

How do I maximize uptime using power data from the equipment cabinet?

APPLICATION NOTE PRO2-001 | Oct 2014



Learn how the PRO2™ Switched POPS® series CDU® with PIPS® provides the ultimate in monitoring for the data center equipment cabinet.

Typical Application

As the designer of a large critical-operations data center, I am responsible for providing solutions for maximum uptime and efficiency. I believe that measurement and alerting at all levels of the power chain, especially during fault conditions, is critical to meeting this goal.

For complete efficiency analysis and PUE calculation, I am looking for a cabinet PDU that provides accurate measurements for power of each device in the cabinet. Additionally, I need alerts for high current conditions at the input, which equates to the upstream breaker, and at the internal branch breaker to ensure uptime.

I like the idea of reducing IP addresses by linking a pair of PDUs from redundant power feeds, but I don't want to lose measurements or alerts when the main unit loses power during a fault or maintenance condition.

Our Solution

The Server Technology PRO2 Switched POPS CDU provides amperage measurements at the input, branch, and outlet levels to alert of impending overload through SNMP traps and/or email. PIPS (Per Inlet Power Sensing) and POPS (Per Outlet Power Sensing) technology adds high-accuracy billing-grade measurements of voltage, power, power factor, and energy to be proactive on your power supply management. With multi-level alerting of the various data points, you will remain aware of critical issues in the data center.

Branch Current Thresholds					
Configure branch current hysteresis					
Hysteresis:		<input type="text" value="1.0"/>	A		
Configure branch current thresholds					
ID	Branch Name	Low Alarm	Low Warning	High Warning	High Alarm
AA1	AA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
AA2	AA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
AA3	AA:Branch_3	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
CA1	CA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
CA2	CA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
DA1	DA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
DA2	DA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>		<input type="text" value="All"/> A	<input type="text" value="All"/> A	<input type="text" value="All"/> A	<input type="text" value="All"/> A

Stay informed with PRO2.

Designed with high-availability data access in mind.

The PRO2 series hot-swappable network card is designed to provide measurement and alert data from the “Master” CDU and up to (3) “Link” CDUs even if power to the master fails. Additionally, as seen in the image below, the link units are wired in a star formation so that failure of any link does not affect communication to the others.



Key PRO2 Benefits:

- > Hot-swappable, redundantly-powered network card (from link CDU)
- > Star architecture multi-linking compared to competition’s daisy chain design with single point of failure
- > Branch current measurements and multi-level alerts
- > Shallower enclosure compared to previous generation CDU
- > More alarms and configuration options compared to previous generation CDU

Key Intelligent PDU Benefits:

- > PIPS® and/or POPS® high-accuracy measurements of current, voltage, power, and other key power metrics
- > Environmental measurements through plug-and-play probes (including link CDUs)
- > SNMP traps and email alerts
- > Use SPM (Sentry Power Manager) for data center monitoring



Interested in learning more about how PRO2 can help you manage and distribute power in your data center?

Visit us online at: www.servertech.com/products/



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