**RICOH**
imagine. change.

We're the IT
in everything.

**Network Ten.**

## Challenge

Network Ten had a need to consolidate its five disparate networks into two converged Wide Area Networks (WANs). This project was conducted to save costs associated with running the network, to increase its capacity and performance and to mitigate risks. Ricoh IT Services has provided ongoing network design, implementation, support, monitoring and management of the Network Ten network for 7 years, and were chosen for this project after a competitive request for proposal process. The selection was based on Ricoh IT Services' high level of networking expertise and capability, as well as their successful track record in delivering innovative, complex and challenging network projects for Network Ten in the past.

This project presented a significant amount of difficulty due to Network Ten's specific requirements for guaranteed service quality, unusual data traffic profiles, the large scale of the project and the dependence of Network Ten's core business functions on the 24x7 operation of the network.

The converged network would have to support critical and sensitive applications such as real-time on-air video, voice, video file transfers, telemetry and typical business applications. To meet strict requirements around quality of service, Ricoh IT Services had to ensure there would be sufficient bandwidth between all sites at any given time to prevent dropped data and voice packets for critical traffic, which could cause noticeable glitches in Network Ten's programming as well as problems with other applications.

Strict time constraints also added to the project's challenges.

### About Network Ten

Network Ten is one of Australia's largest media companies, operating three free-to-air television channels in Australia's five mainland metropolitan markets of Sydney, Melbourne, Adelaide, Brisbane and Perth.

Network Ten needed to get the project completed as fast as possible, which resulted in many changes being implemented during business hours. Also having a large bearing on the project timing were the telecommunications service providers, for as soon as their services came online, Ricoh IT Services had to be ready to start implementing their changes.

With all these challenges in mind, diligent and skilled planning was required to ensure there would be no impact on the Network Ten business..

## Solution: Converged Services WAN

The three original networks were converged into a single VPLS network with gigabit access speeds to all studio sites in major cities across Australia. The two back-up networks were converged into a second similar VPLS network.

In its standard configuration, a single VLAN on a VPLS network was not a suitable option for Network Ten's high volume of multiple-site drop-sensitive data and voice traffic. To support Network Ten's requirements, Ricoh IT Services needed to design a network that allowed for more granular control of traffic between any two sites.

## Network Design

Ricoh IT Services worked closely with Network Ten's in-house team to gain an in-depth understanding of the unique needs of their network and applications.

Glenn Carrick, Network Communications Manager at Network Ten, monitored the design closely to ensure it would meet Network Ten's stringent performance requirements.

"Ricoh IT Services designed a meshed point-to-point network to be overlayed on the VPLS network, producing a greater amount of traffic control between all sites. The overlay allowed the amount of available bandwidth between any two sites to be controlled, but maintained the ability to quickly ramp up bandwidth between two sites if the need arose.

"We were confident with Ricoh IT Services' design, so gave the go-ahead for the implementation work to commence," said Mr. Carrick.

## The Implementation

Time constraints and the need to work within the schedules of the telecommunications service providers meant most changes had to be performed during business hours.

To ensure the work was carried out proficiently and without error, highly skilled Ricoh IT Services Engineers were called upon to complete the complex changes. Network Ten Engineers maintained a high level of vigilance throughout all changes to ensure there were no impacts on the business.

An extensive strategy of thorough planning was completed to seamlessly migrate the networks and mitigate the risk of impact to the business during changes. The benefit of this planning became evident as all changes were made with minimal impact and no business critical issues.

## The Result

Network Ten now runs on two high-bandwidth meshed end-to-end networks; one supporting their regular activities and one providing back-up coverage in case of a failure in the first.

Speaking about the benefits of the new converged WAN to Network Ten's business, Jason Tuendemann, Head of Technology and Infrastructure at Network Ten, stated "The new design has allowed us to achieve significant cost savings in running the Network Ten network, while meeting Ten's business requirements and creating a more manageable and stable environment."

## Benefits

- Significant cost savings due to a more efficient network structure;
- Increased performance and manageability;
- Increased bandwidth available between sites with less chance of bottlenecks;
- A back-up network that can be used without risking reduced performance;
- Ongoing network monitoring and management to ensure a reliable network.

## Ongoing Network Performance

To ensure reliable ongoing network performance Network Ten signed Ricoh IT Services to a three year contract for their Network Management.

Through its Network Management service, Ricoh IT Services provides 24x7 monitoring and management delivering visibility and proactive maintenance to ensure business continuity.

To fulfil the unique requirements of managing Network Ten's new network, Ricoh IT Services modified its Network monitoring tools to include additional routing protocol checks that monitor the state of neighbour relationships, providing greater visibility of point-to-point links in the meshed network.

**RICOH**
imagine. change.

**IT Services**
We're the IT in everything.

Find out more by visiting **itservices.ricoh.com.au** or call **13 RICOH** to arrange an appointment with one of our highly trained IT Services Specialists today.