# Rack Power Redundancy Monitoring, Reporting, and Alerting

Application Note

## Customer Quotes

- *"Power connectivity... takes into account your building's entire power chain. From the building UPS, up to your rack PDUs, utilizing any available management information those devices will offer up."*

  Tony S., Sr. Information Tech. Analyst

- *"Helps with power management to a granular level."*

  Michael B., Data Center Engineer

- *"The alerting feature informs us right away when devices require immediate attention."*

  Jonh F., Principal Engineer

- *"Practical data center inventory management and power monitoring tool in one. Easy to use with intelligent and clear reporting and helpful dashboards."*

  Greg R., Data Center Senior Analyst

- *"It has helped our facilities staff immensely with monitoring power usage throughout all of our sites."*

  Tanner W., NOC Technician

## The Importance of Data Center Power Redundancy

According to Uptime Institute, 55% of data centers experienced an outage in the past three years and 78% said that their most recent impactful downtime incident was preventable.

Downtime is very expensive due to SLA penalties, labor costs, and equipment replacement. Uptime Institute reports that 54% of significant outages cost more than $100,000 and 16% cost more than $1 million.

Data center professionals struggle to prevent downtime because they don't have enough insight into their complex end-to-end power paths and lack real-time data to proactively detect issues.

However, Sunbird's modern Data Center Infrastructure Management (DCIM) offers capabilities that enable customers to better manage rack redundancy to maintain uptime and mitigate risk.

## How Does Sunbird DCIM Simplify Rack Power Redundancy Monitoring and Reporting?

- Load Shift Detection – Leveraging data from outlet-metered intelligent rack PDUs, a tunable AI copilot detects when the load shifts from one power supply on an IT device to another. This indicates a potential power supply issue that might impact redundancy.
- Cabinet Capacity Failover Report – Simulate a failover scenario to identify at-risk cabinets without impacting your equipment in use. See at a glance which cabinets are in danger of being outside of your redundancy requirements so you won't be caught unaware in case of a power failure.
- Rack PDU Inlet Current Threshold Alert – Set warning and critical thresholds on rack PDU inlet current and receive immediate alerts when thresholds are violated, predicting that you may have lost power redundancy to the rack.
- Rack PDU Breaker State Change Alert – Be the first to know when a rack PDU circuit breaker has tripped to quickly restore the PDU to service and maintain redundancy.
- Cabinet Capacity Threshold Alert – Set warning and critical thresholds on rack power capacity and receive immediate alerts when thresholds are violated, indicating that you may have lost power redundancy to the rack.
- Health Polling Alert – The software polls intelligent rack PDUs or other equipment at user-configurable intervals to ensure that they can be reached on the network. If a rack PDU does not respond, potentially indicating a loss of redundancy, the software immediately notifies you so you can proactively address the issue.
- Power Chain Distribution and Redundancy Analytics Chart – See the impact that a floor PDU going down or performing maintenance on panel will have on your devices to know if they have redundant power.
- Power Chain Breaker Utilization Analytics Chart – Compare the actual power load against the power budget for your UPS banks, floor PDUs, power panels, etc. to see if you are close to tripping a breaker somewhere in the power path and losing redundancy.
- Items Per Connected Power Supplies Analytics Chart – See the number of available power supplies on your devices and how many of them are connected. If not all the power supplies are connected on a device, it may not have redundant power.
- Power Circuit Capacity and Redundancy Rules & Validations – When planning item deployments, the software's built-in validation capability prevents you from creating circuits that will trip a breaker and lose redundancy.
- Intelligent Capacity Search for Redundant Power Supplies – Select server asset templates from our models database that you plan to deploy and the software will provide a list of cabinets with available space, power, cooling, and port capacity where the results match your device's power redundancy requirements.



Sunbird® DCIM that's easy, fast, and complete

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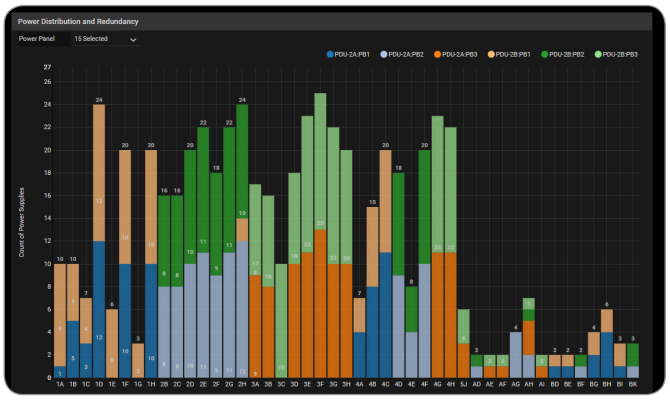
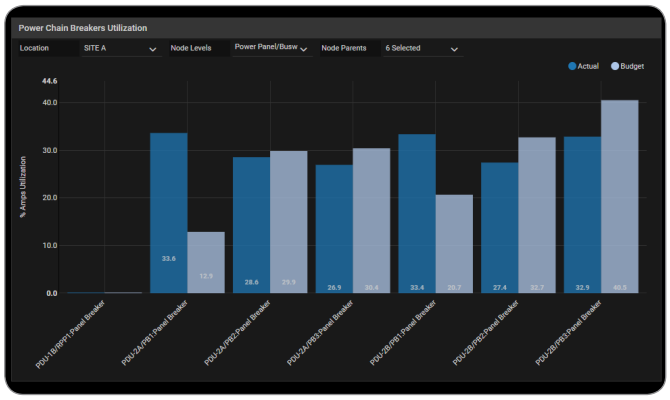
## Power Circuit Distribution and Redundancy Chart

Visualize rack-level power redundancy at a glance with an out-of-the-box dashboard chart that shows how many power supplies in each rack are connected to redundant power panels.




## Power Circuit Breakers Utilization Chart

Compare the measured and budgeted loads of your UPS banks, floor PDUs, power panels, etc. to know if you are at risk of tripping a breaker and if the redundant power path can support the load if a breaker trips.

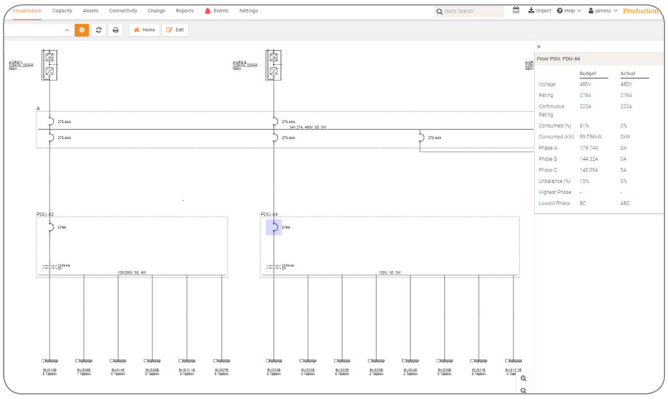



## Items Per Connected Power Supplies Chart

See all your devices grouped by their number of power supplies and easily understand if all are connected, some are connected, or none are connected.


## Real-Time, Dynamic, and Interactive Single-Line Diagram

Visualize your redundant power paths in a single pane of glass with overlaid power capacity and utilization information to facilitate better power planning and faster troubleshooting.



## Call 732.993.4476 or visit **SunbirdDCIM.com**

Sunbird Software is changing the way data centers are being managed. With a focus on real user scenarios for real customer problems, we help data center operators manage tasks and processes faster and more efficiently than ever before, while saving costs and improving availability. We strive to eliminate the complexity they have been forced to accept from point tools and home grown applications, removing the dependency on emails and spreadsheets to transform the delivery of data center services. Sunbird delivers on this commitment with unexpected simplicity through products that are easy to find, buy, deploy, use, and maintain. Our solutions are rooted in our deep connections with our customers who share best practices and participate in our user groups and product development process.

Based in Piscataway, NJ, Sunbird serves over 2,000 DCIM customers worldwide. For more information, please visit SunbirdDCIM.com.



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