

Power IQ 6.0 introduces a new time mismatch event to help you ensure that readings from your Raritan facility items are always timestamped accurately.



In previous versions of Power IQ, the readings from Raritan facility items in buffered data mode might have displayed incorrect timestamps. This occurred when the clock on the facility item was incorrectly set, as the times came from the facility items versus Power IQ.

The new readingTimeMismatch event is thrown with a severity of Critical when a mismatch between the time reported by a Raritan facility item in buffered data mode and the current time in Power IQ is detected. Specifically, the event is generated when the maximum reading time from either the inlet readings buffer, circuit readings buffer, or the sensor readings buffer is greater than or less than 15 minutes of the current time on Power IQ.

The event is cleared automatically after a poll when the latest reading time reported by the facility item is within 15 minutes of the current time on Power IQ.

Bug Fixes and Customer-Reported Items Over Release 5.2.3

Release 6.0 also provides fixes for the following bugs, customer-reported items, and/or security vulnerabilities over Release 5.2.3:

Ticket Number	Issue Number	Summary
N\A	PIQ-9564	Readings from the ODBC PDUReadings view can occasionally be double the expected value if data buffering is enabled and Power IQ collects two readings with the same timestamp.
4830	PIQ-9299	Application error on PX-3270.
4724, 1838	PIQ-9127	Reduce the amount of time it takes for a poll to timeout.
4638, 4607	PIQ-9091	Add ability to monitor CPU, Memory, and Disc usage by SNMP.
4322	PIQ-9007	Device chart: User shouldn't be able to set an end date before start date.
4396	PIQ-8999	Dynamic Plugin: Handle a returned value of Unavailable.
4053	PIQ-8754	Fix for SWEET32 vulnerability (CVE-2016-6329, CVE-2016-2183).
3895	PIQ-8668	Updating SNMP credentials fails due to license count.
3888	PIQ-8653	Add Year value to CSV exports from charts.
N\A	PIQ-8492	Detect PDU model name changes on rescan.
2951	PIQ-8140	Improvements for trap processing.
2864	PIQ-8057	Add token to prevent Cross Site Request Forgery (CSRF).
2864	PIQ-8163	Limit information exposed when errors are encountered.
2675	PIQ-7970	A race condition could cause a delay in trap processing after rebooting



		Power IQ.
2118	PIQ-7446	Dynamic Plugin NFR: Add ability to have wildcard in Trap Filter Value.
1919	PIQ-7344	Error collecting data from APC PDUs that are outlet metered but not outlet switched (including APC AP8453 and AP8450EU3 PDUs).
1894	PIQ-7328	Dynamic Plugin: The warning message for a bad mapping refers to the inlet instead of an inlet pole.

Important Notes

Virtual Machine Requirements*

Minimum Configuration (Number of PDUs)	RAM (GB)	CPU (Cores)	Datastore (GB)	os	VMware	Microsoft
Up to 50	4	4	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V
51-100	8	4	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V
101-500	8	6	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V
501-1000	8	8	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V
1001-1500	16	8	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V
More than 1500	24	8	160 or more	CentOS 64-Bit	ESX/ESXi	Hyper-V

^{*}Based on 30 outlets per PDU

Additional Comments

The table below provides helpful information on issues related to Power IQ Releases 5.2 and above:

Issue	Comments
CC-SG Data	To provide a more secure web experience, TLS 1.0 is disabled in Power IQ 5.2.2 and above.
Sync	Due to this change, after upgrading Power IQ to Release 5.2.2, data sync to Raritan's CommandCenter® Secure Gateway (CC-SG) may fail. CC-SG doesn't support TLS 1.1 or later.



A hotfix is available to address this issue. For more information or to obtain the hotfix, contact Sunbird Technical Support at tech@sunbirddcim.com or via the Sunbird Support Portal.

In Power IQ 5.2.3 and earlier, certain APC Symmetra Floor UPSs were managed as Rack PDUs. Following the first poll upon upgrade to Release 6.0, the type for these facility items will update from "Rack PDU" to "Floor UPS". As a result, customers managing APC Symmetra Floor UPSs in Power IQ may experience the following: • Increased license usage. A Rack PDU requires one license, while a Floor UPS requires five licenses. For assistance with additional licenses, please contact Sunbird Technical Support. • Single-phase Floor UPSs misidentified with a third line/phase. A single-phase Floor UPS with two lines that had been previously managed as a

Door Control

Before configuring door control, ensure that the time on the server is set correctly. Otherwise, it can prevent Power IQ from accurately updating events, sensor states, and providing an accurate audit log.

three-phase Rack PDU with three lines may be identified as retaining the third line when converted from a Rack PDU to a Floor UPS in Power IQ. To address this issue, decommission and then recommission the Floor UPS in Power IQ. Upon rediscovery, the Floor UPS will be correctly identified.

As of January 1, 2017, Google will no longer support SHA-1 certificates in their browsers. For a period, other browsers, such as Firefox, will continue to allow them but will show them as untrusted connections or similar. They may eventually drop support for them.

SHA-1 Certificates in Web Browsers

In Power IQ, we've changed the default certificate that's generated on new installs to use SHA-256. Customers who are currently running SHA-1 certificates won't benefit from this change, as Power IQ doesn't override existing certificates. If you are still using a SHA-1 certificate, you should generate a new one and upload it to Power IQ.

Please refer to the following instructions on how to generate a certificate and upload it to Power IQ:

http://www.sunbirddcim.com/help/PowerIQ/v522/en/Default.htm#Power IQ Only /Security and Encryption.htm

Related Links

- **Google:** https://security.googleblog.com/2015/12/an-update-on-sha-1-certificates-in.html
- **Firefox:** https://blog.mozilla.org/security/2015/10/20/continuing-to-phase-out-sha-1-certificates/

CPI MIB IPv6 Address

The CPI MIB incorrectly lists the Primary IP address instead of the Alternate IP address for IPv6.

IP Address Filters on Event

We've enhanced IP address filters on Event Notifications to allow specific IP matches versus any IP starting with a given value. Going forward from Release 5.2, you can enter an asterisk (*) at the end of any IP address to match IPs starting with a value.



Notifications	On upgrade, we preserve existing suffix wildcard matching by automatically adding the asterisk when needed.
Netbotz Sensors	Following an upgrade to 5.2, Netbotz sensors may be decommissioned and recreated. If a sensor in the EDM hierarchy is decommissioned, the customer should re-place the desired Netbotz sensor back into the desired location in the EDM.
Raritan PX1 1.5.7 Firmware	There is an issue on in the PX1 1.5.7 firmware that is not likely to be fixed since 1.5.7 is supposed to be the final release of the PX1 firmware. The PX1 is supposed to keep the MIB-II sysName and object instance (i.e., PDU Name) objects in sync. When setting sysName via SNMP (as PIQ does via an csv outlet renaming import), these two values will be out of sync until the SNMP agent is restarted or the PDU is rebooted.

Upgrades for Existing 4.x and 5.x Customers

The upgrade is free for customers with a valid software maintenance agreement. Use the Power IQ 6.0 software self-installing upgrade file named power-iq_6.0.x.bin.

Note: Power IQ Release 4.0.x systems with LDAP configured must have a valid email address for each user account prior to upgrading.

Upgrades for Existing 3.1.0 and 3.2.0 Customers

The upgrade is free for customers with a valid software maintenance agreement. The upgrade will require a new install.

Your current Power IQ configuration and data can be backed up and restored to the new 6.0 system. Use the Power IQ software file named power-iq-5.2.0.x.iso for a fresh install.

Where to Find the Software Files and Obtain Help

- Find Software: http://support.sunbirddcim.com/
- Get Help: tech@sunbirddcim.com
- Sign Up for a Maintenance Contract: Contact your reseller or sales@sunbirddcim.com

Browser Compatibility

- Chrome up to v60
- Mozilla Firefox up to v51
- Internet Explorer v11
- Microsoft Edge v40
- Safari v10.0.1



CC-SG Compatibility

- Release up to and including v6.2 Vendor Agnostic Power Control with Configuration Sync
- A patch is required to enable TLS1.0 on Power IQ. See CC-SG Data Sync under the Addition Comments section above.

About

July 28, 2017

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