Case study
Education

Infrastructure upgrade for world-leading computer scientists

Modernised and optimised infrastructure improves performance and massively reduces backup time

The Customer

This organisation is one of the leading universities in the world, continually ranked in the global top 10, and known for outstanding teaching, learning and research achievement. Research carried out by the community of staff, student and alumni computer scientists at the Department of Computer Science has contributed enormously to society over the years, in areas such as business, transport, environment and health.

What did the customer want to do?

The Department of Computer Science undertook a virtual infrastructure upgrade, which included host servers, VMware vSphere, and migration of existing workloads.

Typically this work would be undertaken by an internal team, however, on this occasion the key requirement was to eliminate risk as the impact of any outage was high given the nature and importance of the students' and researchers' work. An external evaluation of expert specialists was undertaken to find a partner who could achieve the challenging results required.

The project required to demonstrate the value of working with a specialist professional services partner. The customer engaged Xtravirt due to the large number of industryrecognised experts and accreditations held within the Xtravirt team, and the extensive referenceability as a long serving trusted services partner of the VMware Professional Services organisation.

What did Xtravirt do to help?

The target solution included the following key technologies:

- IBM Storwize V3700 SAN and a new Lenovo BladeCenter
- Hosts running VMware vSphere 6.0 Update 1 and managed by VMware vCenter Server Appliance 6.0 Update 1
- VMware Data Protection 6

The approach was to baseline the existing VMware vSphere 5.1 environment enabling current and future state comparison to minimise risk. This was accelerated using Xtravirt's Sonar cloud-based analytics and reporting service.

At a glance

Challenge

- Modernise data centre including hardware and vSphere to latest version
- Essential service out of hours upgrade
- Design and commission new documented solution
- Transition workloads to new infrastructure
- No downtime

Solution

- Sonar to ensure optimal performance of existing infrastructure
- VMware vSphere 6.0, vCenter 6.0, vCSA 6.0 Update 1, Data Protection
- Lenovo BladeCenter
- IBM Storwize V3700 SAN

Result

- Backup reduced from 12 hours to 1 hour
- 92% reduction in backup duration
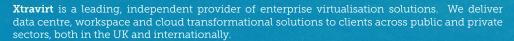- Rapid full documentation of new environment

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In a matter of minutes the Sonar vSphere Configuration report provided an automated, documented design of the key configuration items within the vSphere infrastructure.

A 48 point Sonar Health Assessment was then run to highlight any pre-migration requirements and performance optimisation issues with the existing vSphere environment, and took minutes to complete. The resulting best practice guidance enabled key remedial action to be taken before the actual upgrade. The new environment was designed, built and commissioned, then storage and workloads were seamlessly transitioned, delivering a successful project completion in tight timeframes with no impact to staff or services.

What was the outcome of the engagement?

The modernisation resulted in a significant overall improvement to the performance of the environment. Substantial optimisation in infrastructure resulted in a 92% reduction in backup window requirements, reducing the time taken to complete backups from 12 hours to 1 hour. The project was completed in tight timeframes using smart technologies and automation tools. This included using Sonar to fully document the new infrastructure design, saving a further 2-3 days of work. Customer expectations were exceeded, and the project demonstrated the value of an effective partnership which delivered successful transformation with minimal risk and accelerated delivery timeframes.

Xtravirt is a leading, independent provider of enterprise virtualisation solutions. We deliver data centre, workspace and cloud transformational solutions to clients across public and private sectors, both in the UK and internationally.

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