

Case study

Vodafone replaces legacy technology to drastically cut operating costs



Vodafone Hutchison Australia (VHA) Data Centre refresh delivers industry leading 16:1 Server consolidation ratio with 1,600 Intel Servers replaced with 104 HP bl460c Blades

Industry

Telecommunications

Objective

Drive down operating costs, rationalise IT infrastructure and consolidate seven data centres into two

Approach

HP worked with VHA to design and build highly robust, standards-based infrastructure that combines the management functions of IT Services and Networks

IT improvements

- Re-engineering IT infrastructure ensuring the delivery of a robust and easily managed environment
- IT Services and Networks are now managed as a single entity, reducing complexity and risk
- Reducing the number of operating systems used in production encourages greater focus on skills, specialisation and employee competencies
- Automation of the virtualisation process enables the rapid commissioning of new services and products that enhance VHA's market competitiveness

Business benefits

- Lower operating costs resulting from the adoption of a consistent hardware platform and process automation across the enterprise.
- Reduce power and cooling costs by more than 50% meeting corporate sustainability goals.
- New service rollouts that previously took weeks are now able to be fully operational in hours.
- Service availability levels will dramatically increase as a result of high-availability design goals.



“Our infrastructure refresh will take VHA to a new level in the delivery of infrastructure in a timely manner, at a drastically reduced cost, with state of the art resilience and efficiency to our customers.”

– Kai Koberstein, General Manager IT Capabilities and Transformation

Vodafone Hutchison Australia (VHA) is the third largest mobile provider in Australia with over 4.9 million customers, retail stores located around the country and a customer-care centre based in Hobart, Tasmania. Vodafone in Australia is a 50:50 joint venture with Vodafone Group Plc and Hutchison Telecommunications (Australia) Limited (HTAL). The company shows their commitment to building a more sustainable future by reporting how much carbon they emit and training their network engineers how to optimise infrastructure for energy efficiency. VHA is headquartered in one of North Sydney's first buildings to achieve a “6-Star” Green Star Office Design and “As Built” rating. VHA is a committed corporate citizen with the Vodafone Foundation supporting organisations like Barnardos Australia, Mission Australia, MMAD and Youth off the Streets to support our society's most vulnerable people through grants and the provision of pro-bono services.



Solution Benefits

- HP BladeSystem for VMware
- HP 3PAR StoreServ 10800 Storage
- HP 3PAR StoreServ 10400 Storage
- HP StoreOnce B6200 48TB Backup
- HP StoreEver ESL G3 Tape Libraries
- HP SN8000B 8-Slot Power Pack+ SAN Backbone Director Switch



Legacy equipment had no place in VHA's technology roadmap

VHA's infrastructure was an amalgam of the systems operated by Vodafone and Hutchison 3G prior to their 2009 merger. Servers of assorted models and ages were operating with a mix of Sun's Solaris and HP's HP-UX operating systems. These legacy systems included various versions of Microsoft's Windows Server and a mix of data storage subsystems from Compaq, NetApp and HDS. The task of patching and archiving this environment was complex, requiring skilled engineers to execute. The same situation applied with the storage systems where each platform required individual hardware management proficiency and management tools. Greater economies of scale and return on investment had to be realised from VHA's technology investment in data centre infrastructure.

A vision for the future had to be initiated and deliver immediate savings

VHA's vision was for a single consistent hardware platform that could deliver exceptional performance, irrespective of the operating system or the demanding nature of the task assigned. Opting for HP's Blade Servers met two important design goals: modularity and flexibility. VHA wanted the flexibility to zone infrastructure into either non-virtualised or virtualised segments, depending on the application or function. Using blade architecture meant that administrators could dynamically change operating system and physical partitions and deliver flawless uptime for day-to-day operations.

Better resilience with the help of automated processes lowered the risk of crippling outages

Each step of the project design and implementation was underpinned with one single goal: to reduce the possibility of

service outages. The services provided to mobile phone and data clients are charged according to the amount of minutes or megabytes consumed. Even minuscule outages, when multiplied by the number of users affected, can have adverse effects on revenues and damage the service provider's reputation.

By investing in infrastructure resilience, a better ROI was guaranteed from the subsequent reductions in service availability or diminished network function. Providing peak performance increased data throughput and increased billable hourly revenues. The business case was compelling.

Infrastructure that can scale and grow to meet the needs of increased customer demand

VHA's most important design goal was to build a high performance modular environment based on open standards. Choosing this type of computing topology enabled rapid orchestration of new services and the ability to quickly adopt new technology if the expenditure could be justified with a business case. Storage can be upgraded to Solid State Disk (SSD) to improve performance while upgrades are non-intrusive and pose no interruption to production service delivery. For VHA, this ensures their investment will deliver immediate returns and generate solid revenues into the foreseeable future.

From concept to completed in hours – not days

Reducing the staging time required from concept to production offers competitive benefits for a service provider like VHA. Having systems that can quickly deliver new services and provide new web platforms to promote to new audiences gives the company a competitive edge.

Management Software that delivers better staff productivity

Connectivity to maximise flexibility – performance to meet business benchmarks

Like many organisations that experience a merger, VHA's environment was complex. HP's ProLiant bl460c Blade Servers offer every conceivable type of high capacity interface to ensure that legacy and emerging technology operate at their best performance. This solution was a good fit for VHA's heterogeneous environment and met the flexibility and performance demands of the business.

Blade Servers designed for their operating environment

VHA needed a flexible environment to create physical or virtual realms depending on the service required. The new systems had to meet the needs of individual business units with commissioning, testing and migration to active production easily accomplished. Telecommunication service providers spend a lot of time stress testing new applications prior to commissioning them for active production. Virtualisation will cut the time required in development and testing by a massive amount. Virtualising proof of concept testing further reduces risks that changes to system operations pose for every production environment.

Highly efficient and scalable 3PAR Storage for consolidation and capacity expansion

A key component of HP's solution is HP 3PAR StoreServ storage subsystems. The HP 3PAR Architecture features mixed workload support. This enables transaction and throughput-intensive workloads to run contention free on a single storage system without the requirement for manual segregation of workloads to different

physical resources. This 3PAR feature has delivered a server consolidation ratio of at least 16:1, helping VHA drastically reduce server ownership costs. 3PAR's advanced virtualisation capabilities enable VHA to dynamically adapt Quality of Service (QoS) levels to applications without service interruption. Autonomic tiering capabilities and support for multiple drive types enable VHA to achieve an optimal balance of price and performance for multiple types of data within a single, cost-efficient array.

Brocade FC SAN Fibre Switching

Selecting Brocade SAN switching helped meet availability goals because of the granular analysis that Intelligent Infrastructure Analysis software facilitates. A network is only as strong as its weakest component and monitoring and managing a complex Storage Area Network (SAN) switch is vital in meeting the availability goals of the system as a whole. Better SAN management delivers better performance and increases system uptime.

Bluecoat, F5 Networks and Checkpoint point solutions that add value to an enterprise solution

HP worked with VHA to design the most scalable, flexible and high performance solution that would meet project specifications. To improve traffic management and provide two-layer security demanded by service providers, HP worked with leading vendors, including:

- Bluecoat
- F5
- Checkpoint

