Power IQ

Quick Setup Guide for VMware ESX or ESXi

Thank you for your purchase of Raritan's Power IQ. This Quick Setup Guide explains how to install and configure the Power IQ.

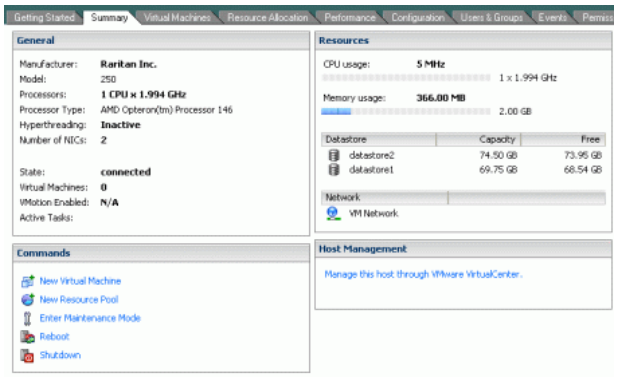
For additional information on any aspect of the Power IQ, see the accompanying Power IQ User Guide, which can be downloaded from the Firmware and Documentation section (http://www.raritan.com/support/firmware-and-documentation/) of Raritan's website.

Installing the Power IQ Application

Uploading the Power IQ Image to the VMware Host

Move the ISO file on the DVD to the server running VMware ESX or VMware ESXi.

1. Insert the DVD into the client computer and verify the DVD contains the Power IQ ISO file.
2. Connect to the host computer using VMware Infrastructure Client. You must log in as a user that has permission to create, start, and stop virtual machines.



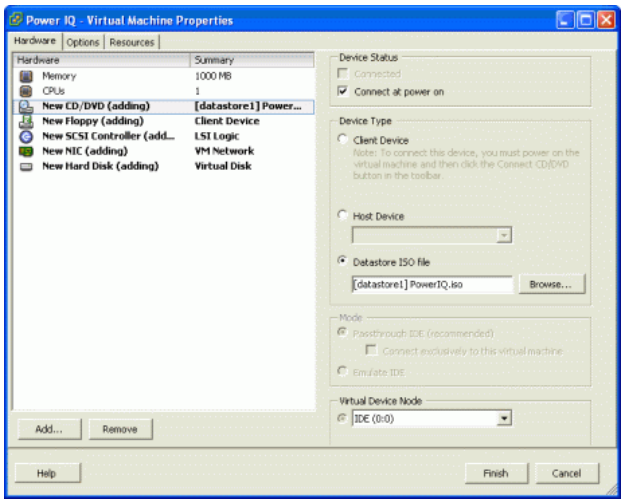
3. Click the Summary tab. In the Resources pane, verify the datastore has 80GB free for a new virtual machine and 1GB free for the Power IQ installation ISO file.
4. In the resource window, double click the datastore icon where you want to store the Power IQ installation ISO file. The Datastore Browser opens.
5. In the Datastore Browser, click the upload tool and choose Upload File.
6. In the dialog that appears, navigate to and select the Power IQ ISO file. The Power IQ ISO file appears in the Datastore Browser when the file upload completes.

Creating the Power IQ Virtual Machine

1. In the Command pane of the Summary tab, click New Virtual Machine.
2. Choose Custom in the New Virtual Machine wizard.
3. Enter a name for the virtual machine.
4. Choose a Datastore with at least 80GB of free space available.
5. Select Linux for the Guest Operating system, then select Other Linux (32-bit) from the Version drop-down list.
6. Adjust the amount of memory allocated for the virtual machine, using the specifications on the DVD box as a guideline for your license size.
7. Set the number of network adapters to one or two. If there are two network adapters, one can be used for external access to the Web interface and the other can be used as a private LAN for communication with the PDUs and other data center devices.

   In either case, make sure the Connect at Power On is checked, and leave all other settings at default.
8. Select LSI Logic for the Storage Adapter Types.
9. When prompted to select a disk, select Create Virtual Disk.
10. Set the Disk Capacity between 80GB and 160GB and select Store with the virtual machine.

11. Leave all advanced options at default. On the Ready to Complete screen, check Edit Virtual Machine Settings and click Continue.



12. In the Virtual Machine Properties window, assign the NEW CD/DVD player to the Power IQ ISO file you copied earlier.
    a. Select the New CD/DVD (adding) item in the Hardware window.
    b. Check Connect at power on under the Device Status pane.
    c. In the Device Type pane, select Datastore ISO file.
    d. Click Browse, and select the Power IQ ISO file from the Datastore.
13. Click Finish.

Loading Power IQ onto the Virtual Machine

1. In the left tree pane, select the Power IQ Virtual Machine.
2. Select the Console tab.
3. Click  to power up the virtual machine. After a few moments, the Power IQ kickstart page opens.
4. Type *2* for a VMware installation and press Enter to begin installation.
5. Installation takes 20 minutes. When it completes, press Enter to reboot the Power IQ virtual machine.
6. The virtual machine reboots and displays a console prompt.

Initial Configuration of Power IQ

After installing the Power IQ, you must configure the system for access over the network.

1. Power on Power IQ.
2. When prompted to log in, use the username: *config* and the password: *raritan*. The Power IQ configuration page opens.

3. Select Networking Setup, then select Setup LAN 1 to configure the primary Ethernet port.
4. Press the Space bar to select Enable this LAN Port.
5. To manually assign the network settings to Power IQ, leave Use DHCP deselected. Type the IP address, network masks, and gateway into the appropriate fields.
6. Select Accept to reset the network interface with the new values.
7. If you are using a second network interface, select Setup LAN 2 from the Network Configuration menu and configure the secondary Ethernet port in the same manner as the first. **Optional.**
8. Select Ping Network Test to ensure that Power IQ can communicate over the network. **Optional.**
9. To disable SSH remote access to Power IQ, select System Services. Then deselect Enable SSH. By default, the config account has access to Power IQ. SSH is re-enabled if a support connection is created. **Optional.**
10. Select Exit from the main menu. You can now access Power IQ from any client on the network.

Connecting to Power IQ

Connect to Power IQ using a web browser on any machine on the network.

1. Open a web browser from a computer on the network.
2. In the browser's address bar, enter the IP address you assigned to Power IQ. For example: *http://192.168.1.10*
3. Answer YES to any security alerts and accept all certificates.
4. The Licensing page opens. Click Add, then select your Power IQ license file. If you are using dcTrack, repeat to add the dcTrack license file (Optional). Licenses are .LIC files. Repeat this step to add incremental licenses if needed.

Note: Your license file can be retrieved from the Raritan web site after you have activated your registration. To activate your registration, click the link in the "Thank you

for registering" email from Raritan and create your user account. Once you create your account, look for a "Your Raritan software license key is available" email containing a link to your license file download page.

5. Click Continue.

   If you see error messages AND the Continue button is disabled, contact Raritan Technical Support. There may be a problem with your license file. See Licensing in the Power IQ User Guide for more information.

6. Select YES to the End User License Agreement and click Submit.
7. Log in with the username: *admin* and password: *raritan*.

Configuring the System Clock

Power IQ uses the system clock to time-stamp events and data records. Set the system clock as soon as possible to keep an accurate record of events.

Using an NTP server is recommended to keep the system clock synchronized between Power IQ and the PDUs it manages.

Configuring NTP Server Settings

The Configure Time Servers table list the NTP servers Power IQ contacts to get date and time information. NTP must be turned ON for this to happen.

Power IQ attempts to retrieve the date and time from the first server on the list. If this attempt fails, it proceeds down the list and attempts to contact the second server, and then the third, and so on. Several NTP servers on have already been configured.

To configure the system clock to use an NTP server:

1. Click the Settings tab.
2. Click Time Settings.
3. Select Yes from the NTP Enabled? drop-down list and click Save.
4. Click Manage Time Servers to configure settings for the NTP servers.

To configure NTP server settings:

1. Click Add.
2. Type the time server's IP address in the Time Server field.
3. Click Save Changes.

Configure Polling Intervals

At each polling interval Power IQ collects data from PDUs under its management.

To configure the polling interval:

1. Click the Settings tab.
2. Click Polling Options.
3. Select a time period from the Polling Interval drop-down list. The time period indicates how much time passes before Power IQ starts a new polling cycle
4. Click Save.

Note: When managing a large number of power distribution units you may need to configure a longer time period for the Polling Interval. Setting a longer time period helps ensure that all PDUs are polled within a given cycle. A warning message appears if Power IQ is unable to poll all PDUs within the configured time period.

Gathering Buffered Data

If you plan to manage Dominion PX PDUs, version 1.2.5 or later, Power IQ can gather buffered data from these devices. This allows Power IQ to retrieve many more samples each time it polls a Dominion PX.

See the User Guide for more details.

Adding PDUs to Power IQ Management

Once Power IQ is configured, add Dominion PX or other PDUs to its management. Power IQ can then gather data from these PDUs.

You can also add PDUs to Power IQ by uploading a CSV file containing the information. See ***Adding PDUs in Bulk with CSV Files*** (on page 4).

To add PDUs to Power IQ management:

1. Click the PDUs tab then click Add.
2. Enter the IP address of the PDU.
3. If the PDU is in a daisy-chained configuration or console server configuration, enter the PDU's position number in the chain or serial port number in the Proxy Index field.

   Note: If the PDU is not in this type of configuration, leave the Proxy Index field blank.

4. If the PDU is a Dominion PX, enter a valid Username and Password for the PDU in the Dominion PX Credentials section. Re-enter the password in the Password Confirm field.
5. Select the SNMP Version.
   - For SNMP version 1/2c PDUs, enter an SNMP Community String that has at least READ permissions to this PDU. This enables polling the PDU for data. Enter an SNMP community string that has both READ and WRITE permissions to the PDU to enable power control, outlet renaming, and buffered data retrieval.
   - For SNMP version 3 PDUs, enter the Username and select an Authorization Level. The authorization levels are:
     - noAuthNoPriv - No Authentication Passkey, No Encoding Passkey
     - authNoPriv - Authentication Passkey, No Encoding Passkey

- authPriv - Authentication Passkey, Encoding Passkey

a. Depending on the Authorization Level selected, you must enter additional credentials for Authorization and Privacy.
b. Authorization Protocol: Select MD5 or SHA.
c. Enter the PDU's Authorization Passkey, then re-enter the passkey in the Authorization Passkey Confirm field.
d. Privacy Protocol: Select DES or AES.
e. Enter the PDU's Privacy Passkey, then re-enter the passkey in the Privacy Passkey Confirm field.

Note: You must enable the SNMP agent on all PDUs added to Power IQ.

6. Select "Wait for discovery to complete before proceeding" to view the discovery process status as you add this PDU. **Optional.**
7. Click Add.

Note: PDU discovery is complete once the PDU model type is determined. SNMP fields such as contact or location values are not determined until this device is polled for the first time.

Once added, the PDU appears in the PDU list. Power IQ begins polling the PDU for sensor data. You can configure how often Power IQ polls PDU. See ***Configure Polling Intervals*** (on page 3).

Adding PDUs in Bulk with CSV Files

You can add PDUs in bulk by uploading a CSV file.

Importing more than 100 PDUs at a time causes polling to suspend while the import is in progress.

You can download a step-by-step CSV template file in the Support section of Raritan's website, under Firmware and Documentation. See http://www.raritan.com/support/power-iq/.

▶ To add PDUs in bulk with CSV files:

1. Click the PDUs tab.
2. Click Import PDUs from CSV file. The Import PDUs page opens.
3. Click Browse and select the CSV file.
4. Select "Wait for discovery to complete before proceeding" to view the discovery progress and the resulting status. **Optional.**
5. Click Begin Import.

What to Do Next

After adding PDUs to Power IQ management, you may want to perform additional activities.

- Perform bulk PDU configuration, if you have deployed several Dominion PX PDUs of the same model type.
- Configure security settings such as web user session timeouts and IP-based access control.
- Change the administrator password.
- Add users.
- Configure an Enterprise Data Model, mapping PDUs and outlets to the IT equipment they power.
- Create reports and charts of your power usage.

See the Power IQ User Guide for detailed instructions.

Additional Information

For more information about the Power IQ and the entire Raritan product line, see Raritan's website (www.raritan.com). For technical issues, contact Raritan Technical Support. See the Contact Support page in the Support section on Raritan's website for technical support contact information worldwide.