



ALPHAWEST GETS TRAINS BACK ON TRACK AT AUSTRALIAN RAIL TRACK CORPORATION

CASE STUDY SNAPSHOT

Customer

Australian Rail Track Corporation

Industry

Transport

Challenge

Due to a major system upgrade to its train control centre, ARTC needed a new data centre to support the current and next generation control systems.

Solution

An integrated data centre solution utilising multiple vendor offerings that enabled virtualisation, networking, compute, storage, security and management technologies to be implemented by Alphawest.

Benefits

ARTC has improved the delivery of core business services and strengthened its disaster recovery capabilities. The result is improved business agility, availability and efficiency through real-time information access, and better protection of the financial and reputational assets associated with business critical services outages.



Alphawest implements a next generation data centre for an agile, responsive and efficient control centre in Australian Rail Track Corporation

The Client

Headquartered in Adelaide with 1,000 full time staff, the Australian Rail Track Corporation Ltd (ARTC) was created after the Commonwealth and State Governments agreed in 1997 to the formation of a 'one stop' shop for all operators seeking access to the national interstate rail network. After significantly increasing in size since its formation in 1998, ARTC now has responsibility for the management of over 11,000 route kilometres of standard gauge interstate track, in South Australia, Victoria, Western Australia and New South Wales. ARTC also manages the Hunter Valley Coal Rail network and other regional rail links in New South Wales.

The Business Challenge

ARTC was undergoing major system upgrades to its train control centre that called for the construction of a new data centre, which also needed to support the running of the legacy train control systems. Steve Bogdanov, Technology & Infrastructure Manager - Communications and Control Systems at ARTC was very clear on the requirements of the new data centre; "It had to be scalable; highly secure; flexible; easy to manage; reduce operational costs in the longer term; and make big wins on cooling and power."

ARTC's working environment, Mile End in South Australia, posed one of the biggest challenges. Bogdanov explained, "In summer we regularly experienced 43+ degree heat which created a negative domino effect: load shedding in the grid led to the generators stalling in the heat which caused our IT infrastructure to experience frequent power outages. This meant ARTC's credibility could have been damaged."

The Alphawest Solution

As a preferred supplier of ARTC, Alphawest was engaged on the project to present a number of infrastructure and information vendor solutions that would seamlessly integrate to help achieve information access and an improved business continuity plan. "Alphawest had a great track record of delivering projects for us in the past and we also felt secure in the knowledge that it could provide the best mix of vendor technologies to suit the project. When you couple this with its open book policy it makes for a very transparent and highly engaging relationship," said Bogdanov.

CASE STUDY

AUSTRALIAN RAIL TRACK CORPORATION

The ARTC data centre is running:

- Five Cisco UCS blade servers
- A single cluster of VMware virtual machines
- Linked to EMC Clarion CX4-240 with 65 terabytes of storage
- Replicated to an existing remote VMware cluster in an Active-Active configuration for disaster recovery using VMware's Site Recovery Manager & EMC's MirrorView technology

The ARTC data centre uses:

- Just 113 virtual machines to comfortably cover storage and UCS requirements
- Just 16 cables, the old solution needed 80-100 cables, UCS uses just 8 cables per chassis
- Only 33% of memory and 8% CPU
- A 10 gigabit backbone, increased from 1 gigabit



ARTC had initially investigated a traditional data centre solution, but after examining ARTC's needs Alphawest suggested a different, highly virtualised path. The solution consists of the new generation Cisco Unified Computing Solution blade servers, a Cisco core network and VMware infrastructure software, all housed in an APC physical data centre. The entire build is designed to deliver a holistic IT infrastructure that integrates virtualisation, networking, compute, storage, security, and management technologies. "After performing the rigorous benefit and cost analysis it was obvious to us that Alphawest had come up with the best solution for ARTC," said Bogdanov.

Alphawest was responsible for the proposal, project plan design and implementation. It engaged project managers; co-ordinated the vendors; completed procurement of products; services and systems and created the new network design. "Alphawest provided a number of resources for this project to allow it to be pulled off without a single issue. The Alphawest staff are very technically savvy, they understood our environment and performed an enormous amount of work with us, making it really easy for us to manage the environment afterwards. Projects like these just aren't possible without resources provided by Alphawest helping us out."

The Benefits

The Alphawest solution has provided ARTC with the ability to:

- Expand business capabilities by enabling scalability and rapid provision of servers
- Help reduce power and cooling costs by utilising server consolidation and APC's next generation of Datacentre cooling technologies
- Improve real-time information access with capacity management tools with the ability to easily see utilisation and managed security information
- Improve risk management with delivery of the VMware SRM (Site Recovery Manager) Disaster Recovery solution
- Elevate business continuity with a highly available network avoiding any single point of failure

"Our new data centre can go from 27 degrees celcius to 21 degrees in just five minutes, with built-in redundancy, even if we lose a whole chiller or cooling unit the other units will compensate. We've estimated that the new system is 70 percent more efficient which equates to a saving of more than \$100,000 a year on power costs alone. Most importantly the business continuity fail-safes means we have not experienced a single outage since the implementation," said Bogdanov.

With Alphawest as our ICT partner the implementation has been extremely successful. From the innovative solution it proposed, the rapid and professional planning, to the simplicity and relaxed atmosphere it brought to the project

Steve Bogdanov
Technology & Infrastructure Manager
Communications and Control Systems at ARTC

The Future

With Alphawest's diligent planning, ARTC's next-generation data centre ensures that ARTC's business critical services have the appropriate levels of security, availability, manageability and scalability necessary to rapidly deliver the solutions that allow the organisation to take important leaps forward.

Bogdanov said, "The new system is full of smarts that enable us to have a full view of exactly what's happening in the data centre. In the past, if the business asked for a new service we'd throw another server rack in and see how it went. Now, we can see exactly where it should fit to ensure it will have sufficient CPU, networking, storage and cooling capabilities to support it. In future, if the business asks for a new service we can fully support the organisation's agility by provisioning it immediately."

inunison

Unified Communications
and Collaboration
powered by Alphawest

YOUR TECHNOLOGY AND TELECOMMUNICATIONS PARTNER IN ONE.

Alphawest, in conjunction with our parent company, Optus, provides integrated Information and Communication Technology (ICT) solutions to private businesses, public companies and government organisations across Australia.

Since 1986, Alphawest has been bringing technology, processes and people together, to help organisations simply work and communicate better. Being part of the SingTel Group enables us to provide solutions that work in unison with Optus' communications networks, so that you can work more productively in more places.

Our solutions are built around a Unified Communications and Collaboration strategy, encompassing expertise in Business Communications, Security, Information and Process Management, Data Centre Technologies, Mobility and Wireless, Managed Services and Green Technology.

As a single source provider, we can help you identify, plan, deploy, secure, manage and optimise your technology and communications investments, to help enhance your productivity, drive competitive advantage and profitability, improve customer service and reduce your environmental impact.

Call us now to find out how your business
can work better in unison.

1300 788 410

www.alphawest.com.au



A wholly-owned subsidiary of Optus Networks Pty Ltd and part of the SingTel Group.
Alphawest Services Pty Ltd ABN 49 009 196 347

March 2011
ALPH_13417

www.mindfield.net.au