



## VIRTUALISATION AND CONSOLIDATION SOLUTIONS

Reduce costs and carbon emissions



The need to do more with less has always been a fundamental priority for IT staff. While this has usually been driven by the requirement to reduce costs, there is now a new factor to be considered - environmental concern. The desire to reduce an organisation's carbon footprint is now an important issue.

Fortunately, there are a number of mature technologies that can help organisations both reduce costs and their carbon footprint, as well as providing a compelling return on investment. These solutions fall into two broad areas - virtualisation and consolidation.

## VIRTUALISATION

Virtualisation allows one computer to do the job of many by sharing its resources across multiple environments. Virtual servers and virtual desktops enable the hosting of multiple operating systems and applications locally and in remote locations, delivering freedom from physical and geographical limitations.

As well as providing energy savings and lower capital costs due to more efficient use of hardware resources, virtualisation also delivers high availability, better desktop management, increased security and improved disaster recovery processes.

## CONSOLIDATION

The increase in data requirements is leading to more money being spent on storage. Consolidation of storage resources enables data to be centralised among multiple servers. The objective is to facilitate data backup and archiving for all users in an organisation, while minimising the time required to access and store data.

Other benefits include simplification of the storage infrastructure, centralised and efficient management, optimised resource utilisation and low operating costs.

Nviron offers a comprehensive portfolio of solutions in both these areas.

# VMWARE - ROBUST VIRTUALISATION PLATFORM

VMware Infrastructure virtualises and aggregates industry standard servers and their attached network and storage into unified resource pools. Complete environments, including operating systems and applications, are encapsulated in virtual machines that are independent from the hardware.

A set of virtualisation-based distributed infrastructure services for virtual machines bring breakthrough levels of flexibility, serviceability and efficiency to IT environments and enable you to:

- Reduce hardware and operating costs by as much as 50%
- Reduce the time it takes to provision new servers by up to 70%
- Save more than £1,500 per year for every server workload virtualised
- Reduce energy costs by 80-90%.
- Power down servers without affecting applications or users

VMware Infrastructure uses virtualisation technology to deliver transformative capital and operating cost savings as well as increased operational efficiency, flexibility and IT service levels.

## A COMPLETE INFRASTRUCTURE SOLUTION

The VMware approach to virtualisation inserts a thin layer of software directly on the computer hardware or on a host operating system. This software layer creates virtual machines and contains a virtual machine monitor or "hypervisor" that allocates hardware resources dynamically and transparently so that multiple operating systems can run concurrently on a single physical computer without even knowing it.

However, virtualising a single physical computer is just the beginning. VMware offers a robust virtualisation platform that can scale across hundreds of interconnected physical computers and storage devices to form an entire virtual infrastructure.

As a VMware VIP Enterprise Partner Nvtron has the skills and experience to help you design and implement your virtual infrastructure solution.

# DELL EQUALLOGIC - EFFECTIVE STORAGE CONSOLIDATION

The growth of company files, e-mail, databases and application data has led to the constant need for more storage. But with storage directly attached to servers, growth means burdensome storage management and decreased asset utilisation. Storage resources remain trapped behind individual servers, impeding data availability. Consolidating your storage resources onto a Dell EqualLogic PS Series array offers an optimised approach to data management.

This makes storage provision and management simpler and more effective, enabling you to enjoy:

- Centralised storage and reduced administrative overhead
- Simplified IT operations and reduced total IT expenditure
- Expanded storage capacity, performance and network bandwidth online without downtime
- Increased availability and protection for critical data
- Consolidated storage assets across multiple OS environments

## AFFORDABLE, ENTERPRISE-STRENGTH SOLUTIONS

Dell EqualLogic solutions deliver the benefits of consolidated networked storage in a self-managing, iSCSI storage area network that is affordable and easy to use, regardless of scale. By eliminating complex tasks and enabling fast and flexible storage provisioning, Dell EqualLogic solutions dramatically reduce the costs of storage acquisition and ongoing operations and are ideal for:

- E-mail storage management
- Database consolidation
- Virtualised server deployment
- NAS file and print
- Backup and restore
- Business continuity and Disaster recovery
- OS Platform solutions

Whether you are looking to consolidate servers to lower operational costs, replicate for data protection, or upgrade your Network Attached Storage (NAS) to a full featured iSCSI SAN, Dell offers affordable EqualLogic data storage solutions with enterprise-strength performance and reliability plus easy installation, management, and growth.



# DELL BLADE SERVERS - FLEXIBLE SOLUTION TO GROWING SERVER NEEDS

All too often organisations end up with server numbers growing much faster than IT professionals have the capability to cope with. As a result, they are forced to spend valuable time on routine deployment, maintenance and management tasks rather than tackling business objectives that can have a positive impact on organisational performance.

Blade servers can help you address these challenges by delivering a manageable, flexible and energy-efficient solution to your growing server needs.

Dell blade servers deliver performance and efficiency without compromise. The PowerEdge M600 consumes up to 19% less power than HP BladeSystem c-Class and delivers up to 25% better performance/watt than HP BladeSystem c-Class and IBM BladeCenter H.

The PowerEdge M600 features the latest Intel® Xeon™ Quad-Core processors, while the M605 supports the latest quad-core AMD Opteron™ processors. Both offer 60% greater density than traditional 1U servers.

## ENERGY EFFICIENT

The M600 and M605 are paired with the PowerEdge M1000e, the only modular blade enclosure delivering snap-in scalability. The M1000e can help you:

- Increase capacity
- Lower operating costs
- Deliver industry-leading performance/watt

Built on Dell Energy Smart technologies, it includes dynamic-flow, low-power fans to cool the chassis and ultra-efficient power supplies and components to enable better performance in a lower power envelope. This is energy efficiency that can have a serious impact on your bottom line.

Dell blade solutions come with powerful tools that make managing a group of servers as simple as managing one, these will:

- Help decrease deployment time from hours to seconds
- Let multiple blades be managed from a single console
- Allow you to set thresholds to help ensure the blades operate within your power envelope
- Enable you to prioritise blade slots to provide optimal control over power resources
- Offer easy setup and deployment as well as seamless integration into your existing infrastructure

# STONEGATE - COMPLETE PROTECTION FOR VIRTUAL ENVIRONMENTS

A virtualised computing environment has many advantages, but its goal to reduce this can make traditional security solutions ineffective, especially when they rely on hardware or special operating systems. This is dangerous, as like with any emerging technology, virtualisation will become the target of new security threats.

In addition, due to the nature of a virtual environment, the complexities of the network are increasing faster than legacy management and monitoring systems can cope with. This is making visibility of the virtual and physical environments extremely cloudy.

According to Gartner, Inc., if virtualisation is implemented without utilising best practices for security, it may actually increase costs and reduce agility. All this means that organisations need to consider new methods of securing their networks and sensitive information in the virtual world.

## LAYERED DEFENCE

The StoneGate Security Solution extends comprehensive network security to virtual environments. It enables layered defence where traditional means of network security cannot be implemented, helping to protect servers, prevent attacks and ensuring business continuity.

StoneGate Virtual Appliances are ready-made, easy-to-add network security appliances specially designed for the needs of virtual environments. They will enable you to:

- Reduce costs with unified management
- Deny unauthorised access
- Provide layered defense with network segmentation
- Encrypt traffic
- Prevent attacks
- Gain visibility over network traffic
- Protect unpatched environments

Its unified view will give you full control over your security systems, as both physical and virtual StoneGate appliances can be managed with the same management system. In addition, it provides graphical reporting for easy administration and regulatory compliance.



# NVIRON CAPACITY PLANNER - HELPING IMPLEMENT VIRTUALISATION

Recognising the opportunity that virtualisation offers is one thing, but knowing how to assess the capacity utilisation of your organisation's IT infrastructure, identify opportunities for consolidation and create a virtualisation roadmap for effective server containment and consolidation is quite another problem.

As a VMware VIP enterprise partner, Nviron can offer a capacity planning service that will enable us to recommend a solution that will allow you to maximise the benefits of implementing virtualisation across your organisation.

## COMPREHENSIVE NETWORK REVIEW

To undertake this service we install a VMware Data Collector onto an existing server on your network. This will then gather technical information, sending it back to VMware. The Data Collector runs for 30 days and the service has 3 main elements:

- Agent-free implementation - the Data Collector component of VMware Capacity Planner component is installed on-site at the network being assessed. This component agentlessly collects detailed hardware and software metrics required for capacity utilisation analysis across a broad range of platforms
- Web-based hosted application service - the Capacity Planner Dashboard is delivered as a Web-based application that delivers rich analysis, modeling and decision support capabilities based on the data collected
- Reference benchmarking - analysis provided by the VMware Capacity Planner Dashboard is based on comparisons to reference data collected from across the industry. This unique capability helps in guiding decisions around server consolidation and capacity optimisation for your organisation

As part of our recommendations we will enter your preferred hardware server configurations and generate a VMware assessment of how your virtualised systems could best be deployed.



## CONTACT DETAILS

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## HOW TO FIND US

From M56, leave Motorway at Junction 11, take the exit signposted A56 Preston Brook.

Follow this road for roughly 1 mile, go straight over the roundabout in front of the O2 building.

About 400 metres after this roundabout, there are a small number of office buildings on the right.

Nviron Limited is the last of the brick built offices, immediately before a white building.

