



How to Rapidly Configure Intelligent Rack PDUs

USB Configuration is Quick, Easy, and Scalable

Most of Raritan's PX [intelligent PDU](#) models can be configured via USB. By using one or more USB Flash drives, a single user can configure hundreds of rack mount power strips in a couple of hours. This method can be used to set IP address, change time settings, set a unique name, turn on SNMP, and much more. How does it work?



All Raritan power strips whose part number begins with the prefix "PX2" or "PX3" will react to a correctly-formatted USB flash drive by:

- Verifying the USB flash drive carries appropriate administrative privileges;
- Reconfiguring itself with global settings found on the USB flash drive;
- Applying individual settings found on the USB flash drive [unique IP address, unique name, etc.] by referencing its own serial number on a user-supplied list;

This entire process takes place in about 20 seconds.

In a typical data center configuration, simply purchase as many USB flash drives as you have power strips in a row of cabinets. Copy the desired settings onto your USB flash drives, and insert them into every power strip in a row. By the time you return to the first cabinet, it will already be done configuring itself—and you can simply remove them all and move on to the next row.

Using such a methodology, approximately 500 power strips can be completely configured (including unique settings on each power strip) for access over the network in about two hours.

TECHNICAL DETAILS

Files Found on the USB Flash Drive—all are plain text

- fwupdate.cfg - the first file that the power strip references. It **MUST** be named fwupdate.cfg (the rest of the names below are suggestions per the example syntax). This tells the power strip what to do.
- config.txt - list of **COMMON** settings to place on every power strip.
- devicelist.csv - comma-separated list of all power strips, by serial number, indicating the **UNIQUE** settings to place on each power strip.
- log.txt - file where the power strip will indicate errors (if they occur).

IMPORTANT NOTE: IF YOU ATTEMPT TO USE ANY OF THE BELOW EXAMPLES, DELETE ALL ANNOTATIONS FIRST. THEY ARE NOT PART OF THE SYNTAX

fwupdate.cfg - example syntax with annotations.

```
// I know the administrative username + password of the power strip
```

```
// So you can trust me and do whatever this USB flash drive says to do
```

```
user=admin
```

```
password=Raritan
```

```
// If anything goes wrong in this process, please indicate in a log file.
```

```
logfile=log.txt
```

```
// Please look at this list of settings and apply all of them on every power strip.
```

```
config=config.txt
```

```
// Please look at this list individual power strips by serial number,
```

```
// and apply individual/unique settings as indicated in the list.
```

```
device_list=devicelist.csv
```

```
// In the list of individual power strips, look for your own serial
```

```
// number in the 1st column... that is how you know what unique settings to apply
```

```
match=serial:1
```

```
config.txt - example syntax with annotations.
```

```
// Give each power strip a unique name.
```

```
// These names can be found on the 2nd column of the separate device list file.
```

TECHNICAL DETAILS Cont'd

pdu.name=\${2}

// Turn on the network port, use static IP addressing, with a /24 mask

network.interface=eth0

network.ip_auto_config_proto=static

network.static.netmask=255.255.255.0

// Set the IP address and Subnet (Gateway) for each power strip differently.

// Unique IP address / gateway list is found on the 3rd and 4th columns of the device list file.

network.static.ipaddr=\${3}

network.static.gateway=\${4}

// Turn on NTP. This is my GMT time offset [below = California]

time.tz_id=6

time.proto._c_=ntp

time.proto.ntp.server_1=192.168.117.1

time.proto.ntp.server_2=192.168.117.2

// Turn on DNS.

network.static.dns_ip_1=17.254.0.50

network.static.dns_ip_2=17.254.0.59

// Turn on SNMPv2 and change from default community strings to my own unique shared passphrase

snmp.agent_enabled=1

snmp.v12c_enabled=1

snmp.v3_enabled=0

snmp.read_community=mySecurePassphrase1234

snmp.write_community=anotherSecurePassphrase5678

// Don't force the admin user to change her password at first login

users[0].needPasswordChange=0

// Don't force users to change their passwords every 30 days

TECHNICAL DETAILS Cont'd

security.pw_aging.enabled=0

Please note that there also exists syntax to change the admin username's password from the factory default (admin/raritan) to a password of your choosing. Please contact Raritan technical support for details—and any other syntax. Also, keep in mind that once your power strips come online, making any other mass configuration change is extremely simple (particularly with Raritan's PowerIQ management appliance)

devicelist.csv - example syntax, human-readable

```
SN,Name,StaticIPAddr,SubnetGateway,  
PBE1950682,Rack12-PDU-Aside,192.168.50.120,192.168.50.1,  
PBE1950241,Rack12-PDU-Bside,192.168.50.121,192.168.50.1,  
PBE1950559,Rack13-PDU-Aside,192.168.50.122,192.168.50.1,  
PBE1950385,Rack13-PDU-Bside,192.168.50.123,192.168.50.1,  
PBE1950558,Rack14-PDU-Aside,192.168.50.124,192.168.50.1,  
PBE1950701,Rack14-PDU-Bside,192.168.51.100,192.168.51.1,  
PBE1950168,Rack15-PDU-Aside,192.168.51.101,192.168.51.1,  
PBE1950541,Rack15-PDU-Bside,192.168.51.102,192.168.51.1,  
PBE1950451,Rack16-PDU-Aside,192.168.51.103,192.168.51.1,  
PBE1950117,Rack16-PDU-Bside,192.168.51.104,192.168.51.1,
```

Obviously, these lists are not generated by hand. Instead, use a barcode scanner to scan in serial numbers by rack, and then use Excel macros to generate the other entries according to your needs.

STANDARD DISCLAIMER / OTHER ADVICE

The above is not meant as technical documentation; please review the PX2 or PX3 product documentation for further details, and contact your local Raritan support representative for assistance.

For any material deployment of Raritan intelligent power strips, your local support representative will be happy to work with you—and simply provide you with a config.txt and fwupdate.cfg file that you can use. That is to say, we'll do the hard work for you because it's not actually hard! Just give us a call at 800.724.8090.