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Customer Case Study
Public Bodies

At a Glance

Company: Radiological Protection Institute of Ireland (RPII)
Industry: Independent Public Body

Customer Profile
The role of the RPII is to ensure that people in Ireland are protected from the harmful effects of ionising radiation. It does this by providing advice, monitoring people's exposure to radiation, regulating those who use radiation, providing technical support to Ireland's plan to deal with radiation emergencies and co-operating with similar bodies internationally.

Business Challenge
To design and implement a scalable IT architecture, encompassing a virtualised server/storage infrastructure for the RPII which would specifically address issues of cost and disaster recovery.

Solution

- Overall LAN architecture design to encompass virtualised server and storage infrastructure
- Virtualisation of 12 individual servers using VMware
- HP StorageWorks P4300 (Lefthand) 7.2 TB SAS SAN Solution
- Powered by two x HP DL380 G7 Host Servers with 6-Core Processors
- Integration of Veeam software to provide image replication and offsite backup platform

Benefits

- Greater flexibility and speed in deploying and commissioning servers for new applications.
- Smaller IT footprint required with lower energy costs.
- High degree of resiliency with three separate layers of backup and disaster recovery capability.
- Better application performance thanks to increased server power.
- Greater return on investment by leveraging existing hardware to complement the new deployment.

Radiological Protection Institute Energises Organisation with IT Upgrade
New virtualised server and storage infrastructure delivers greater performance, more flexibility and higher availability at lower cost

The independent, public body responsible for ensuring the protection of the Irish people against the harmful effects of radiation, has upgraded its IT infrastructure with the help of MJ Flood Technology. The new architecture, based on HP, VMware and Veeam, provides this critical agency with greater application performance, higher systems availability and all at lower cost.

"We realised that many of our servers were approaching end of life," explains Paul Fitzgerald," manager of information management with the RPII. "We went out to tender for a new virtualised server and storage infrastructure, recognising the significant cost-savings that could be made by using these technologies. In fact, cost and disaster recovery were the over-riding requirements driving the solution and choice of service provider," he adds.

A Mission-Critical Operation

"We use best practice methodology in all our implementations," comments Gareth Madden, sales director at MJ Flood Technology. "Rather than approaching the project as a one size fits all, we worked with the RPII to understand their existing infrastructure and to recycle existing devices into the current architecture, thereby protecting their investment in technology and meeting their requirements around resiliency."

The server/storage hardware was upgraded from Dell to HP. At the core, the HP StorageWorks P4300 (formerly LeftHand) forms the primary storage array, reducing SAN costs and eliminating risk with high data availability through synchronous and asynchronous data replication at no additional cost. A total of 12 servers were virtualised using VMware with Veeam providing the platform for image replication to protect data.

"There are three layers of resiliency provided, ensuring data protection and swift recovery management," explains Madden. "At one level, Veeam integrates with the virtualised infrastructure to provide image replication to an onsite backup server. There is also a separate backup to tape facility powered by Symantec while Veeam also provides the platform for offsite backup to another server located at the RPII's second office. Recovery time per server has been almost halved," he adds.

> "Project implementation was excellent. I was impressed by the level of technical capability demonstrated by the MJ Flood Technology staff."

Paul Fitzgerald, manager of information management with the RPII.

Technology in Action

A recent requirement to set up an application server for a short-term project gave staff at the RPII the opportunity to put their new technology into action. "We are undertaking an assessment of the likely impact on Ireland of the construction and operation of new nuclear power plants in the UK," explains Paul Fitzgerald. "This required a new server to host an application, which uses mathematical modelling to complete the task. Prior to the upgrade, we would have had to purchase a server and commission it, costing at least €6,000. However, thanks to our new virtualised infrastructure, I was able to provide a server with good processing power within an hour. Practical cases like this really demonstrate the power of technology to the business and position IT as a real business enabler," he adds.

Smaller IT Footprint with Reduced Energy Costs

The new infrastructure delivers other benefits to the RPII. For example, IT staff were able to reduce the space requirements in the comms room by removing two full cabinets of kit – a welcome development as space is at a premium at the RPII's office. "Reducing the footprint was great," comments Fitzgerald. "However, we are also able to deliver greater speed and performance on application response times, making for a better user experience," he adds.

The server/storage infrastructure also provides the RPII with other features and benefits, which can be configured as required. For example, thin provisioning which allows administrators to allocate disk space only as data is actually written to that volume, increases efficiency and utilisation of the storage hardware.

"Overall project implementation was excellent," concludes Paul Fitzgerald. "I was impressed by the level of technical capability demonstrated by the MJ Flood Technology staff."

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