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G6

Daisy-Chaining Configuration

Daisy-Chain Overview

In daisy chain mode, up to (6) PDUs of the same SKU number, and on the same Firmware version, can be connected via one IP address. This allows users to gather information and data on all daisy-chained PDUs from the main PDU. The daisy chain functionality reduces network cost for PDUs. For example, a standard network switch used in a data center may contain 24 ports. Without using the daisy chain function, each port would supply a network connection to one PDU. However, if using the daisy chain features, a typical network switch with 24 ports can supply network connections for up to 144 PDUs.

Note: When replacing a Daisy Chained PDU or Accessory, please 'RESTART' the Primary (main) PDU1 controller to re-synchronize the daisy chained PDUs sequence. This action will not disrupt operations (or outlet states) and can be completed remotely via Web GUI, SNMP or CLI or physically by pressing and holding the reset button on the primary controller for 10 seconds (but not more than 15 seconds).

Daisy-Chain Setup

1. After the initial PDU is configured (parent), connect an Ethernet cord from the **PDU Out** port on the configured PDU to the **Ethernet/PDU In** port on the second PDU in the daisy chain line.

2. Repeat step 2, connecting PDUs from the **PDU Out** port to the **Ethernet/PDU In** port for up to 6 PDUs.

   Note: The total length of the Ethernet cords connecting the PDUs must be less than 15m (49 ft.).

3. Go to the Web interface (or management software) to manage and control the PDUs in the daisy chain.

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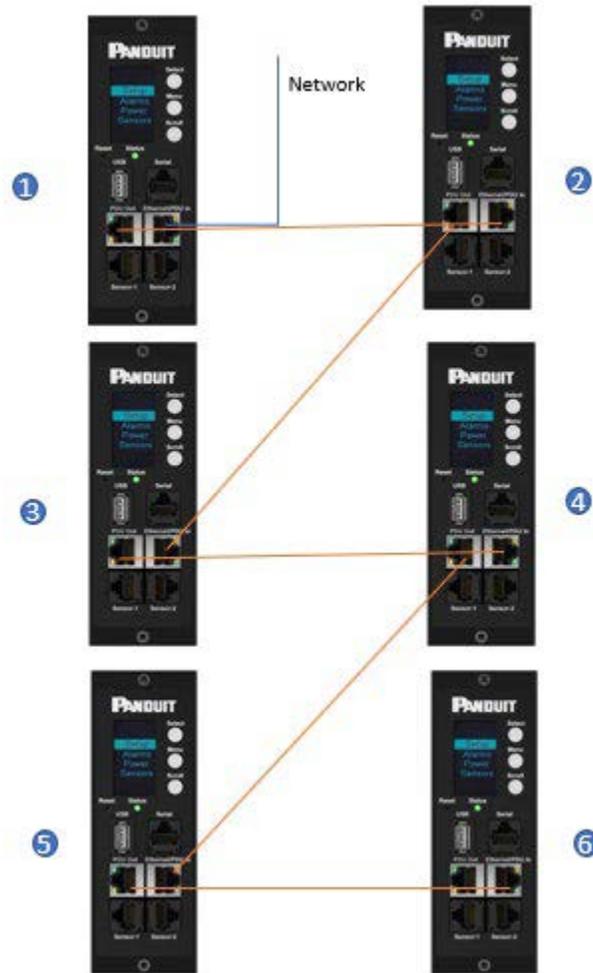
Connection Diagram 6 PDU Daisy Chain

RNA (Redundant Network Access) Functionality

RNA allows secure access of PDU data and statistics on two separate, private networks. RNA must be used with a redundant power delivery design including two rack PDUs for each IT rack. PDUs used in RNA applications must be the same SKU/Part Number. A maximum of (2) PDU can be used in the RNA convention. See the below figure for a connection diagram when deploying RNA.
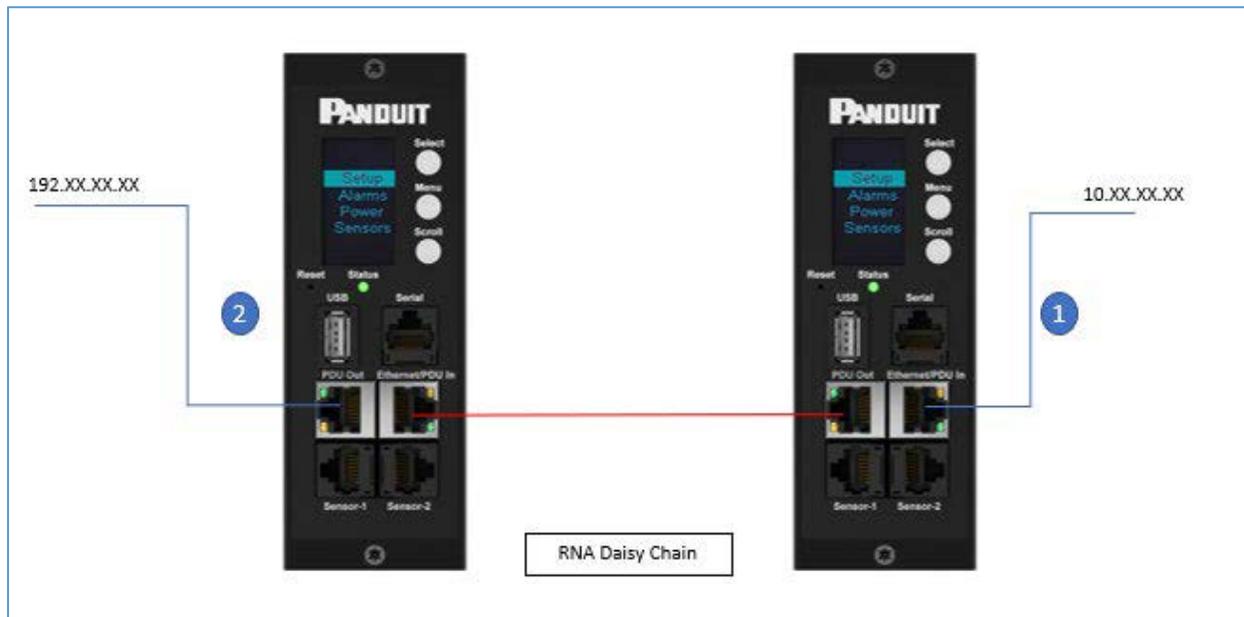
Connection Diagram RNA Daisy Chain

How it works:

- Using RNA, the main and expansion unit maintain two separate private networks that do not overlap.

- RNA works using a redundant power delivery design (two rack PDUs for each IT rack).

- Each PDU is separately connected to the expansion and main unit's private communications network.

- The two PDUs relate to a data communications bus to allow PDUs to share user-defined information.

Each PDU acts like a main PDU to report PDU data to both networks.

RNA Setup

To set up RNA mode on two PDUs, the user must (1) configure the PDUs for RNA Mode (using CLI) and then (2) connect the LAN Network cords and Ethernet cords between PDUs.

To Configure RNA Mode in the CLI

1. Log in to the CLI and enter the command 'dev daisy rna.'

2. The following message will appear:

    • Reboot Required for change to take effort.

    • System Reboot now, Are you sure? (Y/N).

3. Enter **Y** to confirm reboot.

4. After reboot, the PDU will be setup to RNA Mode.

5. Repeat this process for the second PDU.

To Connect the PDUs for RNA Setup

After the PDUs are configured for RNA:

1. Connect an Ethernet cable from the Landlord LAN Network to the Ethernet port of the first PDU. This will have limited access/permissions.

2. Connect an Ethernet cable from the Tenant LAN Network to the Ethernet port of the second PDU. This will have full access to both PDUs.

    a. Connect an Ethernet cable from the **PDU In/Serial** port on first PDU to the **PDU Out** port on the second PDU.

3. Connect another Ethernet cable from the **PDU Out** port on the first PDU to the **PDU In/Serial** port on the second PDU.

4. In RNA mode, the default account username is 'landlord' and password is '12345678'. This account is configured for proper access and control in RNA mode.

5. To enable this account, login to the CLI with admin credentials.

6. Enter the command '**dev daisy rna init**'.

7. The following message will appear to confirm the landlord account is enabled: SUCCESS.

8. RNA is now configured and enabled.

Power Share

Power Share is designed to allow for continual sensor monitoring and electronic rack access if (1) of the (2) power feeds is lost. This feature is available for vertical (0U) PDUs only. However, due to limited available power from the Panduit iPDU Controller, power share was designed and tested under the following conditions:

ACF05 or AC06 Panduit Security Handle, ACF10 (T+D), ACF11 (3T+D).

Care must be taken to not overload the system with accessories as this may cause instability or power share to become unavailable.

The iPDU controller has a maximum output power capacity of 800mA @ 5V = 4 watts. Based on this, DO NOT deploy the Automatic Light Bar (PN: ACD01) when deploying solutions leveraging Power Share.
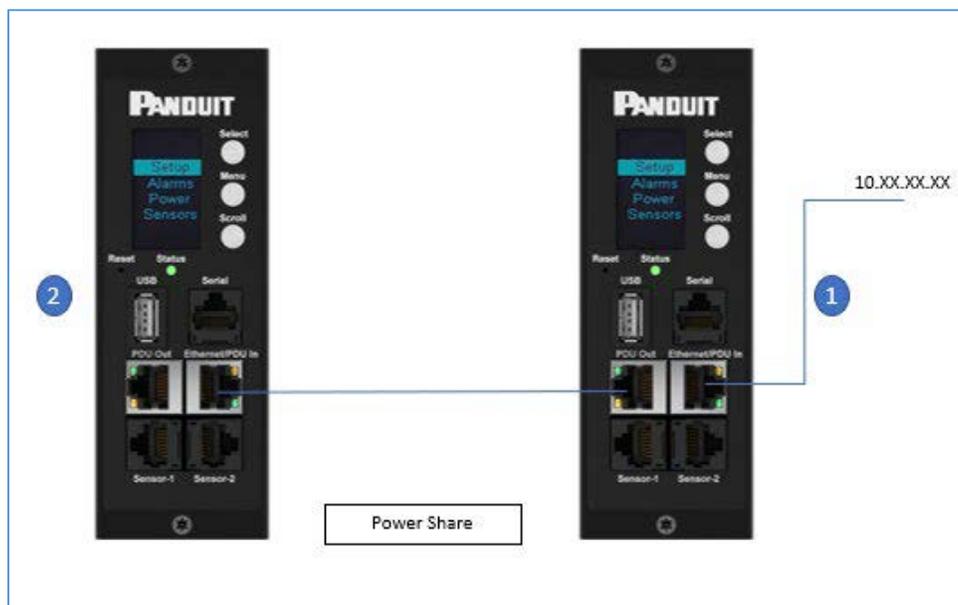
Connection Diagram Power Share & Daisy Chain

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