Release Notes for Dominion® PX Software Version 1.3.1 (firmware version will be displayed as 01.03.01 in the GUI after an upgrade)
Version: DPX 1.3.1 Release Notes, Revision 1.2
Date: March 18, 2009

Effective: Immediately.

Applicability:

> **This firmware release is for ALL PX models EXCEPT the following models:**
>
> **DPXR4X1A-16NP, DPXS20A-16AU-M, and DPX8A-16AU-M.**
>
> **Please do NOT upgrade these models to PX 1.3.1, as it will result in a unit becoming non-functional.**

For customers using CC-SG 4.0, note restrictions below in Known Issues with Release 1.3.1 section below.

IMPORTANT - Upgrade Matrix: - The following upgrade paths MUST be followed, otherwise it can result in a unit that needs to be returned to the factory.
- Single Phase Models running firmware versions 1.0.n:
    - 1.00.nn MUST UPGRADE TO 1.01.nn <u>BEFORE</u> UPGRADING TO 1.02.nn FROM 1.01.nn (where n is a number)
- Single Phase Models running firmware versions 1.01.05/1.01.06:
    - 1.1.5-6724/1.1.6-6889 MUST upgrade to 1.02.0-7173 <u>BEFORE</u> UPGRADING TO 1.3.1-7530
- All Other Models (from-> to)
    - 1.2.1 ->1.3.1-7530
    - 1.2.2 -> 1.3.1-7530

> The upgrade path for customers with these units - **DPXR4X1A-16NP, DPXS20A-16AU-M, and DPX8A-16AU-M** - will be a future release.

Release 1.3.1 MUST not be downgraded to ANY prior PX release.

Release Status: General Availability (GA)

Dominion PX Overview:

Dominion PX refers to Raritan's family of intelligent power distribution units.

Release 1.3.1 contains all enhancements and fixes which are listed below:

A) Support for new hardware models.

B) Reliability fixes for the SSL [18714]

C) Reliability fixes for HTTP/HTTPS using the GUI [18731,18654]

D) When using SNMPv3 it is not possible to access the MIB-II information which includes the system description, system object identifier, location, and contact. [18659]

E) Watts displayed in GUI are in the format xxx.yy. However, any value below 1 watt is below the resolution of the PX. GUI should display Watts & VA without decimal digits. Removed inconsistency between SNMP and local display on Dominion PX. In previous releases, resolution for current was 0.01A. Therefore, minimum Watt value that could be resolved is 1 Watt (0.01A times 100V (Japan) = 1 Watt). Therefore, any attempt to display values less than 1 Watt is meaningless. Beginning with PX1.3.1, this inconsistency has been removed. [17715]

Consult the Dominion PX User Guide for more information on these PX features.

Dominion PX Documentation:

The following user documentation is available for the Dominion PX:

The latest English language User Guide for PX1.3. (PDF format) should be used with this release; it is available from Raritan's website via a hyperlink from the GUI. Note that there is no new User Guide for PX1.3.1, the user guide for in the PX1.2.7 folder is still to be used for PX1.3.1.

Not Supported with the Dominion PX 1.3.1:

KSX G1 does not support the Dominion PX.

PX models **DPXR4X1A-16NP, DPXS20A-16AU-M, and DPX8A-16AU-M** are NOT supported by this release.

Upgrade Matrix (path for upgrades):

Upgrade Matrix: See IMPORTANT note under Upgrade Matrix above BEFORE upgrading firmware on any unit(s).

Dominion PX Release 1.3.1 Compatibility Information:

1. KSX (G1) units do not support the DPX.
2. Upgrade Matrix: See IMPORTANT note under Upgrade Matrix above BEFORE upgrading firmware on any unit.
3. The Google Chrome browser is not supported with this release.[18564]

Important Notes and Information:

A) Enable Javascript in your browser before logging into the unit to start the upgrade process.
B) When the firmware upgrade is complete, check the firmware version on the Home page in the left panel – it should show "Firmware 01.03.01" after the upgrade. This is the displayed designation for the Dominion PX firmware release 1.3.1.
C) When a customer wants to restart or upgrade a PX device from Command Center Secure Gateway (CC-SG) the following steps <u>must</u> be followed for proper operation:
   a. Pause managing the device.
   b. Restart/Upgrade PX.

     c. When PX is fully booted, resume managing the device. [FCR15440, 12777, 12807]

D) Thresholds on some North American and Japanese PX units have to be adjusted to the derated values (maximum) allowed by NEC codes. The User Interface will not allow the user to enter a value more than the system specified limits for critical thresholds. As part of an internal audit, the specified current on some models is being reduced.

If the user has set a threshold value that is greater than the derated value being set by the 1.2.5 upgrade, after upgrading to 1.2.7, the PX will have a threshold value that exceeds the system limit.

For example for DPCR8-15, the max value for threshold will be 15. As part of firmware upgrade to PX 1.2.7, customers need to plan to change this value to 12. If the customer had set the threshold value to any value greater than 12A, prior to the upgrade, then customer would then have threshold above the system limits, and if enabled, an alert, SNMP trap, and syslog event may be generated. [17910]

Known Issues with DPX Release 1.3.1:

1. When adding a PX running PX1.3.1 firmware to CC-SG 4.0, the user will see a warning that this release is not supported, please ignore and override this message, because the PX1.2 will functions correctly with CC-SG4.0. In a future CC-SG release, this warning message will be removed.

2. When a customer wants to restart or upgrade a PX device from CC-SG the following steps must be followed for proper operation:

     a. Pause managing the device.

     b. Restart/Upgrade PX.

     c. When PX is fully booted, resume managing the device. [FCR15440, 12777, 12807]

3. PX slows down when the SMTP server is not reachable. This is observed when the PX and the SMTP servers are in different subnets. This will be addressed in a future release. [16028]

4. Outlet on/off event is not captured in the event log when the event is generated with an alert with that outlet on/off as destination. [16029]

5. In the outlet alert event, the Outlet names remains as the default (e.g., Outlet 1, Outlet 4) for all outlets, even outlet names are changed. [16090]

6. When the current loading is close to, or smaller than, 0.1A, the Power Factor always shows something (e.g., 0.208), but RMS current shows "0". This issue will be resolved in a future release.

7. When setting thresholds, the real IPMI sensor data is shown for thresholds, so it is possible that some values – 10.0A cannot be set for a threshold, a value of 9.97A may show when the threshold value is set to 10.0A. This is due to the enhanced accuracy encoding used internally in IPMI.

8. Due to significant improvements in PX 1.3.1, you cannot downgrade from Release 1.3.1 to Release 1.2.7, 1.2.5, 1.1, or any other release lower than 1.0.3.

9. Minimum power-on delay displayed by IPMI is greater than one second. The GUI will display and allow values to be less than one second.

10. Unable to uncheck (disable) Eventlog assignments when more than one Eventlog targets are selected. A workaround is to Enable syslog forwarding, uncheck all checkboxes and Apply to save changes. Now you can select/deselect the checkboxes for local event logging. This behavior is not observed for SMTP or NFS logging. This is observed only with Syslog.

11. Only when single the user login restriction is Enabled (which is not the default setting), an attempt to login by a second admin user when one admin user is logged in, may result in the first admin user being logged out. Therefore, it is strongly recommended that the single user limitation not be used in this firmware release (1.3.1); instead, assign users to different groups with appropriate access privileges. This limitation will be removed in a subsequent release.

12. The unit of power factor is still "null". PowerFactor in IPMI is no longer percentage data type, but it says "null" not "ratio". PowerFactor should have a ratio data-type, not a percentage data type in IPMI. This issue is expected to be resolved in a future release. [13667]

13. When terminating the web browser GUI session, the user should logout of the unit using the Logout button, and NOT close the session by clicking on the Close window (X) button on the top right hand corner. When this is not done, then the user session will remain open and appear in the Active Sessions panel until the Inactivity Timer expires. Therefore, it is highly recommended that the inactivity timer be set to a small number of minutes, for example 5-10 minutes. [15986]

14. Outlet details are displayed blank when the current exceeds the upper non-critical thresholds. [16448]

15. Switch (on/off/cycle) traps are not generated when SNMP and Switch outlet on/off/cycle (or SNMP and Current outlet on/off/cycle) have been set as the alert destinations (16936, 16904). This will be fixed in a future release.

16. Switch (on/off/cycle) SMTP emails are not generated when SMTP and Switch outlet on/off/cycle (or SMTP and Current outlet on/off/cycle) have been set as the alert destinations. (16937, 16902). This will be fixed in a future release.

For Raritan PX Customers Only

17. For the DPXR8A-16 unit displays PDU Power Rating value is wrong in web page, it shows 3700VA, it should be 3680VA. This will be fixed in a future release. [18194]

18. The PX1.2.0 firmware is missing 4 models that will impact subsequent upgrade to 1.2.5 for these models: DPXR8-20L, DPXR20A-30L6, and DPXS12-30L, and DPXS12A-20L6. [17906]

    Failure Scenario:

    * Upgrade from 1.2.0 to 1.2.5 or 1.2.7
    * PSOC upgrade will fail.
    * Controller FW upgrade will succeed.
    * User informed that Relay Board upgrade failed.
    * Eric is stopped.

    Recovery Steps:
    * Reset PX by Power Cycle OR the RESET BUTTON.
    * Upgrade from 1.2.5/1.2.7 to 1.2.5/1.2.7.
    * User is informed that upgrade is successful.

19. Using PX build PX-1.0.3.0.1.7393, no entries will be added to a NFS Server new log file if a NFS log file was previously created on the PX. Even though the new log file was mounted successfully no entries will be added to either the old or the new log file. Restart the PX unit and then log file entries will be correctly added to the new file. [18411]

20. When using SNMPv3, stop and start the SNMP service (disable and enable SNMP by Device Settings->SNMP settings page, disable SNMPV3, click apply then again enable SNMPV3 and click apply. After restart he should be able to user SNMPV3), so that any new user(s) added are also able to use SNMP. This is because SNMP is user-based.[18418]

21. The Username and Password cannot be modified for an Outlet Group Device using the modify option (button) on the Outlet Group Device Page. Although a "Device Modified Successfully" message is displayed, the entry in the Access User column for the Outlet Group Device (PX) remains the same. According to PX documentation the Outlet Group Device name and username and password for that Outlet Group Device can be modified. As a workaround, the Outlet Group Device data (Group Device name and username and password) can be deleted and new data entered. [18686]

    NOTE: Navigating away from the Outlet Group Device Page and navigating back does not update Access User column.

22. On Outlet Setup page, Click on "Reset to Default" changes the all the settings on that page to default, but when "Apply" is clicked to apply the changes permanently, error message of "Error: The upper non-critical threshold of sensor RMS Current must be less than the upper critical threshold by at least 0.98 Amps"

appears. Manually entering the threshold with a 1A or greater gap will allow settings to be saved. This will be fixed in a future release.[18719]

23. The outlet rating of DPXR20A-16 is changed from 10A to 12A after upgrading from 1.2.7 to 1.3. This will be fixed in a future release.[18722]

24. An admin user who belongs to the user group with "User/Group Management" privileges also requires "Change Password" privileges to create a new user; without the "Change Password" privilege, the "Password" field and "Create" button are grayed out. The workaround is to ensure that the admin user group has both User Group Management and Change Password privileges before they create users.[18755]

25. SNMP GET to obtain the PX's firmware build number is not currently available via SNMP. [18486]

Release Package Details:

The Release 1.3.1 package for the Dominion PX series has the following components. Note that the binary file is posted as a Zip file under firmware upgrades on Raritan's website, and must be unzipped before it can be installed on the Dominion PX unit:

> "DominionPXReleaseNotes1_3_1v1_2" – this file
> A firmware release (binary):
> **fw-kira-rpc-pdu-raritan_010301-7530.bin**

Firmware Upgrade Pre-requisites:

If you have any questions, or cannot follow the instructions below, please STOP and contact Raritan Technical Support for further instructions. Please read the entire instructions (this document) before proceeding.

General Upgrade Instructions (standalone upgrade from the browser based user interface):

1. Ensure no users are logged in; nor are there any active sessions – besides the current admin session.

2. The user upgrading the PX device must be a member of the default Admin Group to have sufficient administrator-level privileges to update the Dominion PX unit.

3. Five to ten minutes are required for the complete update procedure. The update and subsequent reboot time will vary according to the number of outlets in the unit.

4. Upgrade the Dominion PX unit using a wired network only. Loss of packets/dropouts over a wireless network may result in a failed upgrade.

5. If doing the firmware upgrade over a VPN, ensure that the connection is stable and that no inactivity timeouts have been set.

6. The detailed, step-by-step instructions to perform the upgrade are given below.

7. The software upgrades are written to flash memory, and this takes time to complete. Please do not power-off the unit, or disconnect the Ethernet connection, while the upgrade is going on.

8. **Enable Javascript in your browser.**

9. Save the firmware upgrade file on a local or network accessible directory. Unzip the file and save it in an accessible directory.

10. Should you experience any difficulties with the upgrade, call Raritan Technical Support for assistance.

Step-by-Step Upgrade Instructions:

Unless otherwise instructed, PowerIQ customers should follow instructions that come with PowerIQ to upgrade PX units.

    1. Please ensure that no users are logged into the unit. Note that the upgrade will not interrupt power to the outlets; nor will it change the state of the outlet – outlets that are on will remain on; similarly, outlets that are off will remain off – both during the firmware upgrade and following the (software) reset to load the new firmware into the unit.

    2. In Mozilla Firefox, Internet Explorer (or other supported web browser), type in the IP address of your Dominion PX unit, and wait for the web-based interface to load.

    3. Logon as an administrative user "admin" (or other member of the Admin Group with firmware upgrade privilege enabled).

    4. **Click on the "Unit Reset" command under the "Maintenance" tab. This will free used internal memory, and clear internal debug log files to ensure a smooth upgrade. The delay between a Unit Reset, and a firmware upgrade, should be kept to less than 10 minutes. Failure to follow this instruction may result in an upgrade failure on some units.**

5. When asked to confirm with a "Reset Device" prompt, click on the "Reset" button. Another prompt to "Really reset" will be presented, click on the "Reset" button. Once the device resets – this will take about one (1) minute – and you will be logged out and taken to the Login page. Login again, with your admin username and password. Note that the Reset will NOT change any outlet states – outlets will maintain their previous state; outlets that are ON will remain ON, and outlets that are OFF, will remain OFF.

6. Click on the "Update Firmware" command under the "Maintenance" tab.

7. Browse to locate the **.bin** file containing the update: **fw-kira-rpc-pdu-raritan_010301-nnnn.bin** (Note: this has to be an UNzipped file; nnnn is a 4-digit number).

The full path name might look as in the example below (the file path on your system may differ):
 "**C:\Documents and Settings\user\My Documents\My Downloads\ fw-kira-rpc-pdu-raritan_010300-nnnn.bin**" (where nnnn is a 4-digit number).

Click the "Upload" button.

> The current firmware, and future (after the upgrade) firmware versions, will be displayed. Click the "Upgrade" button **ONCE** to start the upgrade.

8. The firmware upgrade will then proceed:

> a. Other users cannot operate the PX during the upgrade; however, power is NOT interrupted to any outlets.

> b. This upgrade step will take 4-10 minutes, depending on how many outlets are in the unit.

> **DO NOT REBOOT OR POWER CYCLE THE PX DURING THE UPGRADE OR THE REBOOT!**

> c. When the upgrade is completed, the admin user will be logged off.

9. The Dominion PX unit will now reboot and reset, which may take up 1-2 minutes.

10. The user will be taken back to the Login page when the upgrade is completed. IF, and only if, you are not seeing the login page after more than 12 minutes, close ALL web browser sessions, and log back in after the reset completes. (Hint: You may have Javascript disabled; please enable it).

11. When the firmware upgrade is complete, check the firmware version on the Home page in the left panel – it should show "Firmware 01.03.00" after the upgrade.

12. Due to improvements in PX 1.3.1, you cannot downgrade from Release 1.3.1 to any previous release.

13. If you have any questions or issues during the update, call Raritan Technical Support for assistance.

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