



# Nationwide banks on VMWare Virtual Infrastructure



*“After converting 40 physical servers into VMware virtual machines in only two weeks, it became clear that we could easily consolidate our application servers on a very large scale in addition to enjoying benefits such as robust business continuity capabilities and ease of management. This free-up of resources can now be reinvested into our members to continue to provide them with a high standard of service and value.”*

**Lynn Banagan**  
Head of IT Infrastructure,  
Nationwide

**Investment in VMware ESX Server brings 15:1 server consolidation, improved TCO and robust business continuity capabilities**

## Results

- Achieved 15:1 server consolidation ratio
- Raised server utilisation from 10 percent to approximately 80 percent for peak periods
- Dramatically reduced TCO
- Enabled the deployment of new servers in hours rather than weeks
- Increased efficiency of business continuity practices
- Achieved hardware independence
- Streamlined management capabilities

## VMWare virtual infrastructure at work

- 95 virtual machines in production
- VirtualCenter 1.2
- IBM x-Series 4-Processor Servers
- More than 700 physical servers with 300 to be converted to virtual machines
- Host operating systems: Microsoft® Windows® 2000 & 2003
- Multiple applications running in virtual machines are all developed in-house using Microsoft applications and OS platforms (e.g., systems management, pensions systems, corporate checks, etc.)



## Nationwide seeks to reduce space in the datacentre

A members-owned financial services provider with mutual status, Nationwide is the largest building society in the world, with more than 11 million members and 150 years of industry experience. It is the United Kingdom's second-largest savings provider, fourth-largest mortgage lender (with more than one million mortgage customers), and ninth-largest retail banking, saving and lending organisation by asset size.

Nationwide has always been a technology leader; in fact, it was the first financial services organisation in the UK to have an online presence. In addition to staying on the cutting edge of technology, Nationwide's 300-person technology infrastructure department is responsible for connecting thousands of employees—both in-house and remote—to the organisation's many IT operations. The department is led by Lynn Banagan, who is responsible for providing and maintaining Nationwide's technology infrastructure to meet customer expectations and current and future business goals.

In 2004, Nationwide began an application server-consolidation project to make better use of the space available within the datacentre. Through the completion of a detailed proof-of-concept proposal that evaluated VMware Virtual Infrastructure – specifically VMware ESX Server 2.5 and VMware VirtualCenter 1.2 – Nationwide recognised VMware's potential for consolidating application servers that ran the organisation's business-critical programs. Since completing the implementation, Nationwide has realised the following benefits on a large scale:

- Dramatic reduction in TCO through the ability to maximise server utilisation
- Added resilience and business continuity capabilities
- Extremely efficient deployment and flexibility to manage future hardware demands VMware ESX Server and VirtualCenter Deliver Customer Value

When seeking to implement a virtual infrastructure, Nationwide assessed all virtualisation solutions available in the market. Ultimately, it selected VMware for its technology's proven marketplace performance, production flexibility, and ability to support multiple services. Additionally, Nationwide based its decision on information gathered by Computacenter, an IT services company and VMware Premier Enterprise Partner. Working with Nationwide, Computacenter Services conducted a proof of concept that focused on the performance and efficiency of VMware ESX Server versus other virtualisation products and commodity servers. The research revealed that, by implementing VMware software, Nationwide could perform equally as well with only one-third of its physical hardware – and at a significant cost saving.

Computacenter Services went on to assist with an additional proof of concept on-site at Nationwide to help minimise any risks around the final implementation. *"As a financial services organisation, Nationwide is naturally risk-averse; therefore, we needed to be certain we had a strong business case for incorporating virtual technology into our IT infrastructure,"* says Lynn Banagan, Nationwide's head of IT Infrastructure.



*“After converting 40 physical servers into VMware virtual machines in only two weeks, it became clear that we could easily consolidate our application servers on a very large scale, in addition to enjoying benefits such as robust business continuity capabilities. This free-up of resources, formerly spent on purchasing extra servers or exact hardware copies for disaster recovery, can now be re-invested into our members to continue to provide them with a high standard of service and value.”*

With VMware ESX Server and VirtualCenter, Computacenter helped Nationwide achieve the following benefits:

#### **Reduction in TCO**

Prior to the VMware implementation, Nationwide was using only 10 percent of its x86 server capacity. With VMware software, Nationwide has achieved a 15:1 server consolidation ratio and is now using approximately 80 percent of its server hardware, which allows for dramatic reductions in funds previously spent on purchasing new servers.

#### **Improved business continuity capabilities**

Business-critical data is replicated in real time at Nationwide’s disaster recovery site and can be restored to any piece of hardware instantly thanks to the technology’s hardware independent nature. Moreover, the ability to move virtual machines around quickly allows for seamless business continuity. An important factor with VMware software is that operational resilience is very much easier to achieve. With VMware, users are not even aware of failures.

#### **Ease of management**

VMware VirtualCenter enables Nationwide to manage servers centrally and schedule tasks and reports at preferred times, allowing employees of Nationwide’s IT departments to focus on higher-level responsibilities.

### **Going from physical to virtual**

The ease of converting physical machines to virtual ones with VMware P2V Assistant and PlateSpin PowerConvert saved Nationwide both time and money. The organisation was able to convert 40 physical servers to virtual servers in only two weeks, whereas it previously could have taken Nationwide one month to deploy a single physical server.

*“The time we spent switching our physical machines to virtual machines was extremely minimal and gave us a feel for the endless possibilities of implementing virtualisation technology,”* explains Banagan. *“We currently have more than 700 physical servers and believe we can virtualise 300 of them in the near future to increase our IT flexibility and resilience even further.”*

*“Our confidence in VMware technology recently led us to sign an Enterprise License Agreement, which will allow us to move the technology forward as we deem appropriate without the worry or hassle of buying new licenses,”* Banagan continues. *“In the coming years, we hope to implement more than 2,000 virtual machines, which we expect will significantly impact our bottom line, improve customer service and drive overall efficiency as a leading financial organisation.”*

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#### **What next?**

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