

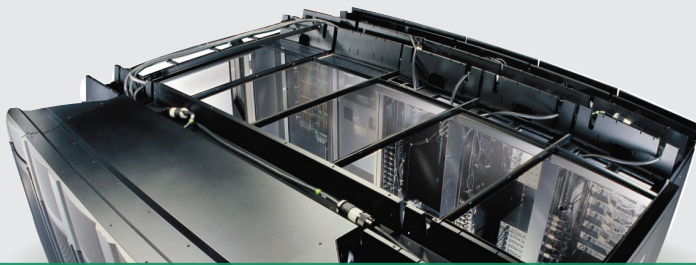


SUMMARY

Industry sector: Housing Association

Business Solution: Datacentre

Technology: APC by Schneider



BACKGROUND

Sanctuary Group is the largest social housing landlord in the UK. With over 75,000 units of accommodation under its management and 5,700 staff employed, Sanctuary Group is a nationwide, charitable organisation with comprehensive IT requirements spanning multiple sites in England and Scotland.

BUSINESS CHALLENGE

Sanctuary Group is a continually evolving organisation with a track record of mergers and acquisitions that add to the scale and complexity of the IT function. As the Group continued to grow, pressure was being exerted on the existing datacentre.

The existing facility catered for all centralised IT operations but was no longer fit for purpose as storage space was becoming scarce and the cooling provision was proving inadequate. During peak load periods, the facility had to depend on the addition of temporary air conditioning units, which were proving both inefficient and uneconomical. As physical space in the main facility ran out, additional rooms within the office were being used for overspill.

OBJECTIVES

Recognising the increasing demands on the organisation's server infrastructure, Sanctuary initiated a tender for a new datacentre solution; one that would provide a reliable, secure and fully monitored facility. Above all, Sanctuary was looking for a solution that was capable of supporting the cooling loads associated with a virtualised, high-density environment, whilst maintaining energy efficiency.

Martyn Lucking is the Computer Services Manager at Sanctuary Group: "Our overall IT requirements included typical corporate applications, communications and storage infrastructure, as well as applications which are specific to the housing association sector. In particular, the housing system application we operate is critical to the running of the entire business.

"Our IT strategy is to move increasingly towards small form factor systems and virtualisation. We embraced Virtual Desktop Infrastructure (VDI) some time ago and we already operate Citrix XenApp and VMware. We plan to extend this further to include MPLS cloud computing technology. It is essential that any IT environment is entirely stable".

SELECTION PROCESS

Sanctuary initiated an open tender process, based specifically upon the delivery of an APC solution. Having been impressed by APC performance in the past, Sanctuary was keen to engage with an APC Elite Partner to deliver the new facility.

Comtec who were deemed to possess the range of datacentre skills and experience required. Sanctuary developed a detailed specification for their new datacentre that featured insulated room reconstruction, water-based cooling, efficient power and cooling, humidification and full environmental and physical security monitoring. The specification was intended to provide future-proof support for Sanctuary's business operations, including an increase in capacity by almost 100%.

Comtec won a competitive tender as we demonstrated both the range of datacentre skills required and experience of successful implementation. Key to securing the project was a proven ability to deliver on the range of energy-efficiency innovations specified by Sanctuary.

THE SOLUTION

The new datacentre facility was scaled to accommodate a total of 42 server racks and four data communication racks. Specifically, the design included:

- An insulated building enclosure, using materials that regulate thermal/solar gain from external environmental conditions. The design of the room also minimises the amount of air humidity treatment required, which equates to direct energy savings.
- APC InfraStruXure® Hot-Aisle Containment Solution® (HACS) efficient environment, incorporating 12 APC InRow™ chilled water cooling units to optimise power and cooling. A key component of this architecture is its close-coupled cooling design principle which locates cooling equipment close to the heat source ensuring that heat removal can be more efficient and predictable.

- APC InfraStruXure® Central management platform – allowing for granular management of power distribution, environmental monitoring and physical threats throughout the datacentre.
- APC Managed Rack PDUs; two installed per rack for comprehensive power management/ monitoring.
- Full environmental monitoring and management, using strategically located APC NetBotz® sensors to measure temperature, humidity, water etc.
- APC NetBotz® physical threat management cameras located at strategic points and configured with surveillance software capable of generating and communicating alarms etc.

“The monitoring systems are particularly useful as they enable us to filter out ‘false negatives’ and identify issues that would ordinarily take a long time to isolate”.

Martyn Lucking, Computer Services Manager, Sanctuary Group.

“The cameras have shown us that around 70% of our issues are caused by people working inside the datacentre. The APC InfraStruXure Central console was extremely valuable when we transitioned from Phase 1 of the project into the fully ‘lights-on’ Phase 2, because it enabled us to balance the placement of equipment and the application of cooling load.”

BUSINESS BENEFITS

The datacentre is now a significant source of pride for Sanctuary’s IT and facilities teams. “We often show the datacentre to representatives of other housing associations, as it demonstrates our capabilities for future partnership,” commented Lucking.

As well as optimising cooling efficiency, heat is extracted from the datacentre and reused in the Sanctuary office heating system. Heat being produced from the IT equipment is contained within the APC Hot Aisle Containment System (HACS) then removed via APC InRow cooling units, using chilled water as the cooling medium. The water is then passed through a heat reclamation system that transfers the heat energy to a heat exchange unit, which in turn feeds the office heating system.

The result is a boiler plant that doesn’t need to operate whilst the IT equipment is in operation. The boiler plant was replaced with high efficiency condensing units to ensure that if heat is required for the office areas when the IT equipment is in maintenance or standby mode, the boiler plant operates at maximum efficiency, reducing CO2 emissions.

The technology (developed with JESP, Carrier and Comtec/ APC) has allowed heat reclaim on the chillers to reduce the cooling load and provide heating for the office areas inside the building. Since project completion, heating for the entire 17,000 Sq. Ft of building space has been provided by heat reclamation, saving approx. 400kW of energy.

“Having all our IT systems in one place ensures consistency across all our IT operations” says Keith Jackson, Director of Asset Management at Sanctuary Group. “We had problems that could only be overcome by constructing a specialised datacentre environment. Once we’d taken that decision, we were keen to use it as an opportunity to drive further cost efficiencies. Comtec have proved to be a valuable partner throughout this process, contributing significantly to the project’s overall success. Using their extensive understanding of APC technology, they have demonstrated a real commitment to excellence and to meeting our IT and sustainability objectives”.

ABOUT COMTEC POWER

Comtec Power specialises in the design, build, maintenance and on-going management of datacentres and server rooms.

Our service encompasses new builds as well as the refurbishment and upgrade of live facilities. Our goal is to create efficient, technically excellent facilities that are scalable to meet the power and cooling demands of latest generation IT equipment.

We are an experienced systems integrator with a thorough knowledge and understanding of the IT industry. We are perfectly positioned to deliver highly resilient solutions for high-density IT deployments and our on-going maintenance and management services help to reduce the threat of systems downtime, mitigate the risk of thermal shutdown and keep facilities operating optimally.

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