

## Operations Energy Management

A single dashboard view of energy data

### Operations Energy Management

Today's data centers are seeing power usage grow at an alarming rate of nearly 20% per year<sup>1</sup>. A typical data center can use thirty times more energy per square foot than ordinary office space. Electrical energy alone used by data centers can exceed a local power company's ability to deliver it.

CA is creating ways to help our customers approach operations energy management. Utilizing environmental sensors to monitor temperature, humidity, motion, air flow, and more, customers collect energy data. By integrating data from the sensors into CA's Infrastructure Management and Data Center Automation solutions, our customers can better control energy expenditures, reduce their carbon footprint, and help meet regulatory compliance goals.

Each rack in a data center may be capable of holding hundreds of blade servers and dozens of other power consumers. A typical data center now has over 1,000 power-consuming devices. However, in data center operations, you can't manage what you can't measure, so measuring real-time power consumption is essential to achieving energy efficiency. Through the use of inexpensive, easy-to-install, non-disruptive sensors that are integrated with CA's intelligent software, your IT operations staff gets real-time answers to essential power consumption questions such as: Where are the hot spots? Which servers are drawing the most energy and generating the most heat? How does power usage map server capacity usage?

### A Single Dashboard View of Energy Data

CA's approach to operations energy management offers you:

- A hierarchical view of energy usage and cost of operations
- Customizable dashboard displays with alarms
- User-defined thresholds for alarm generation on energy usage and cost
- Real-time and historical data for better optimization
- Reports that can provide valuable information throughout your organization from the CIO to the IT Technician
- Connectivity to ticketing and provisioning systems and other command center consoles
- Carbon footprint data
- Compatibility with most hardware on the market today

The data collected enables you to implement meaningful new displays and dashboards to simplify energy monitoring, management, and reporting while deploying modern automation software to continuously balance workloads and adjust the facility environment.

### Value to Your Business

Understanding the use of energy within both your data center and facilities allows you to take the necessary actions to optimize usage and contribute to your organization's Green initiatives. This includes tracking and measurement of quantifiable cost savings as energy costs change and you adjust your energy demands. You also can monitor and control environmental parameters such as temperature, humidity, air flow, vibration, sound and motion, thereby implementing changes that will impact energy usage.

<sup>1</sup> Koomey/EPA/Department of Energy

## APC and CA Partnership

*CA's recently formed partnership with an industry leader, APC, provides enterprise customers the advantage of a fully integrated solution for assessing and optimizing their data center energy consumption. By working together, CA & APC give enterprise customers the capability to connect physical layer information to the dependent business processes, enabling active energy management and conservation across their data center.*



## The Data Center and Beyond

Whether you are concerned with the ability to accurately cross-charge on a true cost basis or focused on reducing operating costs, the first major step is to detail how energy is consumed. CA's approach to operations energy management is holistic and can extend beyond the data center to include facility and cross-facility monitoring.

### Data Center Monitoring:

- Energy assessment support
- Real-time energy data
- Historical data and trend reports
- Total IT integration
- Custom energy audit
- Post-implementation reporting

### Facility and Cross Facility Monitoring:

- Total building power usage
- Total natural gas and water consumption
- Diesel fuel usage, including from generators
- Building automation systems integration

With this foundational insight you can now focus on overall operations energy consumption, making the most efficient use of costly resources and maximizing operations to their fullest value.

## Start Managing Your Operations Energy Usage Today with CA eHealth® Network Performance Manager (NPM)

CA eHealth Network Performance Manager (CA eHealth NPM) can be extended to manage data center power equipment, HVAC systems, fuel consumption, and other devices, such as the thousands of temperature sensors needed to monitor individual rack temperatures. CA eHealth NPM has a long successful history of managing millions of IT assets worldwide. It proactively pinpoints service degradations to enable corrective action before they affect users and business processes. When used with APC's InfraStruXure Central, the integrated solution will allow for the capture and utilization of data from both IT and non-IT devices, providing dramatic improvements in the ability to monitor and manage the energy consumption of these complex systems.

## The Bottom Line: Instrument & Monitor, Apply Change, Measure, Automate, Repeat!

While results are ultimately tied to the unique requirements of every organization, the CA approach to operations energy management provides the resources to help enterprise data centers reduce energy consumption by up to 50% per year.<sup>2</sup>

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For more information on operations energy management contact us at [CAOP-EN@ca.com](mailto:CAOP-EN@ca.com).

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<sup>2</sup> Savings - Cut cooling costs by 50% or more through warmer conditions and tighter monitoring. Reduce server load by 20% to 80% by improved utilization. Eliminate ghost servers reducing hidden consumption.