
Enquest LAN Upgrade – Case Study.

Business Challenge

Enquest PLC has undergone rapid growth during the last few years since their move to their current location in Consort House. User numbers have increased significantly and now occupy two floors as well as an adjacent building. Meanwhile their back office server and storage infrastructure has expanded to suit and was due to undergo further changes with a move towards virtualisation and deployment of a new ERP system. The existing Local Area Network (LAN) had grown organically as the company expanded, but their requirements were starting to exceed the capabilities of the overall design.

To support these changes and to allow for further growth, Enquest asked Network DNA to design a LAN upgrade that would provide increased performance, capacity and reliability.

Solution

To meet these requirements it was apparent that a new core would be required. Network DNA recommended the Cisco Catalyst 6500 series chassis-based switches, using the newly released Supervisor 2T which doubles the performance available. A pair of 6509 switches were installed, configured using Cisco's Virtual Switching System (VSS) technology which allows them to act as a single logical device, while still providing full redundancy. The new core provides 10 Gigabit Ethernet (10GE) connections to the new servers, to a pair of Netapp storage appliances and to the access switches serving the user population. The 6509s act as a local router, passing traffic between separate VLANs with no performance penalty. This allows Enquest to provide separate logical networks where appropriate while still maintaining full performance. Multi Chassis Etherchannel permits links from both core switches to be combined into logical channels, with all links live and forwarding traffic.

To serve other computer room devices Network DNA installed a stack of Cisco Catalyst 3750X switches, each with dual power supplies. This stack connects to the core with four 10GE links, using to provide 80 gigabit total. Each core switch connects to two different 3750X switches, meaning that any one could be taken out of service while still retaining connectivity to the rest.

Connections to the user switches are also made at 10GE, over the internal building fibre. Each floor is served by two separate links, one from each core switch, for a total of 20GE to each floor. Speeds could be increased without further redesign by the addition of more 10GE links.

Deployment of the core and computer room switches was done without downtime, by building and testing the new configuration alongside the existing live network. Once the new core was tested

and handed over, the old and new networks were linked and Enquest could migrate their devices at their own convenience.

Results

Enquest have a stable and reliable network core, into which all their new facilities can connect. Cisco technology allows for redundant connections, which are all live in normal operation with no wasteful separate backup paths. 10GE connections to their centralised storage provide the performance needed without the requirement for separate Fibre Channel or other dedicated storage networking equipment.

As the company grows, additional capacity can be readily be added into the design.

For additional information including company background, case studies and other details please visit our website or email info@network-dna.com.

<http://www.network-dna.com>
