Converged and hyperconverged infrastructure solutions

Manage power your way

Intelligent power management for converged and hyperconverged infrastructure solutions

Powering Business Worldwide

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Unite converged and hyperconverged infrastructures, your way

Converged and hyperconverged infrastructures are compelling architectures for IT organizations. But there is one thing these modern IT models must have to deliver their full potential: an intelligent power management strategy.

IT must always look to consolidate resources and increase efficiency, and converged and hyperconverged infrastructures can deliver on that promise:

- They offer easier management and advanced automation
- They allow customers to focus on their workloads, rather than the components of their infrastructure
- They provide a natural fit for virtualization by facilitating rapid deployment, organizational scalability, and agility.

Despite these benefits, owners and users of converged and hyperconverged infrastructure solutions still face significant risk to their IT infrastructure unless they can support it with a modernized power management infrastructure.

In today's high availability server environments, unplanned power outages or line quality irregularities can have a highly detrimental impact on IT applications. During a recent survey, 37% of IT professionals said they had suffered an unplanned outage in the past 12 months, with 32% saying those outages had lasted more than four hours[1]. The cost of network downtime can average €6,170 per hour for small businesses (1-100 employees), and €66,170 per hour for medium businesses (100-1000 employees), and converged and hyperconverged infrastructures are not immune to its potentially devastating consequences. These include poor business continuity, operational downtime and reputational damage — any of which could be fatal for the organization.

Cost of IT downtime for businesses

Size of business	Small <100 employees	Medium 100-1000 employees	Large >1000 employees
Downtime events / year	1.7	3.5	3.0
Average length of even	2.2 hours	3.4 hours	0.8 hours
Downtime € / hour	€6,170	€66,170	€1,010,390
Downtime € / year	€23,080	€787,390	€2,424,520

With that in mind, organizations need a robust intelligent power management strategy if they want to fully reap the benefits of converged and hyperconverged infrastructure solutions and avoid business continuity risks. A strategy that means the organization can always be confident of efficiency, low costs, and business continuity.

[1]Source: Eaton and Tech Target survey: How "software defined" is redefining the data center

Why power management matters

Powering converged and hyperconverged infrastructures

Power management helps the IT infrastructure deliver its full potential because it delivers the ability to protect data and ensure uptime of IT resources during power problems and environmental events. That's why an intelligent strategy must give you the tools you need to manage power, your way.

How Eaton delivers

Eaton delivers the tools you need with a power management solution that unites efficiency with uptime, demand with capacity, reliability with availability, expertise with innovation, and the needs of today with the opportunities of tomorrow.

The value of intelligent power management

Improved efficiency of IT infrastructure

- Eaton delivers pre-engineered power management reference designs certified by converged and hyper-converged infrastructure vendors. These are easy to choose and install, which means there is no need to spend time and money choosing and managing different components.
- Eaton´s Intelligent Power Manager software delivers the ability to monitor and manage power devices from a virtualization dashboard (a single pane of glass), which allows to save time and increase efficiency.
- Eaton´s modular and compact power devices (UPSs and rack PDUs) as well as power management software are easy to install and use.

Lower costs

- Eaton´s Energy Star qualified high-efficiency UPSs reduces energy consumption and cost.
- Pay-as-you-grow capability of Eaton's modular and scalable UPS makes it possible to choose power solutions that meet current needs without creating over-provisioned capacity or hindering easy expansion in the future.
- Eaton´s intelligent power distribution units ePDU G3 monitor and manage the power consumption of IT equipment with a very high billing accuracy. This means users can quickly determine exactly where energy is being used, ensuring the identification of rogue hardware consuming more energy than it should. Accurate metering also simplifies load balancing and reveals locations with spare power capacity.
- The trend in modern IT systems is to use less cooling but this often means higher temperatures in the rack enclosure. Eaton´s ePDUs work at up to 60º C without derating, so they play their part in reducing the cooling costs for data centers.

Improved business continuity

- Eaton´s Intelligent Power Manager software helps automate business continuity policies in case of power and environmental events. This extends the uptime of IT applications, ensures data integrity and the continuity of the entire business. Eaton's solutions can initiate the following disaster recovery policies:
  - Shutdown of non-critical equipment to extend run time of critical equipment and applications
  - Replication of valuable data
  - Live migration of critical virtual machines (VMs) to a backup site or cloud
  - Graceful shut down of VMs in case of prolonged outage
  - Sequential start-up of IT equipment once power is restored.
- Eaton solutions are also able to expose power and environmental infrastructure state to upper management layers such as cloud management and IT operations management platforms. In doing so, they help ensure business continuity by enabling IT professionals to make informed decisions, to react more quickly and to automate remediation policies.
- Eaton´s power management solutions are tested and validated by leading converged and hyperconverged infrastructure vendors, so IT managers can be sure they are fully compatible with converged and hyperconverged solutions for a reliable data center.

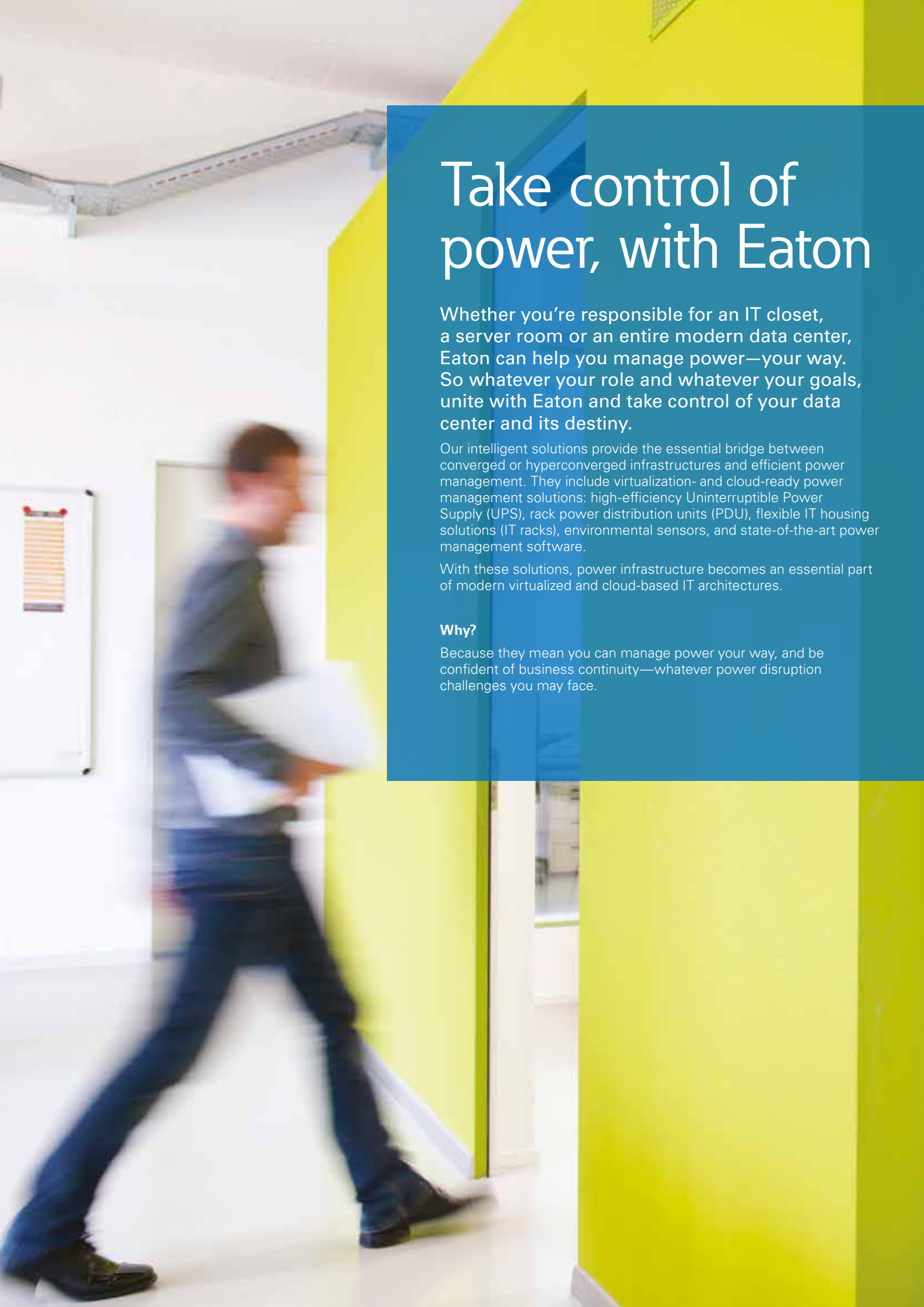
Creating value with intelligent power

Rather than simply selling a series of point products, Eaton intelligent power management unites all the elements of converged and hyperconverged infrastructures with a high efficiency portfolio comprising world class UPS products, IT racks, power distribution, advanced power management, environmental sensors and cable management. Eaton´s pre-engineered reference designs are validated and tested by leading converged and hyperconverged infrastructure solution vendors and are easy to choose and install.

If you're a data facility manager, you can look forward to business benefits including improved business continuity, higher efficiency of your IT functions and lower TCOs.

If you're a data facility engineer, you can easily attach Eaton power management solutions to your converged or hyperconverged infrastructure using pre-engineered reference designs. In addition, you can unite management of power infrastructure with your virtualization platform. So you can manage your entire IT application from a single pane of glass, which will save your valuable time and ensure that disaster recovery policies are triggered in case of power and environmental events—and your business stays alive.

Converged and hyperconverged solutions powered by Eaton



Take control of power, with Eaton

Whether you're responsible for an IT closet, a server room or an entire modern data center, Eaton can help you manage power—your way. So whatever your role and whatever your goals, unite with Eaton and take control of your data center and its destiny.

Our intelligent solutions provide the essential bridge between converged or hyperconverged infrastructures and efficient power management. They include virtualization- and cloud-ready power management solutions: high-efficiency Uninterruptible Power Supply (UPS), rack power distribution units (PDU), flexible IT housing solutions (IT racks), environmental sensors, and state-of-the-art power management software.

With these solutions, power infrastructure becomes an essential part of modern virtualized and cloud-based IT architectures.

Why?

Because they mean you can manage power your way, and be confident of business continuity—whatever power disruption challenges you may face.

Your questions, answered

Q. Why have converged and hyperconverged infrastructures become so significant?

A. IT must always look to consolidate resources and increase efficiency, and these infrastructure models can deliver that promise. They support virtualization and provide IT with a fixed structure for rapid deployment and increased organizational scalability and agility.

Q. What is the importance of power management for these architectures?

A. Effective as these architectures may be, managers and engineers must still be able to answer questions like: "What happens if the power fails? What will I do about it? How can I improve efficiency, reduce costs, and ensure business efficiency?" An intelligent power management solution will provide answers to those questions.

Q. How does Eaton deliver intelligent power management for its customers?

A. Rather than simply selling a series of point products, Eaton unites all the elements of converged and hyperconverged infrastructures with a high efficiency portfolio comprising world class UPS products, IT racks, power distribution, advanced power management, environmental sensors, and professional services. With these pre-engineered reference designs you can manage power—your way.

Q. How do I find out more?

A. Visit **www.eaton.eu/powerquality**

eaton.eu/converged

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