



Case Study:

Working with Sydney Airport

Sydney Airport's network upgrade a departure from high costs and reliability problems

Challenge

Sydney Airports Corporation Limited (SACL) wanted to ensure the availability and security of its critical infrastructure while reducing the amount of time staff spent on network configuration and maintenance. Its network was based on an outdated technology that was becoming increasingly difficult and expensive to support and couldn't cope with the demands of current and planned applications.

Solution

Cerulean built a new campus-wide network using networking equipment from Cisco Systems and a variety of other vendors in just seven months. Cerulean monitors the network 24x7 from its operations centre, detects problems and repairs them. Cerulean has also expanded the airport's wireless network and improved security.

Key benefits

Cerulean's in-depth knowledge and good relationships with networking vendors ensured a workable and cost-effective solution for Sydney Airport. Cerulean has consistently met its contracted response times for problem resolution. The airport and Cerulean have worked together to maintain the availability of the network and its ability to handle a variety of new applications.

Background

Sydney Airport – Australia's busiest and most important commercial airport – was opened in 1920 and is one of the oldest continuously operating airports in the world. It is a dynamic economic hub, requiring the services of some 500 businesses and organisations to meet the needs of airport users. It is also one of the major employers in Sydney, providing an estimated 62,000 jobs. The airport caters to more than 260,000 aircraft movements and 28.3 million passengers each year.

The airport's network consists of over 600 nodes spanning two terminals, the airfield and airport customers such as the airlines and retailers in the terminals. The airfield management system alone comprises 23,000 network points.

"Technology is embedding itself into every nook and cranny of our business and our network infrastructure was becoming increasingly critical," said Andrew Hamilton, IT&T Commercial Services Manager at Sydney Airport. "Over the last few years we have had a much greater emphasis on security so it was also essential that the network was secure and bulletproof."

Lacking the internal expertise to upgrade the network itself, Sydney Airport needed a partner that could provide 24-hour monitoring and maintenance services and technical expertise on configuration and upgrades.

Sydney Airport's previous networking infrastructure was built in the mid-1990s based on ATM LANE, a protocol was increasingly difficult and expensive to support. The technology could not provide the bandwidth required to handle the airport's increasing use of its network to carry critical traffic such as surveillance cameras, airfield runway lighting, security, check-in, pollution control systems, building control systems and its growing wireless network – more than 150 applications altogether.

“

It's a real partnership. We couldn't have hoped for a better, stronger relationship with a supplier.

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Andrew Hamilton
IT&T Commercial Services Manager
Sydney Airport

Sydney Airport has an extensive wireless network that provides wireless internet access for passengers and services for operational activities such as baggage handling. The airport needed to ensure the wireless system would operate effectively and securely.

“We have one of Australia's largest wireless hotspots and it gets used for critical business operations ... Aircraft can't leave if wireless isn't working and it gets complicated with all those big bits of metal moving around. We need a reliable wireless network with rock-solid network transport connecting the wireless access points,” said Andrew Hamilton.

The latest technology and services

The airport put the network upgrade out to tender in 2003. Cerulean responded to the tender and succeeded with a range of services including the network upgrade, 24-hour remote monitoring and management of the infrastructure and improvements to the airport's wireless network.

Over seven months, Cerulean upgraded the existing ATM LANE infrastructure to gigabit Ethernet on Cisco networking equipment. Cerulean staff had to work during the curfew hours of 11pm to 6am to minimise the disruption to airport operations. The new equipment was put in place in parallel to the existing network and then switched over after testing and bedding down. The network was designed for availability so that failure of any single component would not compromise vital applications.

Cerulean remotely monitors the network – almost 600 devices, including over 100 switches – 24 hours a day, 7 days of the week from its operations centre in Sydney. To ensure network performance is adequate, Cerulean provides real-time and consolidated statistics that allow it to analyse trends and make recommendations on configuration changes or upgrades. Cerulean also handles the change management process of any configuration changes.

Where possible, Cerulean staff detect and resolve faults from the operations centre, usually within 15 minutes of the problem occurring. If problems can't be fixed remotely, a Cerulean technician is onsite within an hour of detecting a problem and repairs the problem within four hours.

Cerulean also helped the airport expand its wireless network and ensure it remains secure. The network now covers two of the airport's three terminals and a great deal of the airfield. Cerulean implemented a layered security architecture across the wireless network including firewalls, authentication and encryption. It also monitors the wireless network from its operations centre.

Why Cerulean?

As a critical component of Australia's infrastructure, Sydney Airport needed a vendor that could ensure it met the community expectations for reliability and security.

“We chose Cerulean because of their exceptional capabilities: the number of trained staff, the ability to respond quickly to issues and to handle a fast transition from a previous provider,” said Andrew Hamilton, IT&T Commercial Services Manager at Sydney Airport. “Cerulean also gave us a very astute technical account manager who understood our business.”

Cerulean's close relationship with networking vendor Cisco was another advantage for Sydney Airport.

“It was obvious Cerulean and Cisco had deep linkages and we felt that would work to our benefit,” said Andrew Hamilton. “This was particularly so in the wireless space where we had complex issues based on critical infrastructure and variety of organisations connecting to it.”

This relationship allowed Cerulean to put together a solution that was workable and cost-effective. Cerulean's experience and technical knowledge gave Sydney Airport confidence in its capability to migrate to the new network and provide support, warranty and maintenance. Cerulean consistently meets its agreed response times for problem resolution.

“Cerulean has consistently been very professional and flexible, and is a pleasure to deal with,” said Andrew Hamilton. “Given the complexity of everything we're trying to achieve here, it's amazing how routine our meetings are. If there have been problems, they have been solved quickly.”

Having a Cerulean project engineer working onsite at Sydney Airport has given Cerulean an insight into the airport's business at an operational level and been instrumental in making the relationship productive.

Cerulean Sales Representative

Telephone: +61 2 9928 0000 (Australia)

Visit us at: cerulean.com.au

Or visit Sydney Airport at: sydneyairport.com.au

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