

POWER AND COOLING

# SUSTAINING CRITICAL FUNCTIONS

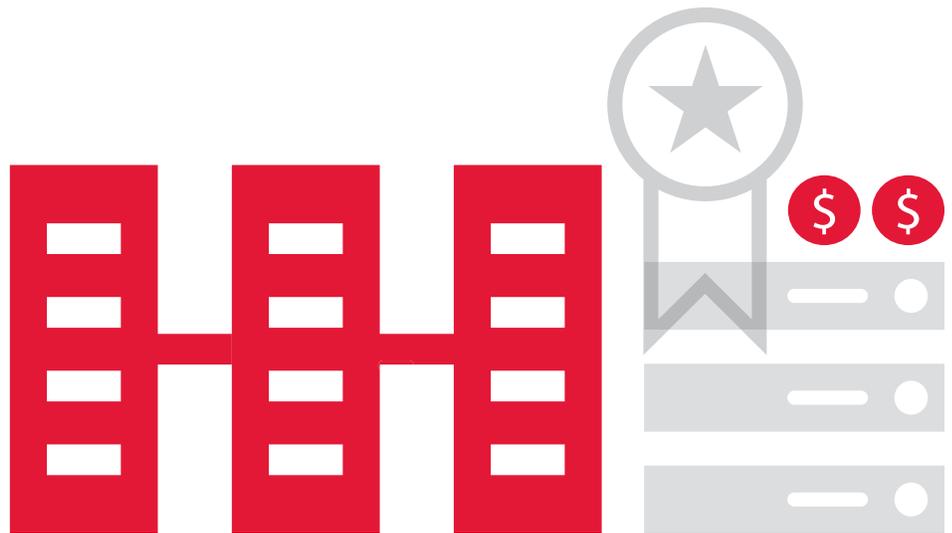


See how we can bring together all of the technology you need to support your evolving infrastructure with a resilient power and cooling solution.



and





## KEEPING YOUR OPERATIONS OPERATIONAL.

As your increasingly consolidated data center runs hotter, you have to balance performance with higher cooling costs and potential downtime. At CDW, we can build a solution that fits your infrastructure and delivers the resiliency you need.

### MEETING SHIFTING DATA CENTER NEEDS

As you converge your infrastructure, its power and cooling needs change dramatically. With a dense, highly utilized environment, you'll see a larger power draw and increased heat output. To minimize the risk of downtime and protect your systems in the event of a disruption, you need a solution that accounts for these demands by:

- + Keeping Power Infrastructure Stable**  
Power being drawn by your equipment needs to be stable and free from surges. Plus, it must be distributed efficiently so no equipment is strained. Unstable and unprotected power distribution can create slowed server response and, worse, irreversible damage.
- + Maintaining Proper Cooling**  
You need to provide enough cooling to your servers to maintain performance levels while trying to keep cooling costs low. Failure to properly cool your servers can cause them to overheat and crash, resulting in devastating downtime.
- + Maximizing Visibility**  
Data regarding resource usage, operational status and overall infrastructure health needs to be readily accessible and understandable. Without this information, you may not know that your data center power flows or cooling levels need to be adjusted until it is too late.

**\$8,851**  
per minute

On average, data center downtime costs nearly \$9,000 per minute.<sup>1</sup>

**40%**

of a data center's energy consumption goes to cooling.<sup>2</sup>

**18%**▼  
power usage  
effectiveness  
(PUE)

**14%**▼  
overall energy  
consumption

Organizations that improved their thermal conditions reduced PUE by as much as 18% and reduced energy consumption overall by an average of 14%.<sup>3</sup>

## REALIZING RESILIENCY WITH PROPER POWER AND COOLING

To keep your data center running and avoid the hassle and expense of downtime, you need a power and cooling plan that meets your data center's demands. The right approach can protect both your infrastructure and your organization's productivity in the event of an equipment failure, power outage or other disruption. At CDW, we offer validated designs to address the power and cooling needs of leading converged infrastructure solutions. Your power and cooling solution could include:

### Comprehensive Power Solutions

An adaptable power protection and control system can include:



**Uninterruptible power supplies (UPSs)** allow you to rightsize your power flow and adjust it as your needs change. They also serve as temporary battery backup in case of outage.



**Modular power distribution units (PDUs)** simplify configuration and support rapid power distribution network expansion.



**Intelligent power distribution units** combine power distribution with remote monitoring to quickly alert you to any irregularities in power, humidity or temperature.

### Flexible and Powerful Cooling Resources

Your cooling infrastructure should be flexible enough to handle the increasing power and rack density of your current consolidated data center, as well as be scalable for the future.

### Smart Management Software

Having easy access to clear information regarding resource usage, operational status and the overall health of your data center is critical. With the right software, you can strike the perfect balance between data center availability and efficiency.

## HARNESSING EFFICIENCIES AND AVOIDING DOWNTIME

With a comprehensive power and cooling solution, your organization will enjoy many benefits, such as:

### Increased Resiliency

Power and cooling technologies can help you identify potential disruptions, prevent damaging downtime and keep your data center up and running even if disaster strikes.

### Reduced Costs

A plan that maximizes the efficiency of your resource usage can help you reduce the sizable costs of powering and cooling your data center.

### Improved Visibility and Utilization

The management systems deployed as part of the solution can provide insights into operational efficiencies that go beyond power and cooling. You may uncover a need for more dynamic data center equipment or design a better power distribution plan based on usage patterns.

### Maximized Infrastructure Flexibility

The modular nature of a well-designed power and cooling solution will facilitate future scalability as your organization grows.



## PEOPLE WHO GET IT.

At CDW, we'll use our extensive expertise to help you maximize efficiency and resiliency in your data center. We have close partnerships with top power and cooling providers and will bring together the right technology from the right partners to create the right solution for your organization.

Our team includes more than 220 power-certified account managers as well as dedicated power solution architects and expert engineers who are on hand to help you build and implement a power and cooling solution that fits your unique environment.

We also offer EnergySTEP data center assessments with APC that can help provide insight into your power and cooling landscape and identify areas for improvement.

## PARTNERS WHO GET IT



APC® by Schneider Electric Smart-UPS® systems provide protection for electronic equipment from utility power blackouts, brownouts and sags as well as surges, small utility power fluctuations and large disturbances. They also provide battery backup power for connected equipment until utility power returns to safe levels or the batteries are fully discharged.



Tripp Lite will help you maximize the availability, manageability and efficiency of your business. From UPS systems to PDUs to cables and rack solutions, they offer products that enable you to organize and protect your critical equipment.



Eaton's power quality portfolio encompasses a comprehensive offering of power management solutions from a single-source provider. This includes uninterruptible power supplies, DC power solutions, surge protective devices and power distribution units.

## CASE STUDY

### SUPPORTING STATE-OF-THE-ART TECHNOLOGY

See how we helped a community college create a power and cooling solution to support the production studios, soundstage, screening room, gaming labs, web design labs and more in their new Center for Arts and Media.

“Typically, power is not something we worry about, and that's the way it should be.”

#### Casey Moore

Technology Director  
Salt Lake Community College

[CDW.com/slcc](http://CDW.com/slcc)

To learn more about how we can increase power and cooling efficiencies, call 800.800.4239 or visit [CDW.com/power-cooling](http://CDW.com/power-cooling)



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#### SOURCES:

<sup>1</sup>ponemon.org, "2016 Cost of Data Center Outages," January 2016

<sup>2</sup>sciencedirect.com, "Data Center Energy and Cost Saving Evaluation," August 2015

<sup>3</sup>datacenterworld.com, "The ROI of DCIM," August 2013

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