# Eaton guarantees uninterrupted service for Total Cloud

**Location:**
Saint Martin d'Hères, Isère, France

**Challenge:**
Improve energy efficiency and provide an uninterruptible power supply to a data center during its launch phase.

**Solution:**
A 9355 Eaton UPS equipped with Eaton's Intelligent Power Manager (IPM) software. The system is supported by IT racks and aisle containment solutions from Eaton's REC series and features two of Eaton's Managed PDUs per rack unit as well as Eaton´s environmental sensors.

**Results:**
Total Cloud relies on Eaton power management solutions, enabling the company´s data center to operate without interruptions right from the beginning.

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## Background

The French electricity network is subject to frequent disruptions, which can cause various problems in IT installations, including shutdowns, data processing errors or even a total system outage. Total Cloud specializes in data center lifecycle management, and offers services including storage, security, archiving and hosting. In order to streamline the management of its services, and meet the needs of its existing clients, the company decided to build its own data center and centralize everything in one location. The data center has been operational since early 2015.

## Challenges

With its wealth of experience in information technology, Total Cloud was able to rely on its own resources for the initial installation. However, when it came to ensuring the data center had a secure electricity supply, Eaton stood out as the obvious partner. Eaton's comprehensive offering, including IT racks, aisle containment solutions, UPSs, rack PDUs, environmental sensors and power management software, together with the company's ability to respond quickly to Total Cloud's requests, convinced the company to select Eaton's solutions.

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## Solution

Although Total Cloud is considered an SME (small and medium-sized enterprise), it designed its data center to host a large volume of data, which meant that it required very high-performance equipment. When Total Cloud approached Eaton, the commissioning date for the data center was imminent. However, Eaton experts were quick to establish the equipment requirements and, within just a few weeks, offer Total Cloud a comprehensive solution that met its needs on time and on budget.

The new data center covers an area of 200 m² and comprises 76 IT racks. It is laid out with 47U racks from Eaton´s REC series and has a dual feed power supply via two Eaton´s Managed PDUs per rack: 16 A as standard and an optional 32 A. The first PDU is on an uninterruptible power supply circuit, with the second on the mains current circuit, both being supplied by one generating set. Eaton´s environmental sensors (Environmental Monitoring Probe) are installed in racks in order to collect temperature and humidity readings and monitor the environmental data remotely. Total Cloud selected a 9355 Eaton UPS for protection of power supply.

In terms of ventilation, Total Cloud opted for free cooling, which offered the most energy efficient ventilation solution. The data center has raised computer flooring, and hot and cold aisles using Eaton´s REC series aisle containment solutions including aisle ceilings panels and end of row doors.

*"Thanks to the detailed presentation given by the Eaton team, along with the clear and precise documentation they provided when the equipment was installed, we have not had any technical problems at all in terms of performance. As a result, the Eaton solutions have met all our expectations."* Cyril Calmon, Site Administrator, Total Cloud

Eaton's Intelligent Power Manager (IPM) software is used to monitor the system, provide alerts and initiate various failover policies on power and environmental events. These include the shutdown of non-critical equipment, replication of valuable data, live migration of critical virtual machines (VMs) to a backup site or cloud and graceful shut down of VMs in case of prolonged power outages.

Cyril Calmon, Site Administrator at Total Cloud, explained: "We use a full EMC environment, but we have not had any issues with interconnecting the two solutions. In fact, VMware's ESX servers are monitored by Eaton's UPS software and vice versa. This means that if an exceptional power outage occurs and lasts for a particularly long time (over 86 hours), the Eaton UPS will initiate a shutdown of ESX servers, which offers a high level of security for the overall system."

## Results

Since the installation, Total Cloud has been able to completely rely on the Eaton equipment, enabling the company to operate without interruption. Eaton's customer support, from the initial selection and installation phase through to launch, has contributed to the successful operation. As a result, Total Cloud is now working in close cooperation with Eaton on future interfacing with other EMC solutions. In addition, to meet their clients' needs, the company is researching a project to build a second data room in the very near future.

Eaton Managed ePDU

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