

The Power of ICT

[CASE3]

Energy



External view of UCS

Contributing to an 80% Power Consumption Reduction and an Enhanced Educational Environment by Optimizing a Higher Education Datacenter

— University Campus Suffolk set aside storage scalability thanks to virtualization technology

Challenge

An ICT strategy to meet critical needs at a higher education institution

Growth in student numbers participating in higher education has led to significant changes in ICT service provision. In the UK, University Campus Suffolk (UCS), as part of its 2020 vision, was planning for rapid expansion in their 4,500 undergraduate student population.

A five year strategic initiative was put in place to service growth in student numbers, which included a campus wide ICT modernization program and new build data center, to replace an older data center with a PUE*¹ of over 2.0.

The overall ambition of the project was to eliminate prolonged downtime, due to aging and increasingly unreliable storage and server equipment and fragmented service delivery to staff and students. Flexible storage provision, lower power consumption and consolidation of services were the keystone of the ambitious project plan.

*¹ PUE

The PUE (Power Usage Effectiveness) value is an index expressing the ratio of power consumed by the datacenter as a whole to power consumed by the IT equipment inside it, with the goal being to come as close to 1.0 as possible.

Solutions

80% Energy Consumption Reductions from Virtualizing Data Storage

UCS's installation of two FUJITSU Storage ETERNUS DX80 systems, as part of the modernization plan, enabled a twofold increase in storage performance, and the consolidation of their legacy servers into a unified storage environment. This established a stable platform for service modernization.

Virtualization of legacy servers was the next logical step. UCS took nearly 100 physical servers and virtualized them onto five FUJITSU Server PRIMERGY RX300 units. The RX300 servers feature highly energy efficient 80 PLUS *² certified power supplies, as a key feature of the overall design.

The project vision was achieved, resulting in a reduction of power consumption by up to 80%, floor space utilization by 70%, and a corresponding reduction in operating costs.

*² 80 PLUS®

Power saving standards, formulated mainly by U.S. industry groups, for the power supply units in computers and servers (see Page 18).

Benefits

Contributing to an Enhanced Education Environment

With this new, updated SAN and virtualization solution, UCS was able to realize a PUE close to 1.2, which was a significant reduction from the original PUE, of over 2.0.

UCS is deploying additional Fujitsu technologies, across campus, as an expansion of the original strategic vision. For example UCS's Computer Games Design course purchased FUJITSU CELSIUS M370 workstations, to replace gaming PCs. The highly performant CELSIUS workstations gave greater scope for ambitious 3D graphics and gaming projects, enabling Games Design students to realize their ambitions more quickly than ever before, while contributing towards UCS's green campus targets.

Fujitsu is dedicated to providing solutions for the issues facing higher education institutions and, along with supporting the development of a new generation of workers, strives to contribute to reducing energy consumption and efficiently using resources by optimizing ICT environments.