

For Petbarn moving to virtualisation meant future proofing IT to support rapid growth now and into the future.



"As a fast growing organisation Petbarn couldn't afford to be slowed down by IT interruptions that with flexible IT solutions would be unnecessary."



Customer Profile:

Industry: Retail
Outlets: 72 Nationally
Website: www.petbarn.com.au

Business Needs:

Demonstrating consistently strong growth, Petbarn required infrastructure capable providing industry best performance that was both manageable and scalable into the future. Any solution needed to provide access to remote locations while maintaining security and integrity from a centrally managed head office.

Solution:

Industry leading vendor technologies from NetApp, VMware, Citrix, Dell and more were utilised to provide the performance, scalability and security required across multiple remote locations and through more efficient virtualisation organisational growth can be facilitated, while keeping CAPEX and OPEX under control.

Performance driven – Petbarn's scalable, manageable IT.

- Utilisation rates dramatically increased through virtualisation on VMware vSphere
- Unified architecture on NetApp virtual storage ensures scalable storage into the future
- Multiple backup and disaster recovery solutions from NetApp and QuorumLabs ensure reliable, fast recovery
- Centralised management through Cymphonix and Dell KACE reduced management labour costs
- VOIP phones reduce OPEX for stores

Petbarn has 72 huge retail stores located across Australia. Petbarn sells one of the biggest ranges of dry, wet, fresh and frozen pet food in Australia, as well as a huge range of veterinary products, flea and tick products, pet accessories, beds, baths, bones, toys, kennels, bird cages, aquariums and pet accessories - It's everything for pets.

"Moving to virtual infrastructure the IT system is now realising utilisation rate increases of 50% or more. The associated cost saving in that is obviously significant."

The Challenge: Keeping up with growth

Petbarn as an organisation was expanding rapidly as part of a formulated business plan, and recognising the importance of information technology in achieving that growth, Petbarn set out to update existing infrastructure.

Petbarn's existing infrastructure was 100% physical and reaching its end of life, this presented a few key challenges for Petbarn typical of any organisation seeking high growth including growing IT related expenses, an increasing IT footprint and a lack of scalability and efficiency.

As always success provided its own challenges, and the substantial growth was adding to the administration burden of staff and required a significant investment in time just to manage and maintain the infrastructure and deploy to new Petbarn stores as they opened nationwide.

Taking a proactive approach the team at Petbarn sought to address these potential issues before they became a serious bottleneck to organisational growth and approached The IT Consultancy Group to audit, design and implement new virtual infrastructure and address their core concerns.

The Project: Moving to the virtual age

Petbarn's new server infrastructure was built around 4 Dell R710 servers. These physical servers are used as host machines based on VMware vSphere 4.1. This approach transformed 10 physical servers to 4 running 40 virtual machines. Effectively transforming the infrastructure into a private cloud facilitating rapid deployment and easy scalability

Storage was virtualised around a dual controller active/active NetApp FAS2040 filer platform. Management of the storage environment is performed using direct management to a given controller and through the central management platform, Operations Manager and Protection Manager. As management was a critical aspect of the new deployment NetApp allowed staff to manage and control multiple protocols be it NFS, CFS, Fibre Channel or iSCSI in a single storage solution.

Technology at Work

Solutions

Servers: Dell
Storage: NetApp
Server Virtualisation: VMware
Desktop Virtualisation: Citrix
Networking & Security: Cisco
System Management: Dell KACE
Disaster Recovery: QuorumLabs
VoIP Phone System: 3CX

Desktop virtualisation was a critical aspect of the newly designed system helping to address the difficulty of provisioning and managing multiple desktops across multiple locations. To solve the challenge Petbarn now uses a mixed Citrix environment of XenApp5 and XenApp6 servers across 2008 and 2003 Windows servers..

The XenApp deployment allowed staff to centrally configure, store and maintain a single application image in the datacentre. XenApp also addressed the challenge of providing reliable, remote access across the organisation; And with the built-in Citrix controlling and encrypting access to data Petbarn's data remains safe.

Managing the critical aspect of networking and security across so many locations meant any solution needed to be reliable and performance driven. For this reason Petbarn's email security, antivirus and anti-spam solution is a Cisco Blocker. The Cisco Blocker is product providing enterprise security and junk email prevention. The Cisco Blocker confirms the existence of Petbarn email addresses through an active directory lookup to prevent malicious and spam email content.

Leveraging Petbarn's existing asset in the form of a Cisco ASA 5510 firewall all stores and offices were directed through the Firewall for their Internet connection. In addition to the Cisco ASA being utilised as a firewall, it was also configured as an SSL VPN for remote access to Petbarn systems.

As part of the centralisation of Petbarn's systems, it was recommended that security and filtering be put in place to secure web access and prevent miss use. A Cymphonix network composer was installed for control, security and reporting of Internet usage, with the added benefit of caching some Internet traffic.

Dell KACE was implemented for simplified systems management. The KBOX is a centrally managed server with an agent installed locally on all the desktop systems it manages.

The K1000 is used for reporting and deploying scripts, software, pathes and more on office and store desktop systems. While the K2000 is an appliance based imaging solution, automating the majority of the imaging process for Windows servers and workstations. Through the K1000 and K2000 appliances ITConsult was able to deliver a fully integrated solution without disruption.

For fast recovery in the event of data loss or serious hardware failure Quorumlabs' onQ recovery solution has been implemented. onQ can back up and rebuild servers, regardless of hardware vendor, so a virtual machine can be replicated from HP, Dell etc hardware or hypervisor such as VMware or Hyper-v.

This high availability, rapid recovery solution provided a frontline against any file, hardware or even complete site failure. However it was deemed critical to archive the data backups and ITConsult implemented a backup second backup and archive solution. This solution combined the SnapManager suite of software transferring snapshots to a single Dell sever in Petbarn's collocation facility, this server was fitted with a LTO5 tape media library providing a cost effective source of long term archives.

To reduce the cost and complexity of opening new stores, a 3CX VoIP server was configured and Yealink 22P VoIP handsets were rolled out to existing and new stores. 3CX enterprise edition allows up to 128 simultaneous calls and software upgrades.

“The scalable nature of NetApp and its ‘Unified Storage Architecture’ means Petbarn has essentially future-proofed the needs of the organisation in relation to storage; and in today’s world of big data, increased data retention times and exponential growth in data quantity that is reassuring”

The ITConsult Benefits: Realising performance, utilisation and manageability.

By taking the time to understand the key challenges faced by Petbarn and approaching the project with a fundamental understanding ITConsult was able to deliver a range of benefits across the entire organisation.

Going green in today's world is not only a social imperative but potentially a financial one. Through improved utilisation and the reduction in IT footprint thanks to the virtualisation energy, power and cooling costs have all been significantly reduced.

Labour costs have also reduced thanks to centralised management with vSphere and NetApp's Data ONTAP consoles.

System reporting and a large portion of deployment into new office and store locations are now automated through the Dell KACE appliances

Through the combination of NetApp, VMware, Dell and Citrix the team at Petbarn have also experienced significant performance increases through improved remote connectivity as well as the increased processing power of Dell servers.

Security has been bolstered across the organisation by centralising control and implementing the Cymphonix network composer and a Cisco Blocker. Leveraging the existing Cisco firewall asset also saved capital expenditure at the time of the project while providing increased security when dealing with the remote access

Simplicity of virtualisation can be realized not only from the internal IT staff but by creating and maintain the standardization of hardware and interface all Petbarn members are benefiting from the virtual infrastructure and desktops.

Virtualising the storage and servers effectively transformed Petbarn's infrastructure into a private cloud environment with the ability for scalability and rapid deployment across the organisation while maintaining central control and granting the ability to monitor and chargeback internally based on usage.

The final major benefit is one that every organisation hopes never to have to use, the ability to recover in minutes instead of days with the implementation of the QuorumLabs onQ appliance. In addition the use of an LTO5 tape library provides Petbarn with a nice safety net at all times.



View all our case studies at: www.itconsult.com.au

The IT Consultancy Group (IT Consult) provides Australia's medium sized businesses with high quality, personalised and efficient IT solutions. For more information on available products, services and solutions contact ITConsult through the website www.itconsult.com.au or phone on +61 2 9270 0666