Nine Sites Become One as Telco Moves to New Unified Wireless Campus

EXECUTIVE SUMMARY

OPTUS

- Integrated Telecommunications Provider
- Sydney, Australia
- Approx 10,000 staff

BUSINESS CHALLENGE

- Improve employee communication and collaboration within new campus
- Create showcase environment to demonstrate leadership and credibility as provider of IP solutions
- Provide secure connectivity even in outdoor areas of the campus

NETWORK SOLUTION

- Cisco Unified Wireless Solution

BUSINESS RESULTS

- Employees freed from desk-bound connectivity, getting even more secure outdoor access
- Tracking features help assist location of staff and equipment
- Foundation for wireless voice communication

Company Description

Optus is Australia's second largest telecommunications company and a leader in integrated telecommunications, with approximately 10,000 staff. The company serves more than six million customers each day with a diverse range of telecommunications services including mobile, local, national and long-distance telephony, business network services, Internet and satellite services, subscription television, and information and communication services and solutions.

In 2001, SingTel became the parent company of Optus, further adding to their strengths as a strategic telecommunications player in the Asia-Pacific region.

Business Challenge

With its continued business growth, Optus decided to consolidate nine of its sites in Sydney into a new purpose-built campus at Macquarie Park, North Ryde, about 15 km north of Sydney central. This new campus will bring significant cost savings in rental and consolidated operations, providing more than 84,000 square metres of commercial space, comprising six campus-style office buildings with retail facilities, a child care centre, gymnasium, and food court.

The campus is also a showcase of mobility and communications. Optus decided to place their telephony infrastructure, as well as their call centre services on a complete IP network with wireless connectivity, and integrated voice, video, and data services, creating a robust platform on which to deploy additional services to boost staff productivity. Through the move Optus plans to improve business productivity, collaboration, and network security and create a showcase environment to demonstrate Optus' leadership and credibility in IP solution delivery using their corporate products.

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Network Solution

Transparent integration was the key requirement for Optus in moving to an end-to-end, Quality of Service (QoS) enabled, IP network platform. In their search for an implementation partner, Optus decided that a full Cisco IP network would be the ideal choice for their communications needs. In particular, they were impressed by the willingness of the combined Cisco and Alphawest team to provide detailed demonstrations of the technology in action, and how the technology would bring about real productivity and operational benefits for their staff.

Being an existing user of Cisco core networks was also a deciding factor. As Optus Director Corporate Services, Jon Wilkie says, "Our previous offices used Cisco networks, so we were already familiar with the capabilities of the products. Optus' positive experiences naturally led us to asking Cisco about what solutions would best suit the needs that Optus had for such an important project."

The proposed solution included a core network of Cisco Catalyst 6500 Series Switches, providing approximately 11,000 LAN ports and intrusion prevention systems. To provide telephony features, more than 7500 units of Cisco 7941G IP Phones were deployed. The network has also been provisioned to run the Cisco Unified Personal Communicator software. This is a productivity tool that provides presence and contact preference information, call history, click to dial, and voicemail access from the desktop. In turn, the software is delivering significant benefit in consolidating communications media in Optus.

The Optus contact centre will be powered by the Cisco Unified Contact Centre Solution, providing intelligent routing of service calls to appropriate agents anywhere on the campus, based on resource availability, and provide them with detailed customer profiles for individualised service. The solution would create one of the largest call centres running on Cisco technology in the Asia-Pacific market. The Cisco solution is an extension of the existing Hosted Unified Contact Centre platform, which supports Optus' other internal contact centres and also provides contact centre services to more than 80 Optus corporate and government customers.

"As our 18 month relationship with Cisco and Alphawest on this project progressed, we realised how important our decision was to appoint a single vendor solution for our fully integrated end-to-end solution."

– John Wilkie, Optus Director Corporate Services

Optus also wanted to employ wireless as an overlay technology throughout the campus to further boost productivity. The Cisco team was able to provide a secure wireless connectivity model for the campus that could be managed from the same central console as the rest of the Cisco network. Optus was impressed with the Cisco and Alphawest team's ability to demonstrate and test how the wireless LAN (WLAN) would be integrated with the wired LAN.

As a result, Optus decided to also invest in the Cisco Unified Wireless Solution, deploying some 230 Cisco Wireless 1130 Access Points (APs) throughout the campus. By adding the Cisco wireless local area network (WLAN) Access Controller for Catalyst 6500 Series Switches, all elements of security, mobility, Quality of Service (QoS), and other functions essential to WLAN operations could be efficiently managed across the entire wireless enterprise. Further, with the extremely lightweight Cisco wireless APs receiving power via their LAN cables, there is no need to install separate, expensive electrical cables.

The use of the Cisco WLAN Location Appliance allows tracking of the physical location of wireless devices to within a few meters, and the Cisco Building Broadband Service Manager (BBSM) provides Internet access management features and functionality to wired and wireless networks for guests on the campus.

The WLAN / LAN solution also includes a demonstration of Network Access Control (NAC), showing how devices connected to the wireless network can be checked dynamically to help ensure that they meet corporate security requirements, such as having the latest software patches, and security updates.

"As our 18 month relationship with Cisco and Alphawest on this project progressed, we realised how important our decision was to appoint a single vendor solution for our fully integrated end-to-end solution," says Wilkie.

Alphawest, a Cisco Gold Certified Partner, was selected by Optus to deploy the solution based upon their experience and expertise delivering and customising IP solutions and enterprise networks. As one of Australia's leading Unified Communications solution providers to government and commercial organisations, Alphawest is at the forefront of the voice-data convergence wave with strong processes and methods to deliver a consistently highly valued customer experience.

Garry Henley, chief executive officer, Alphawest, says, "Alphawest was very pleased to have been awarded the deployment services contract for Optus' Macquarie Park project. Our technical skills and enviable proven record of successfully deploying sophisticated converged solutions, combined with Cisco's expertise, helped us secure the business. Being involved in one of the largest IP network and communications rollouts in Australia has given us valuable insight and further validated that our flexible customer-centric approach is a highly desirable attribute sought.

PRODUCT LIST

Cisco Unified Wireless LAN
- Cisco 1130 Wireless Access Point
- WLAN Access Controller (WiSM for Catalyst 6500)
- WLAN Location Appliance
- WLAN Management WCS
- Broadband Guest Access Manager (BBSM)

Unified Communications
- Personal Communicator
- Unified Video Advantage - Video Camera & Client Software
- 7970G & 7941G IP Phones

Cisco Campus Security
- Intrusion Prevention Module (IPS for Catalyst 6500)
- Security Event Manager (MARS)
- Cisco ACS
- Cisco Secure Services Client

Business Value

Implementation work began in February 2007 and ran until just before the first staff moves, although design work and testing had begun some time earlier. Optus began moving approximately 6500 staff to the new campus in July 2007. Some of the benefits that they will experience include:

Extensive Wireless Coverage

Wireless access is now provided throughout the facility and available to all employees as well as guests. Whether at their desks, in meeting rooms, or outdoors on the campus, employees will continue to stay connected to corporate applications. In the event that Optus plays host to external consultants or business guests, the Cisco BBSM will allow simple user authentication, configuration, and tracking of guest access and activities.

Traffic Management and Quality of Service (QoS)

The Cisco solution will also make it easier for Optus to manage both the wired and wireless LAN, monitor data traffic, and identify bottlenecks. Using a centralised management system, Optus will be able to automate device manageability tasks, gain visibility to the network's health and capability, and identify and localise network trouble.

Scalability

As the campus' physical footprint expands, Optus can easily add more access points. On the other hand, if certain physical locations are expected to contain more users, the wireless network can be configured to divert more bandwidth resources to the areas of high load. In the case of the Unified Communications, more IP phones can simply be plugged in when needed. It is this scalability that will allow Optus to keep up with increasing demands in the future.

Security and Access

Another important feature of the Cisco wireless network will be the ability to segment the network into virtual LANs. Depending on the role and department that the user belongs to, Optus will be able to create logical networks using the network management tool.

Cisco access points and wireless LAN controllers can simultaneously act as data-serving devices and security sensors. Cisco access points and controllers are equipped with a robust library of attack signatures that are used to detect wireless threats, which could include the use of unauthorised APs and the creation of unplanned networks.

NAC features of the wireless network allow Optus to identify whether networked devices such as laptops or IP phones are compliant with a network's security policies and help repair any vulnerability before permitting access to the network. Network administrators are able to passively scan all

connected laptops to check whether they have the latest security updates and virus signatures installed.

Location Tracking

The Cisco Wireless Location Appliance will improve visibility and tracking. For example, it can be used to determine the location of employees, as well as to locate and track shared equipment, such as vehicles in the compound, or safety equipment. Alarms can be set up to help IT staff detect the removal of these devices from the premises.

Next steps

This solution will become the standard operating environment for all of Optus' LAN/WLAN and voice deployments over the next three years. The wireless network may also be used for wireless voice communications in the future. By providing employees with Dual Mode phones or enabling them to use their laptops (equipped with the Cisco Personal Unified Communicator), calls can be routed to users wherever they are located on the campus. Dual Mode phones allow users to transparently switch between a cellular network and the wireless network.

Cisco Australia and New Zealand managing director, Les Williamson says, "Optus, Cisco, and Alphawest have worked together for many years. The consolidation of Optus' offices to the new Macquarie Park campus provides Optus with an opportunity to create a truly interactive communications environment where Optus can embrace the benefits of a service-oriented, intelligent networking infrastructure. Cisco has a strong relationship with Alphawest, and we are delighted to be partnering with them to help Optus create such an environment for the benefit of its staff and its customers."

"The new Optus Centre Sydney is a tremendous showcase of convergent technology," says Wilkie. "The Cisco technology delivered by Alphawest will help provide the increase in productivity and collaboration that are amongst the goals from the relocation."

For More Information

To find out more about the Cisco Unified Wireless Network solution, visit: www.cisco.com/go/unifiedwireless

To find out more about Alphawest, visit: www.alphawest.com.au

For find out more about Optus, visit: www.optus.com.au

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