

REACH cuts annual operating costs by US\$1 million with HP server and storage refresh

HP customer case study:

Top service provider saves up to US\$5 million in capital costs

Industry:

Telecommunications

“HP is a significant partner that understands our business and that is very important to REACH. We have achieved many significant benefits from our HP refresh and the primary reason for this is the close partnership between the two companies.” Sundi Balu, chief information officer, Reach Global Services Ltd



Objective

Hong Kong-based telecommunications infrastructure provider Reach Global Services Ltd (REACH) wanted to cut its capital and operating costs and to have the ability to extend the longevity of its systems through a phased refresh.

Approach

REACH and HP implemented a complete server and storage refresh at its Hong Kong and Sydney data centres.

IT improvements

- A server estate of over 150 machines has been reduced to 68, lowering maintenance requirements.
- Seven operating systems have been reduced to three, including more open source Linux.
- REACH now has a more agile and scalable platform for supporting future business needs.

Business benefits

- The HP project has saved REACH between US\$3 million and US\$5 million in capital expenditure.
- Operating costs have been reduced by US\$1 million a year.
- HP blade systems have brought power savings of 90KW a day and corresponding drops in CO₂ emissions.



Hong Kong-based telecommunications company, Reach Global Services Ltd (REACH), was established in 2001 as a joint venture between two of Asia's largest carriers. It is now the premier provider of international voice and satellite services in Asia.

REACH has interests in more than 40 submarine cables and international satellite systems and its network stretches over 364,000Km around the globe. It has commercial relationships with more than 400 carriers facilitating access to over 240 countries and territories.

With half of its traffic terminating at major hubs in Hong Kong and Australia, REACH runs a principal and secondary data centre in Hong Kong focused on Internet Protocol (IP) and two similar data centres in Sydney for corporate applications.



“We have reduced the perceived capital expenditure or opportunity costs for going from the old architecture to the new HP architecture by US\$3 million to US\$5 million over the refresh period of three years. From an operating cost perspective, by the time this programme is done we will be saving US\$1 million a year in operating expenses.”

**Sundi Balu, chief information officer,
Reach Global Services Ltd**

REACH was running a mixed IT infrastructure of HP, Dell and Sun equipment with seven different operating systems and decided that it was time for a refresh. Analysis revealed that maintenance of the infrastructure was costing nearly US\$1 million a year so a reduction in operating expenditure was vital.

Cost cutting aim

“We also needed to reduce capital expenditure because we wanted to implement a whole utility computing/cloud computing paradigm,” says Sundi Balu, chief information officer for REACH. “In addition we wanted to extend the ‘maintainability’ of the infrastructure from the standard three or four years to five or six years. This required technology which would enable us to do phased refreshes rather than a big bang every three years.”

Wanting to switch to a close partnership with a single vendor, REACH considered HP and another major hardware and services vendor. It chose HP because of its extensive Communications, Media and Entertainment (CME) practice backed by strong operational support systems. HP equipment would support REACH’s internal cloud computing model where the IT department would offer services to its internal customers. An HP solution would also meet REACH’s criteria on reduced capital expenditure, operating expenditure, longevity and capability.



Blade solution

An initial benefit of this decision was that REACH’s landscape of over 150 servers in Hong Kong and Sydney was reduced to 68, mostly HP blade servers with some rack mounted boxes. Thirty two servers (HP ProLiant BL460c and BL860c blade servers and HP Integrity rx6600 servers) were installed at the main Paddington data centre in Sydney and ten at the secondary Oxford Falls site in Sydney. Twenty three similar server models were installed at the principal Telecom House data centre in Hong Kong and three (HP ProLiant DL380 and DL580 server models) at the secondary Hermes House site in Hong Kong.

As part of the refresh, REACH decided to put more emphasis on generic, open source Linux operating systems rather than UNIX. It has reduced the number of operating systems from seven (TRU64, HP-UX, Solaris, Windows, RedHat Linux, FreeBSD and CentOS) to just three (HP-UX, RedHat Linux and Windows). HP-UX is used at the high end, Windows at the departmental level and Linux for more corporate and critical systems.

HP also assisted REACH with a refresh of its Storage Area Networks (SAN), including the installation of three new HP StorageWorks 6400 Enterprise Virtual Arrays (EVA6400). Two disk arrays at the Paddington data centre provide storage capacity of nearly 28TB and one at Oxford Falls has capacity of 8.6TB.

REACH uses a combination of near-line and off-line storage which enables it to utilise more cost effective disks where possible. Longer term storage and backup is to tape for which REACH uses an HP StorageWorks MSL4048 LTO-4 fibre channel tape library with 76.8TB compressed capacity in Hong Kong and an HP StorageWorks MSL8096 tape library with 153.6TB compressed capacity in Sydney. Efficient storage management and high availability are supported by the use of HP ServiceGuard.

“We have a classic blade architecture design with blade enclosures sitting at the front end feeding off the SAN at the back end,” says Balu. “It is a very clean design with a high degree of virtualisation utilising either Microsoft Hyper-V or RedHat Enterprise Virtualisation. HP helped us design how we would provide the blade architecture and connectivity to the SAN and also how we could maximise the footprint of the blade architecture in terms of load balancing and virtualisation.”

Apart from strategy and demand management, operation of REACH’s IT infrastructure is outsourced to a major outsource firm. This is conducted on a partnership model with the outsourcer being part of REACH’s leadership team. HP provides hardware maintenance.

Power saving

The HP refresh has enabled REACH to achieve significant business benefits.

“We have reduced the perceived capital expenditure or opportunity costs for going from the old architecture to the new HP architecture by US\$3 million to US\$5 million over the refresh period of three years,” says Balu. “From an operating cost perspective, by the time this programme is done we will be saving US\$1 million a year in operating expenses.”

Implementing HP blade servers has also enabled REACH to reduce power by 90KW a day, with a corresponding reduction in CO₂ emissions.

Customer solution at a glance

Primary hardware

- HP ProLiant BL460c servers
- HP ProLiant BL860c servers
- HP Integrity rx6600 servers
- HP ProLiant DL380 servers
- HP ProLiant DL580 servers
- HP StorageWorks 6400 Enterprise Virtual Arrays (EVA6400)
- HP StorageWorks MSL4048 tape library
- HP StorageWorks MSL8096 tape library

Primary software

- HP-UX, Windows and RedHat Linux operating system
- HP ServiceGuard
- Microsoft Hyper-V
- RedHat Enterprise Virtualisation

HP Services

- Infrastructure design services
- Hardware maintenance

“From a maintenance perspective, the HP refresh has provided us with a great process and framework to deploy our private cloud practice and that brings a lot of benefits for us because it is something we can expand to other aspects of the business as well. Operating an internal cloud computing paradigm enables us to provide a better IT service for staff within REACH with quicker provisioning to support new projects.

“Our underlying architecture will last for another five years but from a scalability perspective, because we have done this in a modular fashion, if demand grows I can just add on.”

REACH is now talking to HP about future plans to implement a Disaster Recovery solution and to transform its IT infrastructure supporting its IP platform.

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