

Case Study

Turning IT 'weak links' into strengths

Datacentre - hosted virtualisation puts transport firm in driver's seat



“You’ve got to trust your suppliers. They’ve got to know what they’re talking about and what they’re doing. Even with planning and protection, things can go wrong. You’ve got to be confident that issues will be fixed quickly. Lexel ticks all the boxes.”

John Tetley, IT Manager, Peter Baker Transport

With so much focus on ICT innovation and emerging computing platforms it’s easy to overlook a central truth of the business computing age: IT performance is governed by the weakest link within a system of inter-related parts e.g. server virtualisation might offer better protection from hardware failures, but what does it matter if a failed communications link prohibits access to applications running on those servers?

Virtualisation would address the vulnerabilities of the aging server platform, realising this national transport company Peter Baker Transport (PBT) went further, collocating a new production platform for extra protection. PBT achieved this with Lexel Systems.

Challenge: Removing IT weak links

Auckland's fragile electricity supply once froze PBT's IT operations. Its Mt Wellington office, the company headquarters, fell victim to a national electricity grid failure, de-powering its server room and effectively cutting IT services to PBT's 24 national offices. The situation coupled with an ageing server platform, prompted a rethink and put impetus behind a refreshment programme addressing wide-ranging issues.

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Among these, backup was prominent. A blend of servers supporting legacy business applications, Microsoft Exchange, Blackberry device software, and web applications, needed fortifying. Application data was backed up to disk, but operating systems weren't, so the speed of server failure recovery was dictated by the pace of a server rebuild and data re-loading. Followed by the unavailability of hardware drivers for a key Linux application – an immediate candidate for server virtualisation, which manages drivers within the virtual server layer.

Business IT needs: Remote, virtualised computing provision

The first job was to consolidate and then liquefy a blended server platform, eliminating hardware dependencies. Collocating the new platform in a specialist hosting facility plugged in necessary power and network redundancy to protect IT services from single power and network outages.

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The question was getting there in a fashion that didn't jeopardise business as usual. Would the Linux application run smoothly on a virtualised platform? Just how does one go about correctly measuring and provisioning virtualised capacity, SAN and backup mechanisms, for non-virtualised IT environments?

▣ Solution: Lexel consulting, architecture, procurement and professional services

Working with PBT IT manager John Tetley, the new computing platform was architected, mapping capacity requirements of physical SQL, Linux, Microsoft Exchange and web servers to virtualised capacity. The new platform, comprising three HP Proliant Servers, an HP EVA4400 SAN, VMWare ESX hypervisor management software, and an HP Tape Backup Library, was configured, tested and embedded at a remote datacentre. Planning and implementation took two months, with final migration and commissioning taking just one day.

Tetley said testing Linux applications in the virtual environment was critical. “We needed to know that it worked and find any potential showstoppers. It was difficult simulating user testing for the Linux servers, so we had to trust Lexel’s judgement.”

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▣ Big Wins

Computing on demand

- In decoupling applications and operating systems from physical servers, PBT effectively taps liquid computing capacity, providing real-time provisioning, both up and down, as required. Provisioning new servers is much faster, and their management easier, as vanilla hardware replaces a patchwork of physical servers.

Improved IT services availability

- Performance idiosyncrasies of physical servers have been removed so past issues that could potentially derail IT services, like locating drivers for fragile Linux servers, are a distant memory.

Streamlined backup

- Restoring data backups is a case of mouse clicks rather than the man-hours it once took to rebuild operating systems and reload application data.

True disaster recovery capacity

- Should a physical server fail, fresh capacity kicks in, thus protecting applications availability. Housing the new platform in a remote facility offers another layer of protection in the form of environmental management and network redundancy; if Auckland is without power, PBT operations are protected.
- Core applications are replicated to the DR site, with hot instances preloaded, ready to take the load

More efficient IT administration

- In consolidating and redeploying server capacity, PBT has removed a certain amount of distraction and trouble shooting activity, allowing the IT team of seven to address higher value IT related tasks.

Better business

- John Tetley says the transport industry is dynamic. “There’s a constant flow of change requests and core systems development. It is incumbent on IT to make the business run smoother and keep on top of workload.” He says speed and the ability to recover from unplanned events are two critical achievements.

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