

MACQUARIE TELECOM BUILDS SUCCESSFUL NETWORK CONVERGENCE AND HOSTING BUSINESS ON JUNIPER NETWORKS PLATFORM

Summary

Industry: Telecommunications

Challenge: Deploy a network infrastructure that would enable Macquarie Telecom to provision new services quickly, easily, and securely, while supporting customized service-level agreements (SLAs)

Network Solution: Juniper Networks MX960 3D Universal Edge Router, Juniper Networks ISG2000 Integrated Security Gateway

Results: Juniper delivered operational savings and high availability (HA) while enabling Macquarie Telecom to build a unique value proposition for its network convergence and hosting services with business-quality telecommunications

Established in Sydney, Australia in 1992, Macquarie Telecom is one of the country's first telecommunications companies of the deregulated era. It has more than 400 employees with offices in Sydney, Melbourne, Canberra, Adelaide, Brisbane, Perth, Hobart, and Singapore. Macquarie Telecom specializes in the business and government markets, offering managed voice, network convergence, mobile, and complex managed hosting services. The network convergence and managed hosting markets form a major part of the company's strategy, complementing its highly successful traditional voice business.

As it built these businesses, Macquarie Telecom was quick to recognize that not all customers had the same requirements, and that availability on its own was not a good enough measure of service delivery. It thus adopted the unique approach of offering services and SLAs tailored to the business needs of individual customers. Key to this value proposition was the ability to adapt and add new services quickly, easily, and securely. Macquarie Telecom needed to meet this commitment while minimizing operating expenditure.

Challenges

As the company embarked on its strategy in 2002, it realized that the disparate systems in its network were not enabling it to respond as quickly as required in some cases. Macquarie Telecom was seeking a more intelligent approach to its network and data center design.

Selection Criteria

Following consultation with its various stakeholders, Macquarie Telecom decided in 2006 to develop in a greenfield setup. Several vendors were invited to submit their proposals. Macquarie Telecom selected Juniper Networks®, which provided the best proof of concept. One factor was the scalability of Juniper's products, which meant that Macquarie Telecom would not need to add new hardware as it ramped up its customer base. Another factor was the best-in-class security based around Juniper Networks ISG Series Integrated Services Gateways, which have a well-established record in the industry.

Solution

Working closely with Juniper Networks as a strategic partner alongside a number of other vendors, Macquarie Telecom embarked on a long-term program of network design.

It moved all of its systems onto the Juniper platform to take advantage of the operational savings flowing from a single network operating system—Juniper Networks Junos® Software. Junos simplifies the provisioning of services for customers through features such as configuration automation and other built-in customized tools.

Two MX960 routers were installed in Macquarie's main data center in Sydney. Juniper Networks MX Series 3D Universal Edge Routers cover Juniper's carrier Ethernet range. They feature quality of service (QoS) at the interface level and per VLAN, which ensures that services receive the appropriate level of quality regardless of traffic conditions.



This advanced capability allows a variety of services to be offered over Ethernet with guaranteed SLAs. With this, Macquarie Telecom is able to meet a growing demand for new IPV6-enabled services, especially from the government sector. At the same time, support for up to 10 Gbps gives Macquarie Telecom plenty of headroom for expansion.

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Nicholas Bojko,
Technical Services Manager, Hosting,
Macquarie Telecom

Macquarie Telecom also deployed two ISG2000s in the data center to ensure the highest levels of security and availability. The ISG Series is a family of purpose-built, security solutions that leverage a fourth-generation security ASIC, the GigaScreen3—along with high-speed microprocessors—to deliver unmatched firewall and VPN performance.

The ISG2000 is a fully integrated firewall, VPN, and intrusion detection and prevention (IDP) system that is ideally suited for securing enterprise, carrier, and data center environments where advanced applications such as VoIP and streaming media demand consistent, scalable performance.

Another firewall from the ISG Series—the Juniper Networks ISG1000 Integrated Security Gateway—is deployed at Macquarie Telecom’s disaster recovery site in Melbourne, which ensures business continuity for its customers. In the unlikely event that the main data center in Sydney goes down, there will be nearly instantaneous failover to the Melbourne facility.

Results

The new networking platform has enabled Macquarie Telecom to deliver operational savings while supporting its significant growth in complex managed hosting. The company is now the market leader in Australia.

“With the intelligent infrastructure built around the MX960 routers and ISG2000 security solutions, Macquarie Telecom is now able to provide customers with more granular and customized services and service-level agreements. New services to customers can also be added quickly and easily, in a way that is highly available and secure,” said Mr. Nicholas Bojko, Technical Services Manager, Hosting, Macquarie Telecom.

For example, Macquarie can offer a firewall service or a bypass non-firewall service through the same infrastructure, simply by turning the service on or off. This has resulted in about 50 percent reduction in the effort needed to provision the new service.

The ease with which the standards-based Junos Software can be integrated with existing devices and systems has reduced Macquarie’s integration costs by about 20 percent. At the same time, far less training is required because users now have to familiarize themselves with only one platform.

The green approach—the consolidation of switches and routers—has also enabled Macquarie Telecom to save on energy consumption and space in the data center, while leaving plenty of headroom to grow. It is estimated that the current setup will allow Macquarie to scale up to 10 times the services offered.

Finally, the new intelligent network has been designed with a high level of redundancy, allowing Macquarie to ensure HA with 100 percent uptime.

Next Steps and Lessons Learned

The intelligent approach to its network and data center design has become a core part of Macquarie Telecom’s corporate strategy. It is now leveraging this intelligent infrastructure as it embarks on an 18-month plan to migrate its customers to its new HA system.

For More Information

To find out more about Juniper Networks products and solutions, visit www.juniper.net.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

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