



Eaton and Amdocs collaborate to create an efficient data center

Location:

London, UK

Challenge:

Transform Amdocs' existing City of London data center and satellite offices into a modern, purpose-built infrastructure, while adhering to strict timeframes for an 90 day build.

Solution:

Eaton worked alongside Carter Sullivan – the main contractor on the build – to deliver a solution based on Eaton's xEnergy switchgear, Eaton 93PM 120 kVA UPS, battery breakers, transformer, electrical panel components, and cold aisle containment. Eaton also provided a comprehensive service package.

Results:

A fully operational, efficient and future-proofed facility within 90 days, delivering reliable and efficient power to Amdocs' IT infrastructure. This is one of Amdocs' most important data centers in Europe, and will be a benchmark for other sites around the world, and is optimised for further expansion.

“The outstanding efforts of Eaton and Carter Sullivan made it possible to complete the Amdocs data center on schedule and on budget”

Ronnen Perry, Global Technical Manager and Regional Facility Manager at Amdocs

Background

Amdocs' customers have high expectations for the integrity and availability of its data centers. Some of the world's most successful wireless, wireline, broadband, cable and satellite services and mobile financial services providers rely on Amdocs' blend of software and services to power their businesses. Amdocs, which has 25,000 employees and serves customers in over 85 countries, provides a range of technologies that help drive its customers' digital and network transformation, such as cloud, IT modernization and DevOp, and its datacenters which are a critical component of its service.

For many years, Amdocs had been based in the heart of London, in Fetter Lane, within the Square Mile. At the start of 2016, the company made the decision to move to outer London to consolidate its satellite offices into one, purpose-built, modern building. By moving to a new location, Amdocs could reduce many of the overheads they faced with being in central London and running multiple satellite offices, and it could also build a site that would address all its needs for a future-proofed, efficient data center.

Challenge

Amdocs faced a serious timing challenge – although the site had been acquired, and the design and planning completed by Amdocs personnel, the company would need to move out of its current office and it would need the new site to be fully implemented and operational within a short timeframe of just 90 days.

Amdocs put out a tender for bids to find the right supplier for the data center's power infrastructure, with the crucial factor being able to complete the project on time. This was so important to the success of the move that Amdocs needed to be able to completely trust its chosen suppliers to meet the deadline. Amdocs and Eaton have enjoyed a long, successful relationship and the company trusted Eaton above other power management providers to deliver the product.

Eaton responded to the requirement together with its trusted partner Carter Sullivan, who had already developed an excellent relationship with Amdocs as the main contractor on the project. Carter Sullivan specialises in the design, manufacturing and installation of complex UPS systems, high-end data center solutions, and bespoke electrical switchgear products. Working together, the two companies put forward a solution using Eaton switchgear and UPS back-up. At the same time, Carter Sullivan coordinated the fit out of the state of the art air conditioning system throughout the data center.



Powering Business Worldwide

Solution:

Eaton and Carter Sullivan implemented a complete power security solution based on the design provided by the Amdocs team, and built around Eaton's Uninterruptible Power Supply (UPS), switchgear, transformers, and Cold Aisle containment.

Eaton looked at the load that Amdocs predicted it would run in its data center and proposed using its 93PM UPS range – one of the most efficient on the market and quite a simple, straight-forward solution to the Amdocs UPS specification. The 120kW unit is completely aligned with the requirement and the battery system is sized accordingly. The 93PM UPS guarantees power supply for a defined period to critical loads in the event of a power failure. The unit also protects critical loads by filtering out power fluctuations, such as voltage spikes, and providing continuously high quality power.

The design of the 93PM is based on online double conversion technology, which is widely recognized as giving the best possible protection because it guarantees a clean and reliable power supply regardless of the quality of the grid. Energy loss with the 93PM is minimal, compared to traditional double conversion UPS devices, and it can achieve an efficiency rating of 96.7%.

After the initial install of the power quality items, attention turned to how the team could further increase energy efficiency within the data center. Two rows comprising 30 42U server cabinets sat in an open area, and after conducting a survey, Eaton and Carter Sullivan designed and installed the cold aisle containment,

which provides more effective airflow management. This was a completely bespoke design and comprised a set of aisle doors with roof panels.

Mark Anderson, Managing director at Carter Sullivan, said, "Collaboration drove the success of this project. There was a great working relationship between all the companies involved, which meant that the tight timing of the build could be achieved and we could give Amdocs a data center solution that will enable business growth and improve efficiency."

Amdocs also requested isolation transformers in the datacenter, which Eaton provided, to ensure electrical isolation for the system and prevent downstream issues due the building 4-pole main circuit breaker.

In the second phase of the installation, Eaton built the electrical panel, which is future proof. This eliminates the need to interrupt the data center's operation during any future expansion, and incorporates all of Amdocs' requirements for the building infrastructure, IT, generator, and bypass facilities. The panel is based on the Eaton xEnergy LV Switch system, which is designed to meet constantly increasing requirements, providing optimum conditions for building infrastructure up to 5000 A.

Amdocs also chose Eaton's Green Care Service Contract, which provides comprehensive protection through remote monitoring and maintenance and guarantees that Eaton would be onsite within four hours in the case of any events.

Results:

The move was completed within the 90 day timeframe and the modern facility is now operating successfully using the new power management concept. Amdocs will be using this data center set up as a model for the development of its other data center projects around the world.

Ronnen Perry, Global Technical Manager and Regional Facility Manager at Amdocs, said, "I have technical engineering responsibility for Amdocs data centers worldwide and I can honestly say that my experience with this project ranks with the best that I've worked with. The outstanding efforts of Eaton and Carter Sullivan made it possible to complete the Amdocs data center on schedule and on budget."

The data center is delivering cost savings already. It uses Eaton's Variable Module Management System (VMMS), which increases efficiency without compromising reliability. This new Data Center has the lowest PUE in Amdocs world-wide.

Amdocs has recently implemented a second UPS for the B-side of the data center and is looking to roll out this approach in other data centers around the world.

To learn more, visit www.eaton.eu/datacenters



The xEnergy system is designed for increasing future requirements. Its module-based design allows for smart combinations and expansions.



The xEnergy system is designed to meet constantly increasing requirements, providing optimum conditions for building infrastructure.



The Eaton 93PM 120 kW UPS guarantees power supply for a defined period to critical loads in the event of a power failure.

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