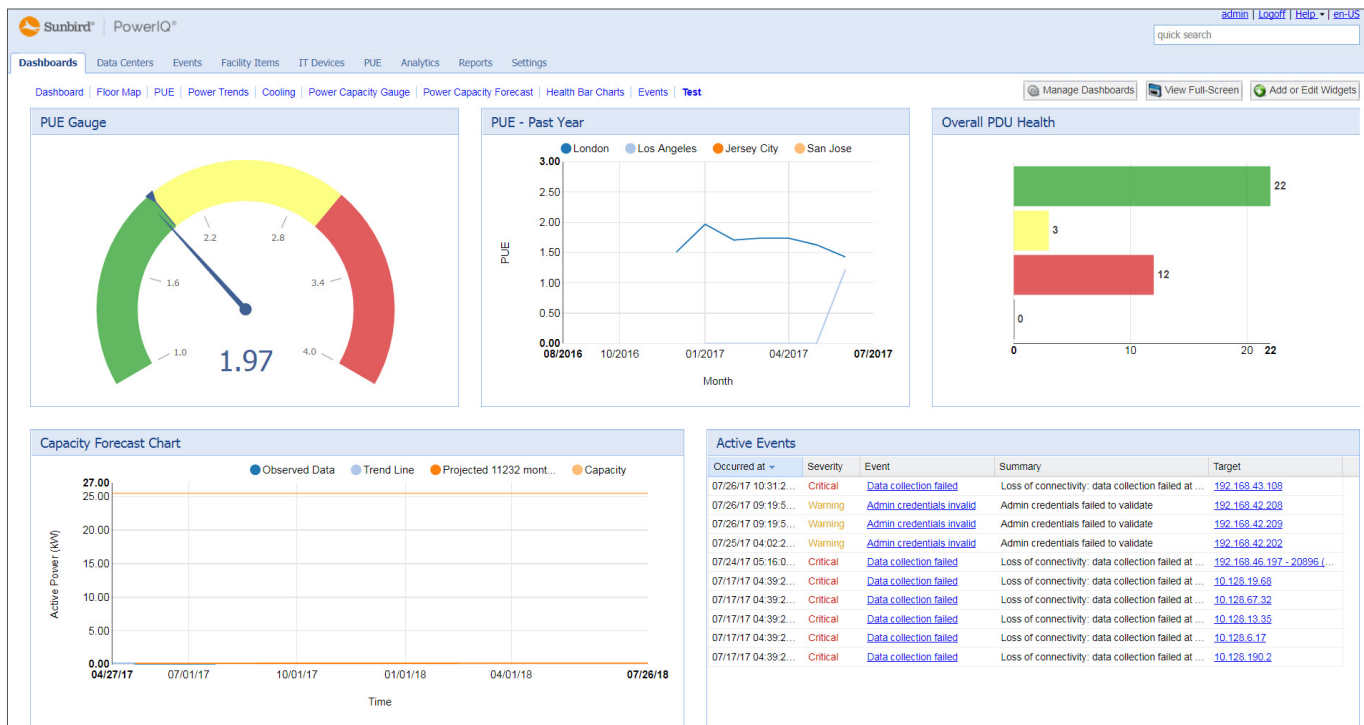


Power IQ® DCIM Monitoring Evaluation Copy

A Step-By-Step Guide



Thank you for downloading this free evaluation copy of Sunbird's Power IQ® DCIM monitoring software which supports up to five devices!

Power IQ allows you to:

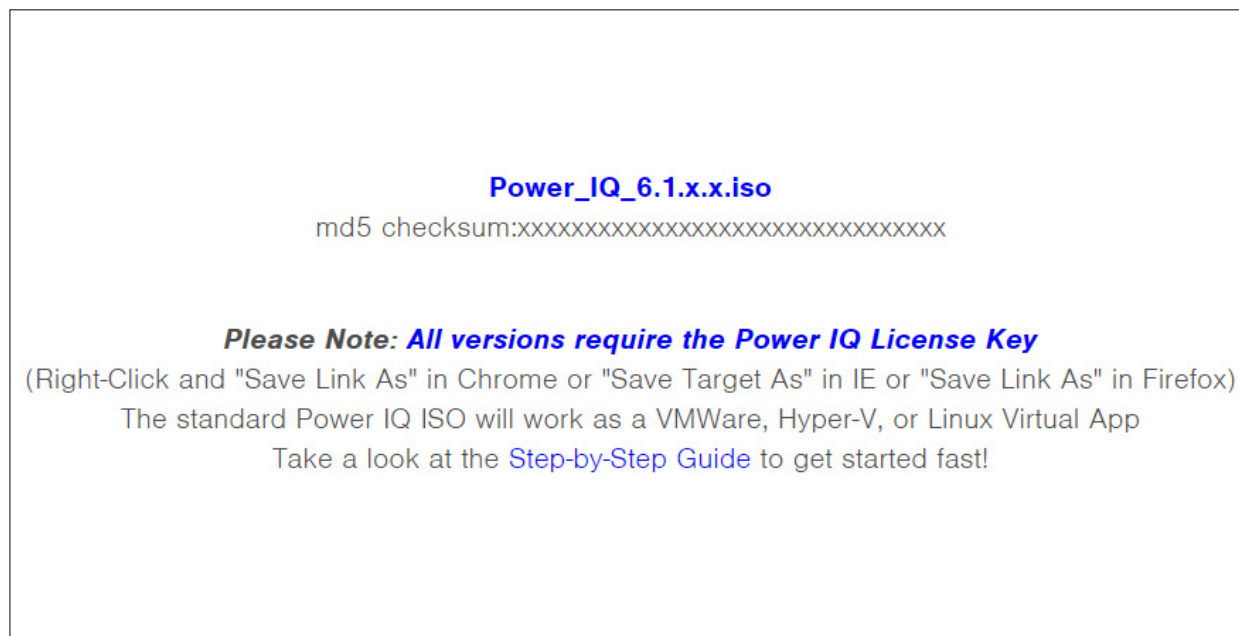
- Easily identify active power, energy, cost and environmental trends.
- Locate stranded capacity.
- Generate energy cost reports for customers.
- Gracefully shutdown IT devices.
- Use cooling charts that project savings by increasing room temp.
- Measure PUE to measure and improve efficiency initiatives.

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Installing Power IQ

Upon filling out the registration form, you'll be led to the page pictured below. Alternatively, the page can be found at:

http://info.sunbirddcim.com/pig_download



Please note that the images in this guide may display slightly different version numbers than the files you have downloaded. Please ensure that your install file and VM application screens show the appropriate version numbers based on the version you have downloaded.

Do you have additional questions? Contact Sunbird Tech Support via the Sunbird Support Portal at <https://support.sunbirddcim.com> or by email at tech@sunbirddcim.com for help with accessing the following:

- a.** Quick Setup Guide Software Installation
- b.** Software Release Notes
- c.** Power IQ User Guide (Online Help)

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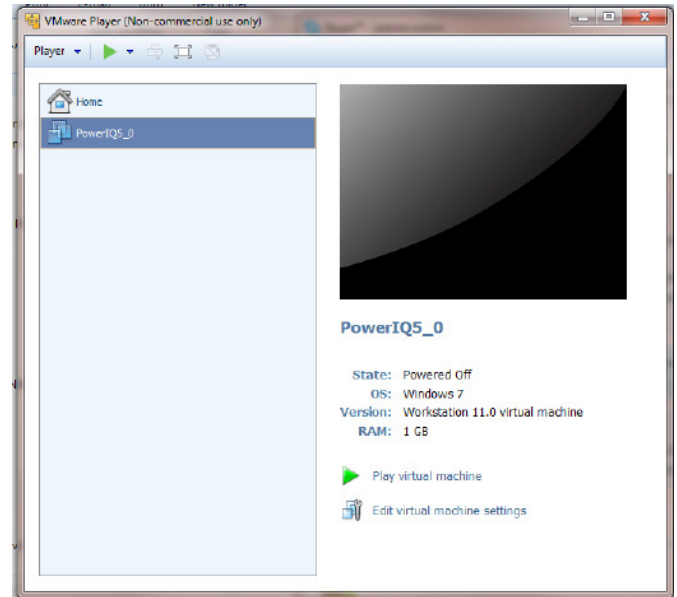
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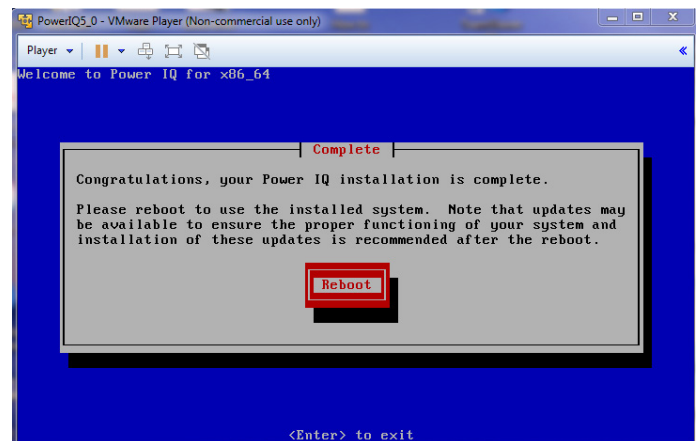
Power IQ VMware Installation Instructions

1. Click on the .iso file link to download the file. Next, click on the link for the License file. Save these two files in a directory you can find easily.
2. Download and Install VMware Player.
3. Open up VMware Player and click “Create a New Virtual Machine” and install from .iso. Browse to the location where you saved the power-iq-xx.x.x.iso file and click Next.
4. Choose the OS that you are running the VM on and click Next.
5. Choose a name for your VM and click Next.
6. Choose the recommended disk capacity (160 GB) and click Next.
7. Click finish to install the virtual machine. You will see a screen similar to this one, then click Play Virtual Machine.



8. At the next screen choose the Virtual Machine. Ctrl-Alt will let you return to your computer and Ctrl-G will let you direct input to the virtual Machine.

9. Congratulations! You have successfully installed Power IQ. Reboot to continue with the Power IQ setup.



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Power IQ Hyper-V Installation Instructions

1. Open Hyper-V Manager. Right-click on the machine running Hyper-V and select New > Virtual Machine. The New Virtual Machine wizard launches.

2. On the Before You Begin page, click Next.

Note: The New Virtual Machine wizard walks you through two different ways to create a virtual machine: default and customized. You must click Next to create a customized virtual machine with the values required to run PowerIQ.

3. On the Specify Name and Location page, enter the name of the virtual machine and click Next.

4. On the Specify Generation page, select Generation 1 and click Next.

5. On the Assign Memory page, enter 4096 MB as the amount of RAM to allocate to the virtual machine and click Next.

6. On the Connect Virtual Hard Disk page, select Create a Virtual Hard Disk. Enter the Name, Location, and Size for the virtual hard disk. Click Next.

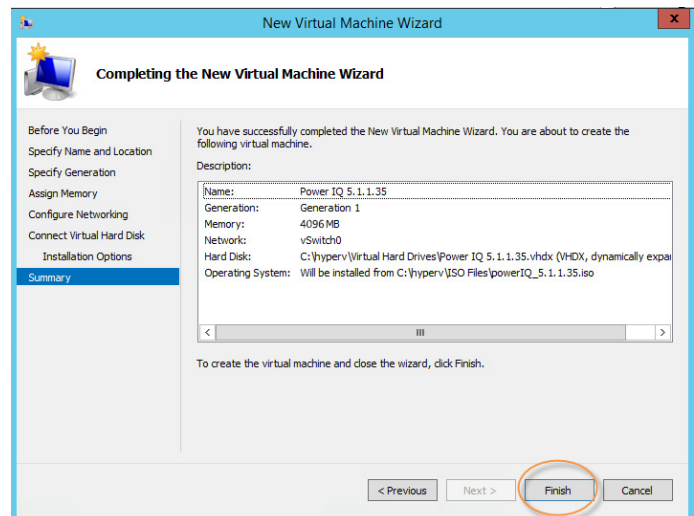
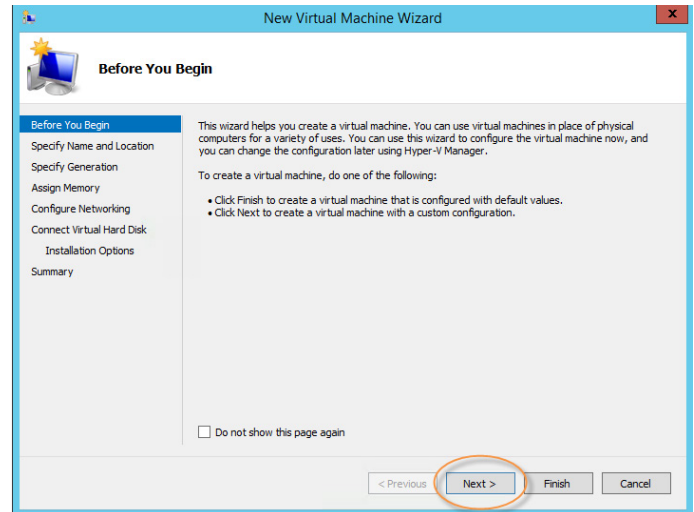
7. On the Installation Options page, select Install an operating system from a bootable CD/DVD-ROM. Select Image file (.iso) and use the Browse dialog to specify the path to the Power IQ installation file. Click Next.

8. To complete the New Virtual Machine wizard, on the Summary page, confirm your selections and click Finish.

9. To configure the virtual machine you have just created, right-click on the virtual machine in Hyper-V Manager and click Settings.

10. On the BIOS page, set the startup order of your boot devices. Select the device and click Move Up or Move Down to change the order.

11. On the Memory page, you can modify the memory settings, including dynamic memory settings, for your virtual machine. When initially installing Power IQ, you must use the minimal amount (4GB) of RAM. After completing the installation, power off the virtual machine and increase the allocation to the recommended RAM or greater. It is strongly recommended that you do not use dynamic memory for this virtual machine.



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12. On the Processor page, you can specify the number of processors for your virtual machine and other resources based on the expected load. Set the number of virtual processors to four (4).

13. Under IDE Controller 0, go to the Hard Drive page. Under Media, select Virtual hard disk and use the Browse dialog to specify the path.

14. Under IDE Controller 1, go to the DVD Drive page. Under Media, select Image file and use the Browse dialog to specify the path to the .iso file. Note: Ensure that the disk image is created as an IDE device. If it is created as a SCSI device, the installation will fail.

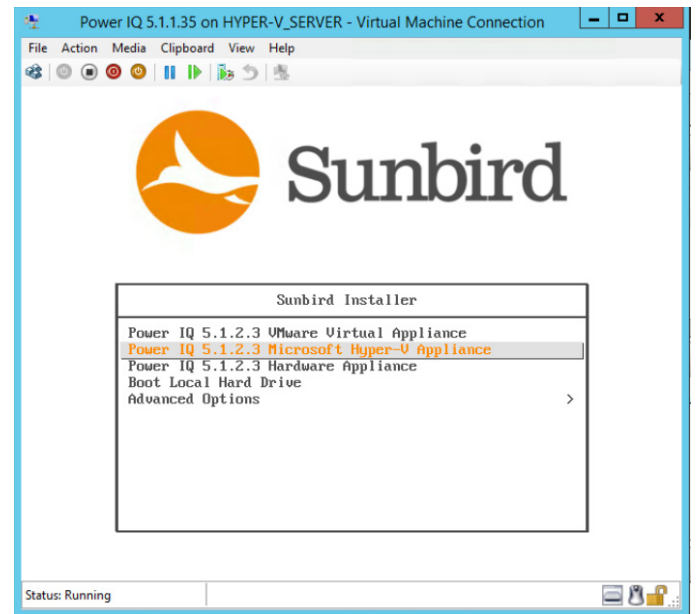
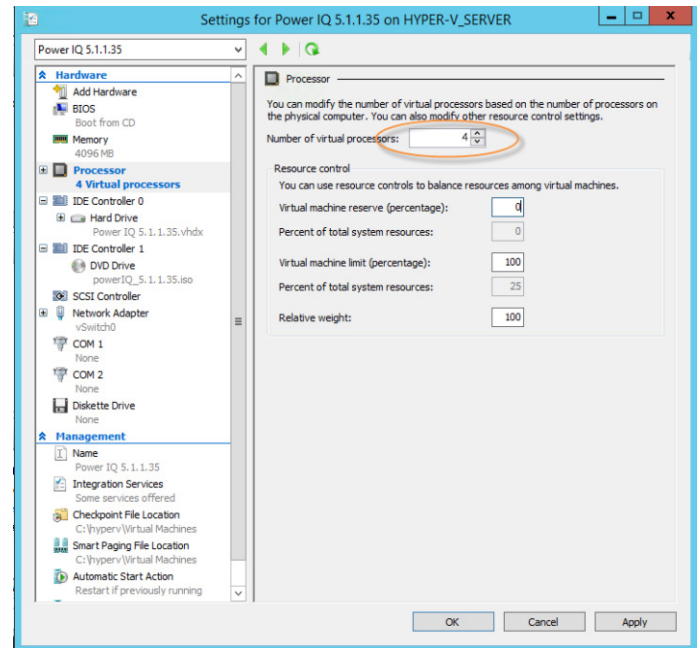
15. Under Network Adapter, specify the network adapter configuration. Note: Running Hyper-V on Microsoft Windows Server 2012 or Windows Server 2012 R2 with Broadcom NetXtreme 1-gigabit network adapters may result in loss of network connectivity and/or unusually slow performance. See Microsoft's knowledgebase for more information on troubleshooting this issue.

16. Click Apply and then OK.

17. In Hyper-V Manager, right-click the name of the virtual machine and click Connect. The Virtual Machine Connection tool launches.

18. From the Action menu in the Virtual Machine Connection window, click Start to power on your virtual machine. The installation package loads. Proceed with the installation.

Congratulations! You have successfully installed Power IQ.



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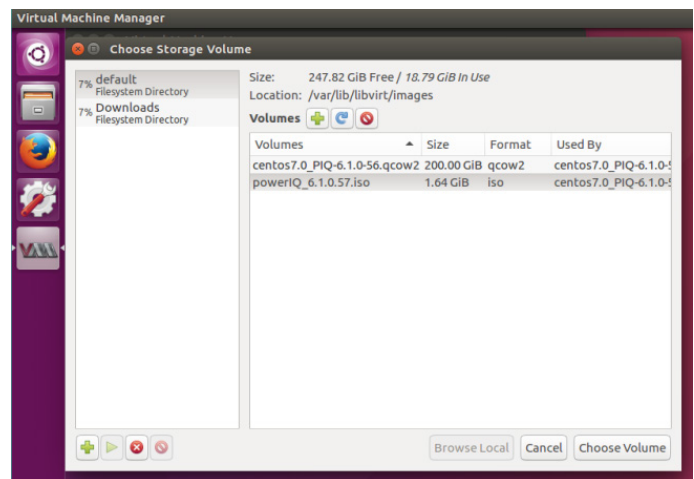
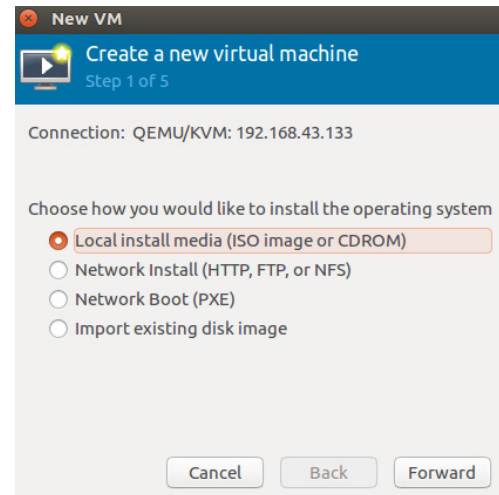
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Power IQ Linux KVM Installation Instructions

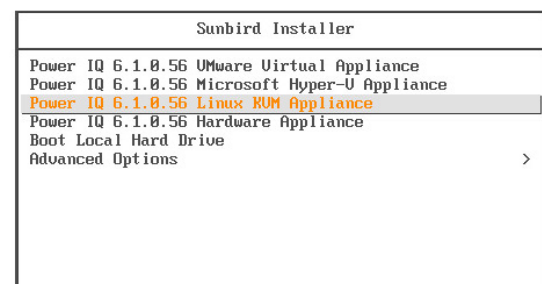
Note: The following steps are provided as an example of a virtual machine installation using a Linux kernel-based virtual machine (KVM). Your instructions may differ depending on your KVM management tool.

1. Open Virtual Machine Manager.
2. Click the Create a New Virtual Machine icon. Virtual Machine Manager will walk you through a wizard to create a new virtual machine.
3. In Step 1, make your selection for how you would like to install the OS based on where you have saved the Power IQ ISO file. For the purposes of this example, we've selected Local install media (ISO image or CDROM). Click the Forward button.
4. In Step 2, select your boot media. Click the Browse button. Select the Power IQ ISO file in the Choose Storage Volume dialog by either double-clicking the file or selecting the ISO file and clicking the Choose Volume button.
5. Back on Step 2 of the wizard, select Linux as the OS type. The version should be the highest CentOS 6.x version supported. Click the Forward button.
6. In Step 3, specify your memory and CPU settings. For this example, we set the RAM to 4096 MB and the CPUs to 4. Click the Forward button.
7. In Step 4 of the wizard, specify the storage for your virtual machine. Sunbird recommends 160 GB or more for Power IQ. The Enable storage for this virtual machine box should be checked. Click the Forward button.
8. In Step 5, name your virtual machine and select the network of your choice. This example uses the default options.
9. Click the Finish button to complete the wizard and create the virtual machine.
10. Select to install Power IQ on the Linux KVM appliance. Run Power IQ on the virtual machine.

Congratulations! You have successfully installed Power IQ.

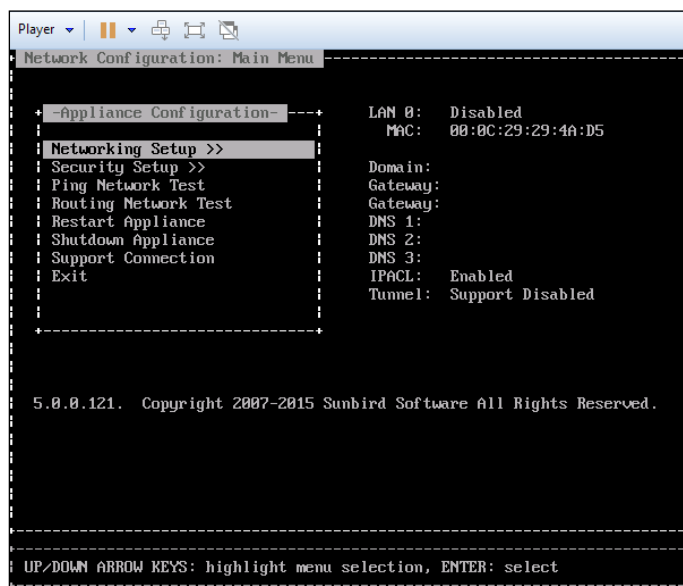


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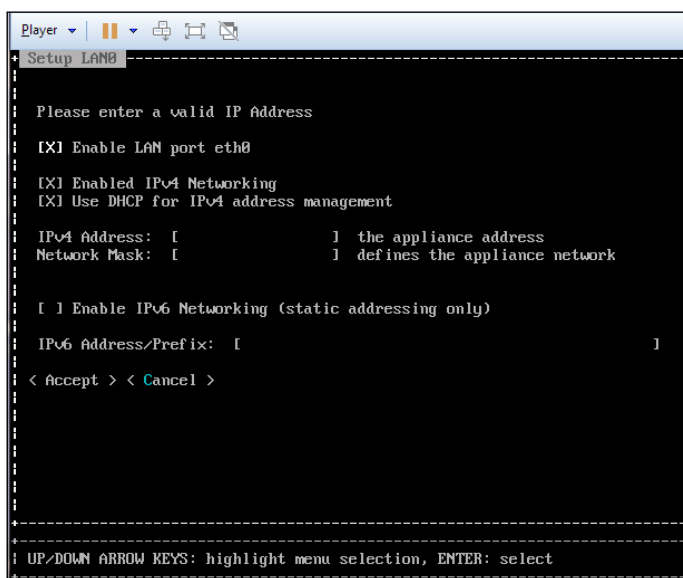


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2. After logging in, you should see a configuration screen display. Highlight Networking Setup and hit enter.



4. Configure your Ethernet port, accept, and return to the Main Menu, and then exit the configuration setup.



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Getting Started in Power IQ

1. Open a web browser and enter the IP address for the hostname assigned to Power IQ. Click Add under Licenses.

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Licenses

[Add](#) [Remove](#)

Feature	Type	Count	Licensee
---------	------	-------	----------

Page 1 of 1 No licenses found

Licensing Summary

Customer Name

Installed License Units

Remaining License Units

[Continue](#)

2. Click Browse to find the location where you had saved the license file, then click Add. Then click Continue.

License File: RAR_PWIQ5FL_W7rYAAT_13JAN10_1206 (2) [Browse...](#)

[Cancel](#) [Add](#)

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Licenses

[Add](#) [Remove](#)

Feature	Type	Count	Licensee
Power IQ	Initial License	5	Raritan (for Evaluation)

Page 1 of 1 Displaying Licenses 1-1 of 1

Licensing Summary

Customer Name
Raritan (for Evaluation)

Installed License Units
5

Remaining License Units
5

[Continue](#)

3. Next you will encounter an End User License agreement. After carefully reviewing it, scroll down to click I Agree and then Continue.

4. You will then be prompted to login. Use the default username **admin** and password **sunbird**.

Unauthorized Access Warning

Access to this computer is prohibited unless authorized.
Accessing programs or data unrelated to your job is prohibited.

User name

Password

[Log in](#)

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5. Upon logging in, you will be brought to a blank default Dashboard screen.

Before you see any data, you will need to add devices to the database. Refer to the Power IQ online help (accessible in the GUI under Help > Help) for more information.

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admin | Logoff | Help ▾ | en-US

quick search

Dashboards | Data Centers | Events | Facility Items | IT Devices | PUE | Analytics | Reports | Settings

Rack A1 Outlets | Google Dashboard | **Example Dashboard**

Manage Dashboards | Add or Edit Widgets

Click the add button at right to get started. →

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6. Power IQ automatically uses the system clock to time-stamp events and data records. To customize time, language, and locale settings, click the Settings tab > Application Settings.

[admin](#) | [Logout](#) | [Help](#) ▾ | [en-US](#)

quick search

Dashboards
Data Centers
Events
Facility Items
IT Devices
PUE
Analytics
Reports
Settings

Display Settings

Facility Item Labels:
☒ Show Facility Item IP Address
☐ Show Facility Item Name

☒ Allow user-created HTML widgets on the dashboard
HTML widgets are useful, but they may have potential security implications.

☐ Show a custom uploaded logo
Logos must not exceed 150 pixels wide, 48 pixels high, or 512 KB in size.

Time Settings

Current device time: 01/21/18 05:18:05 PM EST

Time zone:

(GMT-05:00) Eastern Time (US & Cana ▾

Set time manually:

YYYY/MM/DD
HH:MM:SS

Language and Locale Settings

Default Language:

en-US ▾

Temperature Unit:

Fahrenheit ▾

Currency Symbol:

\$ ▾

Phase Labels:

L1,L2,L3 ▾

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7. From the Settings tab, click on Power IQ Settings in the Appliance Administration panel. Here you may modify PDU polling intervals, power control, and event notifications.

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Dashboards Data Centers Events Facility Items IT Devices PUE Analytics Reports **Settings**

Power Control Settings

There is an [active task](#) that must be deactivated or deleted before power control settings can be changed.

☒ Enable power control
☐ Require reason message for power control operations
☒ Allow ad hoc power control for rooms, aisles, rows, and racks
☒ Allow scheduled power control

Cancel Save Power Control Settings

Event Notification Settings

☒ Enable e-mail delivery of event notifications
☐ Enable HTTP delivery of event notifications

Endpoint:
 Username:
 Password:
 Confirm Password:

Cancel Save Event Notification Settings

SNMP Trap Settings

Use SNMP trap settings to configure event-based trap filtering, trap fuse parameters, and event-based trap forwarding filters.

[SNMP trap settings](#)

Data Poller Settings

Default SNMP version: 1/2c
 Data polling interval: 15 minutes

☒ Store raw readings in CSV files on disk
 Only enable this setting if you require access to raw readings in CSV format. Since this can slow down the poller and consume a lot of disk space, refer to the [Power IQ Data Storage Configurator](#) to make sure your system can handle it.

☐ Enable buffered data retrieval on Raritan PDUs
 Sample interval: 30 seconds

Default Estimated Voltages for PDUs

Single-phase PDUs: 120
 Three-phase PDU inlet voltage: 0
 Three-phase PDU outlet voltage: 0

Cancel Save Poller Settings

Health Poller Settings

☐ Enable Health Poller
 Health Poller uses ICMP Ping.

Health polling interval: 15 minutes

Cancel Save Poller Settings

8. In the Polling Settings box, select a time period from the Polling interval dropdown list to specify how much time passes before Power IQ starts a new polling cycle. Click Save Poller Settings when done.

Note: Whenever making any changes under the Settings tab, always make sure to save the changes within the given panel (e.g. If you choose to enable Power Control, be sure to click Save Power Control Settings. Otherwise your changes will NOT be saved.).

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9. Return to the Settings page and select Server Settings to set up SMTP settings, log files, and proxies.

10. Once your SMTP server settings have been set, you are ready to add filters for event notifications. In the upper right corner of the main Power IQ screen, click on your user name (the link is next to the word Logoff). Click Manage Event Notifications to specify which message event notifications should be sent.

[Add a filter](#)

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Creating an Enterprise Data Model (EDM)

Under the Settings tab, click on Enterprise Relationships in the Data Management section. Click on Generate Default Enterprise Relationship under the CSV Data Mapping Actions section.

Upon successful generation, you will get the following screen and your setup will be complete.

Summary of Enterprise Mappings

237 Total PDUs	222 Mapped PDUs	3 Data Centers	13 Rows
2914 Total Outlets	1502 Mapped Outlets	1 Floor	125 Racks
290 Total Sensors	393 Mapped Sensors	5 Rooms	1571 IT Devices
6 Total Card Readers	0 Mapped Card Readers	4 Aisles	4 Doors

CSV Data Mapping Actions

Import EDM relationships from a CSV file:

[Generate Default Enterprise Relationships](#)
Create a generic enterprise relationship mapping to allow immediate use of graphing functionality.

[Export Relationships](#)
Export the enterprise relationships to a CSV file. This file can be used for editing and re-import or for backup.

[Clear Enterprise Relationships](#)
Delete all Data Centers, Floors, Rooms, Aisles, Rows, Racks, and IT Devices.

[Browse IT Devices](#)
Browse the list of IT Devices.

Enterprise Data Generation Success

The generation has completed successfully. This page will give a quick description of the changes to the system.

Detailed Results

- 0 existing Outlets were updated during data generation.
- 0 existing Sensors were updated during data generation.
- 0 existing PDUs were updated during data generation.
- 0 new IT Devices were added during data generation.
- 0 new Racks were added during data generation.
- 1 new Data Center was added during data generation.
- 0 existing Data Centers were updated during data generation.

Return

[Back to Enterprise Relationships](#)
Organize enterprise relationships using CSV files

Thank you for downloading Sunbird's Power IQ DCIM Monitoring Software. Now that you have the software installed, take a look at our step-by-step test drive instructions, which highlight some of the key features of the software.

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