OAK Telecom Regional Library Group Case Study

Background

Library groups all have similar requirements: To provide staff data communications; get access to third party lending services over the Internet; and to allow patrons (the public) access to the Internet, usually through public WiFi services in and around the libraries.

This group "Library" also decided that the network should support a Voice-over-IP (VoIP) telephone system hosted at head office, but including phones in all the libraries.

The issue is to provide a low-cost, secure network which connects these sites together in a simple solution which requires no complex operations by the users. The network must also have a low fixed cost monthly cost, with low support costs and good, reliable performance. Access to the Internet should also be of good quality and reliability.

Regional Library Group

Library decided to implement a Private Network solution from OAK Telecom with ten remote libraries using ADSL2+ connections (up to 20Mpbs/1Mbps) and a 6M/6M SHDSL connection at head office to create the private network for staff data and VoIP.

For Internet access, it was decided to use a Central Internet Access with a managed firewall which has direct access to both the private network and the main Internet node in Melbourne. This also proves to be much more price effective, as well as avoiding a bottleneck at head office.

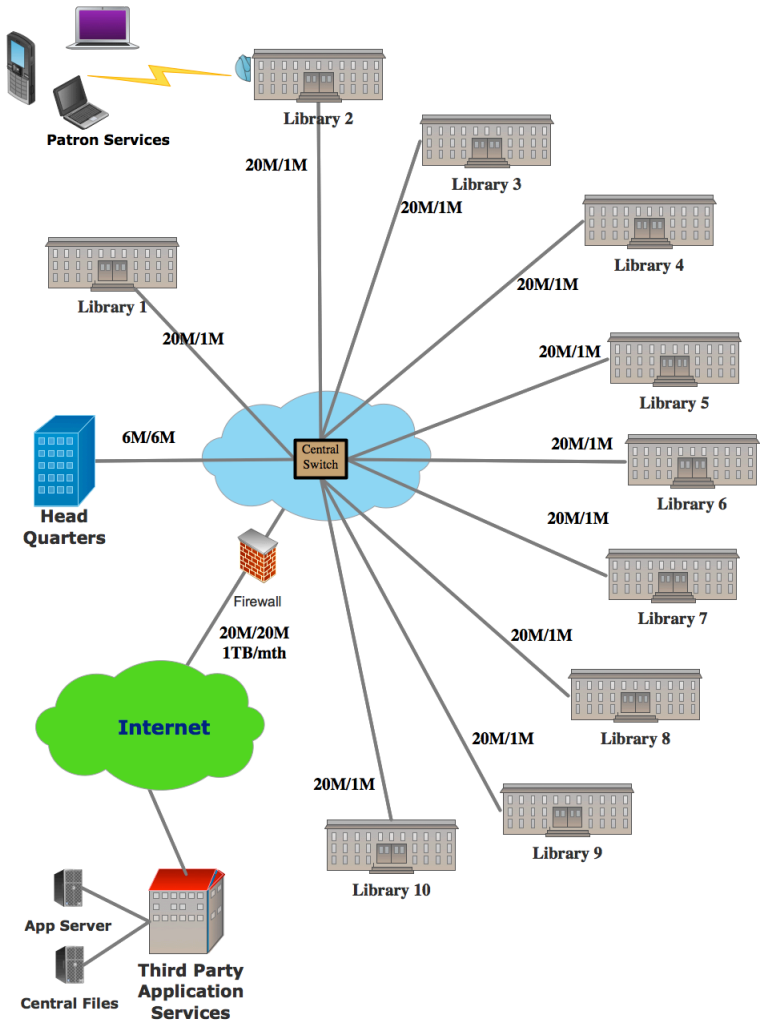
Benefits of the OAK Telecom Private Network

The advantages of a private network are that it is like extending the blue cable on your office LAN to other locations simply, reliably and in complete security. The private network is completely secure (except where it touches the Internet, when it should be through a firewall). The upload and download charges are included in the fixed monthly price, so there are no surprises.

A cheaper alternative can be constructed by creating a virtual private network (VPN) across the Internet, but the results are poorer and less certain. In a private network the lower latency and jitter also provide a much improved end-user experience (particularly for VoIP and video).

The head office LAN forms part of the private network.

Regional Library Diagram



Future Directions

The use of multiple VLANs on the private network, enabling end-to-end separation and prioritisation, is of great interest to this type of application generally. One VLAN can be used for staff data communications, another for public WiFi, another for VoIP, etc. This will bring immediate benefits, especially as QoS becomes available end-to-end, even on third party carrier remote links.

NBN connections can be added to the private network just like any other connections, plus ADSL links can be bonded together to increase capacity economically where NBN doesn't yet exist and other types of connection can be too expensive (as in this case study with links to two of the larger libraries).

This case study has been prepared anonymously for website publication, but OAK Telecom can provide actual information privately or contact details for referees. Please contact us for further details or a free consultation.