Avocent Data Sheet

Eight Reasons IT Should Measure Energy Costs in Data Centers

Calculating energy consumption data can help IT operate a more efficient data center in a variety of ways:

Help the facilities department determine how to charge back power usage to other departments.

If all accounting servers are grouped together in racks, then facilities can determine the percent of the monthly utility bill to charge accounting based on kWh used.

Help IT with capacity planning.

IT can easily decide where to add new servers/racks in a data center. Additional equipment, if plugged in to the wrong location, can cause significant downtime and data loss because of power overloads.

Help decide what activities can be moved to off-peak times when energy is cheaper to purchase.

Since IT can monitor power usage at any time, including off-peak times, IT can pull reports and compare historical data to determine how much power is being consumed during peak versus non-peak times. So, if the report shows that certain racks spike power usage during certain times of the day, IT can investigate why and then move that activity to a time when the price per kWh is cheaper. Major utility companies offer industrial and corporate customers lower rates during non-peak times. IT could also consider moving that activity onto a virtualized server.

Help get a total reading on power usage for the data center and set a maximum threshold of power usage so as to never go over budget.

By setting alerts to know when the threshold is reached or exceeded, a decision can be made to move certain computing activities to non-peak times or virtualized servers.

Help IT keep a balance of power usage for better efficiency.

By identifying hot spots or times when activity spikes (drawing more power), IT can shift equipment or activities for better balance in order to maintain a consistently cool data center (less stress on cooling systems).

Help IT know what electrical infrastructure to build into a backup/disaster recovery site.

The design can be based on real historical data, rather than faceplate ratings or best guess scenarios which result in overbuilding, leading to inefficiencies.

Ensure availability by setting power and environmental related thresholds and alerts.

By getting pre-emptive notifications, IT can take actions before issues happen.

Help IT decide which applications to virtualize.

Applications running on servers that aren't pulling much power aren't being used much, making them good candidates to be virtualized. A server sitting idly can still draw as much as 50% of the power it draws when operational, so applications running on underutilized servers should be first for virtualization consideration.

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