



## Eaton's proactive power management transforms network for University of Winchester

**Location:**

Winchester, Hampshire, United Kingdom

**Challenge:**

Urgently replace the University's existing UPS systems to provide more effective monitoring of UPS batteries and enable the University to move to a virtualised environment.

**Solution:**

Fifty 5PX UPS and two 9SX UPS units to support network applications in student villages and a 93PM UPS in the central data centre. All UPSs feature Eaton's Advanced Battery Management (ABM) technology to extend the service life of UPS batteries. Virtualization-ready Intelligent Power Management software helps monitor and manage power devices in the virtualized environment. Eaton's Green Care UPS Service Contract gives five-years of protection through remote monitoring and preventative maintenance visits.

**Results:**

Eaton's data centre solutions have enabled the University of Winchester to build an integrated and highly efficient infrastructure, with superior performance monitoring and management across the network. Above all for the University, the new solutions enable proactive maintenance to ensure business continuity and resilience.

*"The quality of service from the UPS systems was a critical factor in our choice of supplier, but more than that, it's the support that Eaton brings in enabling us to monitor and manage our systems."*

*Sean Ashford BA (Hons).  
Network and System Manager  
The University of Winchester*

**Background**

The University of Winchester is one of the top rated universities in the UK, ranked 10th for teaching excellence in 2016. It is a well-established university tracing its origins back to 1840, catering for approximately 6,500 students, and over the last decade has invested heavily in its facilities and infrastructure, including the development of a new teaching block and three student villages. In tandem with its investment in its facilities, the University is committed to building a modern virtualised IT infrastructure. Housed on the main campus, there is a datacenter which supports the core IT infrastructure for the University. Prior to Eaton's involvement, the University's network comprised of a competitor's UPS systems, whose batteries had failed and were unable to provide the network resilience required.

**Challenge**

The University had an urgent need to replace its existing smaller UPS units that were housed in student villages across the University and protected the Edge IT infrastructure, which is there to ensure availability of IT services to students around-the-clock. The existing units' batteries had failed without warning, the first sign being noticeable fumes coming off the units, so the University's IT team made the crucial decision to find a new provider for its UPS requirements. Crucially, the University wanted to avoid any future scenarios where this could happen again so it needed its new UPSs to enable it to monitor the condition of the batteries and provide proactive diagnostics. The University is moving towards a virtualised environment and wanted to take the opportunity to bring in power management software that could be integrated with its existing VMware servers so that it could manage the entire estate through a single pane of glass.



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## Solution

The University had made a conscious decision to avoid like-for-like product replacements, instead opting to install superior solutions that would bring additional value and reassurance, notably in management and monitoring of the overall solution, as well as working with legacy equipment and helping to manage a move to a virtualised environment. Its key criteria were:

- Remote control and management of the IT equipment
- Close integration with the VMware virtualised IT environment
- Proactive monitoring and predictable maintenance of infrastructure

Eaton provided a range of different UPS units, with power management software supported by a remote management service.

For the University of Winchester, Eaton's software was a crucial point of differentiation in the market. Eaton's Intelligent Power Management (IPM) software was chosen to support business continuity across the entire estate. The software enables the University's IT team to manage its mission critical applications across the network directly from the VMware vCentre virtualization dashboard offering a single pane of glass approach to the entire IT solution. The system can be preconfigured in a way that in case of power events it can prioritize and keep running the most critical applications, but switch off less critical ones or limit the power to certain applications. Virtual machines in the University's network can be shut down through Eaton's IPM and their restarting controlled by VMware vCentre virtualisation management software, meaning both shut down and restarting are performed in a manner that minimises downtime and eliminates the risk of data loss. The University chose the Silver

licence for IPM, which supports up to 100 nodes across the network.

Eaton installed 50 5PX single phase 3kVA units across the campus, each providing a critical runtime of up to 20 minutes in the event of a power failure, long enough to ride out short power outages with no loss of functionality. Eaton's 5PX UPS batteries have a design lifetime of five years, and the way Eaton's ABM battery management technology charges batteries enable them to outlive competitor batteries by 50 percent longer.

Alongside the 5PX units, Eaton also installed two 9SX UPSs 5000i to support higher power switching at the network distribution layer and a 93PM UPS in the University of Winchester's data centre. The 93PM is a 50kW power module with an internal battery cabinet, which has an incredibly small footprint to achieve space-saving in the data centre. It ensures long-term, reliable and uninterrupted operation of the University's IT equipment, protecting it from failures and long power outages, and has an LCD touchscreen display that provides essential status information at a glance in both graphical and numerical formats.

All of the UPSs installed at University of Winchester are new products that have been released to market within the last three years, which ensures that they have the best efficiencies in terms of power and running costs, as well as providing as much useable power as possible.

But more than that, the UPS units also feature Eaton's patented ABM technology that enables proactive diagnostics of battery life, giving the University's IT team up to 60 days' warning ahead of a battery's end of useful life, which is enough time to hot swap the battery without switching off any IT equipment. Given its experience with

battery failure, this gave the University of Winchester's IT team huge peace of mind.

The University chose Eaton's Green Care UPS Service Contract, which gives them five-years of protection through remote monitoring and preventative maintenance visits to give them further proactive support and reassurance.

## Results

The University of Winchester now has an infrastructure solution across its data centre and network that is more resilient, future-proofed and ready to grow with its needs. Since implementing the Intelligent Power Management software, the University has been able to get much greater insight into what's happening with its IT suite and at a power level – in fact, it has tracked that the UPS units have kept its IT running on a vast number of occasions, despite over 1500 small power outages and interventions over the last year. The proactive diagnostics of the Advanced Battery Management solutions also enable the University to plan IT maintenance outside of term time, further increasing uptime.

Sean Ashford, Network and Systems Manager at University of Winchester said, "Eaton has been a really important partner in helping to bring the university's IT infrastructure up to standard. The quality of service from the UPS systems was a critical factor in our choice of supplier, but more than that, it's the support that Eaton brings in enabling us to monitor and manage our systems so that we know exactly what is going on at any point in the network."



**Sean Ashford BA (Hons.)**  
Network and System Manager  
The University of Winchester



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