

## How virtual beats physical

# Lexicon



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Brian Joynt, IT manager, Lexicon

IT is famous for poor capacity utilisation, particularly when it comes to servers, which often function at less than 20 percent capacity. Australasia’s leading environment design and creation company, Lexicon Group, faced two choices when it decided to upgrade its server environment: replace like with like, or consolidate and virtualise.

Decoupling physical hardware from operating systems sounds simple enough, but in some quarters the scope it offers for downsizing server hardware is considered the modern day equivalent of putting all your eggs in one basket.

When Lexel Systems Ltd. mapped Lexicon’s IT infrastructure future, the fast-growing trans-Tasman business got the best of both worlds – a consolidated server hardware environment and greater robustness, scalability and best practice IT management.

## Challenge: Simplifying server complexity

Most businesses aspire to grow. But with growth comes extra complexity, particularly when it involves IT. Working with leading corporations across Asia Pacific, Albany-based signage and branding company Lexicon has offices on both sides of the Tasman and over 100-plus employees.

Despite continuing expansion and adoption of new technology to satisfy customer demands for more transparency and collaborative project management, Lexicon's IT department has remained small, at just two.

With 20 servers forming the company's computing backbone supporting critical business applications, IT was being swamped by maintenance and network management issues. It was a headache, distracting IT manager Brian Joynt from his principal functions and potentially jeopardising critical business functions, when systems availability and performance wavered. "If we're going to effectively collaborate with customers, IT has to function as an enabler – not an Achilles heel," says Joynt.

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## Business IT needs: Enterprise computing (on a medium-sized budget)

A consolidated server hardware environment was expected to eliminate most of Lexicon's IT maintenance issues. But that driver was only a small part of Joynt's larger plan for enterprise-grade consolidation. Virtualisation would introduce a more easily managed and scalable production computing backbone to support Lexicon's continued growth.

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Joynt wanted to remove friction from IT operations. Simple tasks, like allocating testing and development servers, complicated by a cluster of heterogeneous servers, had to be simplified. And, more strategically, he wanted to introduce best practice approaches to business continuity, including scope for disaster recovery, which could be replicated across the Tasman. The company's board had approved dedicated computing infrastructure for Australia, but first wanted to bed down the right architecture in New Zealand. Virtualisation was slated as the corporate blueprint. "We could have replaced like with like, but the benefits of virtualisation made the decision easy," says Joynt.

## Solution

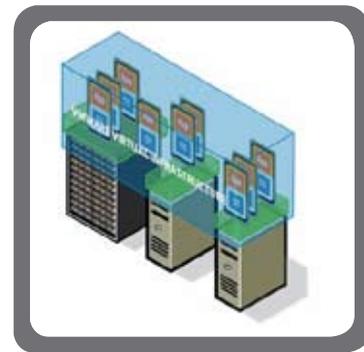
Solutions architect Lexel Systems Ltd. configured VMware's virtualisation platform to dramatically shrink Lexicon's 20 servers to just two HP ProLiant dual-core servers.

The approach offers Lexicon multiple virtual servers and operating systems that run in isolation, but side-by-side, on the same physical machine. Each virtual server has a set of virtual hardware, on which operating systems and applications are loaded. Each operating system sees a normalised set of hardware, regardless of the actual physical hardware components, such as RAM and CPU.

Core VMware modules include VMware ESX Server, which partitions Lexicon's physical servers into multiple virtual machines by abstracting processor, memory, storage and networking resources; VirtualCenter enables Lexicon to rapidly provision, manage, monitor virtual machines; and VMotion supports dynamic policy-based allocation of IT resources with automated load balancing.

Lexel Systems Ltd. architected, procured and implemented the combined solution, and provides Lexicon with ongoing service support. Says Joynt: "The transition from old to new is fantastic. We are extremely comfortable with the architecture."

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## Big Wins

### Consolidated server footprint, and management distraction

- Lexicon has replaced 20 servers with just two HP ProLiant dual-core servers, immediately downsizing server management issues and company investment in hardware.

### Unlimited scalability

- Server sprawl and platform dependencies no longer limit Lexicon's computing demands. Joynt can deploy additional virtual servers in just 30 minutes, and move fully configured applications from one physical server to another, without disruption or downtime, within seconds.

## Simplified management

- Joynt used to spend much of his day troubleshooting and managing fixes, mostly server related. Today, he is able to monitor the performance of virtual servers and their hosts from a single location. He is able to conduct live migrations of virtual servers, without downtime, and automate load balancing between physical hosts. None of this was possible under the old regime.

## Streamlined testing and development

- Joynt is able to evaluate software in ready-to-run virtual environments, which can be deployed multiple times, without installation and configuration. It has simplified Lexicon's development and testing, by allowing the creation of multiple environments with different operating systems on the same server.

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## Simplified DR platform

- Lexicon's data restores are now less dependent on hardware. If there is a failure, or a disaster, the most recent tape backup can be restored on either side of the Tasman, without hardware being the limiting factor.

## Leading edge, without the risks

- Joynt says the risks with new technology are mitigated when you deal with the right integrator. “Lexel Systems Ltd. has really helped us to lock down our whole environment. Everyone you deal with is technically sound.”



### Lexel Systems Ltd.

72 Paul Mathews Road  
Private Bag 302 902  
North Harbour Industrial Estate  
Auckland, New Zealand

Phone: 09 4141 777  
[www.lexel.co.nz](http://www.lexel.co.nz)