Manawatu Stewart Centre:
NETWORK SERVER PROJECT

Sam Ralston

Academic Supervisor
School of Information Systems & Computing
Universal College of Learning

`s.ralston@ucol.ac.nz`

Nigel Grimstrup

Student, Bachelor of Information and Communications
technology (Applied)
School of Information Systems & Computing
Universal College of Learning

This project, undertaken by Nigel Grimstrup, was divided into the following deliverables:

1. Analysis of the computing infrastructure and the needs of end-users and recommendations
2. The introduction of an operational network server
3. Introduction of network resources to staff and user manuals
4. The technical documentation of the new completed network

The analysis of the centre found the following issues:

- The network server's software was inadequate for network domain duties
- Staff and Clients were using computers as stand alone terminals
- The network hub and dialup Internet access needed upgrading for projected operations.

The recommendations made included:

- Install and configure a new network operating system on the server for file and print services
- Create a network domain under centralised system administration control
- Upgrade to ADSL or Wireless Internet connection
- Utilise a surplus computer as an independent hardware-assisted firewall
- Create system administration procedure documentation (backup, security, managing users)
- Producing technical documentation of the network for future reference.

Software for the project was evaluated in a controlled environment and an appropriate network operating system was chosen for the server. A hardware-assisted firewall was introduced with network filtering, management, and traffic audit capabilities. Internet access was improved and was shared to all the users via new switches installed in the building.

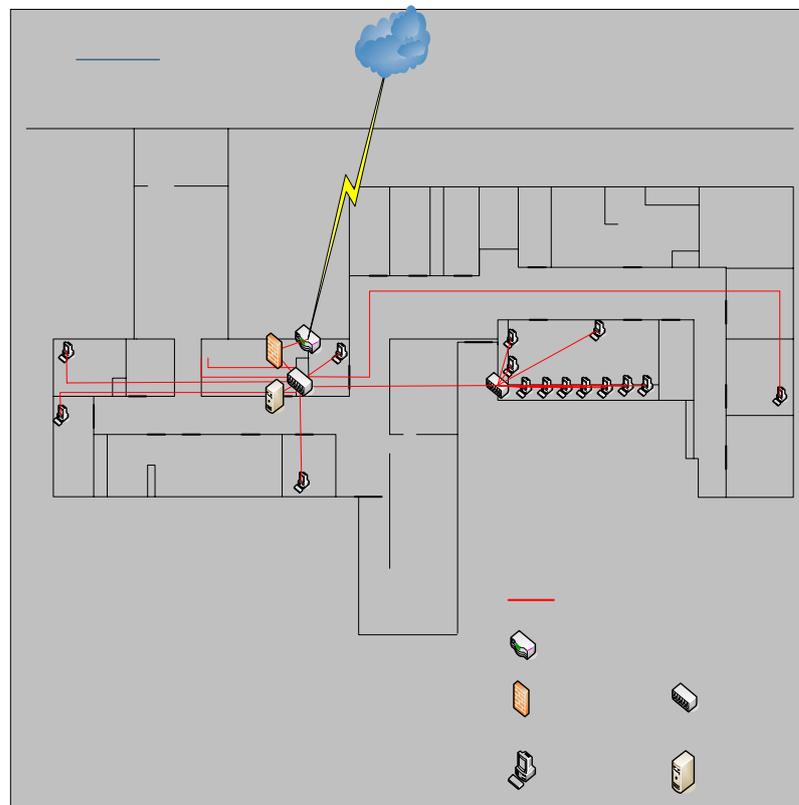The project concluded with the testing of network performance, training of staff, and technical documentation of the finished network.

Figure 1. Physical topology