

Case Study



North Staffordshire IT Service

North Staffordshire IT Service install a scalable telephony infrastructure to reduce revenue spend and to future-proof any further investment

“ The successful implementation of the project highlights the good working relationship between the IT Service and ANS. ANS provided experienced Cisco Engineers with a thorough understanding of the local business requirements. The meticulous planning and communication between the IT service and ANS guaranteed that the project was completed to a very high standard”.

**Adam Cooper, Associate Director IT,
North Staffordshire Combined Healthcare NHS Trust**

Company Background

North Staffordshire IT Service is an agency that provides IT and Telecommunications services to two PCTs (NHS North Staffordshire and NHS Stoke-on-Trent) and a mental health trust (Combined Healthcare NHS Trust) in North Staffordshire. The trusts employ over 6,800 staff who, between them, are located in over 65 premises.

ANS Group and North Staffordshire Combined Healthcare NHS Trust have formed a partnership and worked together on a number of successful projects over the past four years. Knowledge and expertise within the NHS sector has allowed ANS to develop a key understanding of IT objectives, business drivers and challenges within any NHS organisation. As a Cisco Gold Partner and an advanced unified communications specialist, ANS were well equipped to design and deliver the IP Telephony solution.

The Challenge

The local telecommunications infrastructure was mixed and comprised of both managed solutions and legacy PBX solutions. Figure 1 shows the existing architecture.

The hub of the existing environment was an Ericsson MD111, located at a hospital near the centre of North Staffordshire. This system was due for replacement but the site where it was located, was scheduled for closure. Many of the sites used BT Featurenet, a managed solution, which can prove to be expensive for telephones that do not make a lot of calls, as each line has a call commitment of £100 in addition to the annual line rental. A Cisco Communications Manager V4.3 (CCM V4.3) cluster was operating in several administrative buildings, with approximately 750 devices attached to it. Finally, community-based staff used mobile phones that connected to the voice network via a Mobex link connected to the Ericsson MD111.

The local community were in the process of rationalising the number of premises they operated from. This consolidation would result in the closure of some of the larger premises and lead to more staff working in the community without a fixed base.

The business objectives were to:

- Reduce revenue spend on both the line rental and call charges, without compromising service.
- Provide a telecommunications service that can support mobile working.
- Increase the functionality of telecommunications services on offer, to support staff in managing telephone calls.
- Minimise the impact on the business of the migration to the new solution.

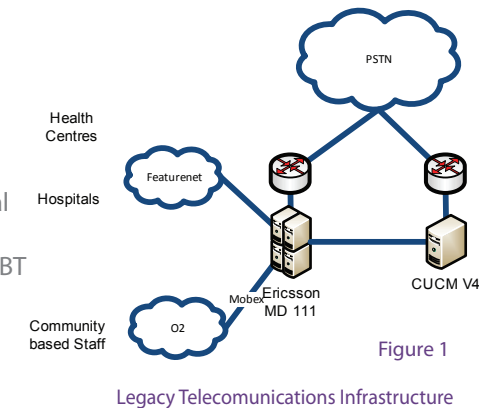


Figure 1

Legacy Telecommunications Infrastructure



Case Study

The technology objectives were to:

- Consolidate the telephony infrastructure to reduce the number of systems in use.
- Provide a convergent solution to push voice traffic over the Community of Interest Network
- Replace legacy telecommunication systems with a scalable upgradeable solution to future proof any investment

The Solution

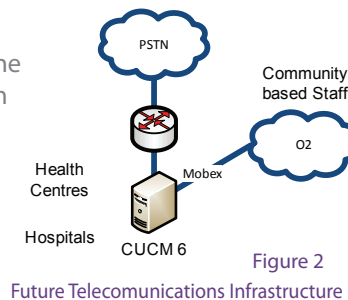
The trust already had a strong investment in Cisco technology. In order to make best use of this investment, the chosen solution was to unify all existing services onto a single Cisco Communications Manager Version 6.1 (CCM V6.1) cluster. Figure 2 below shows the new simplified configuration. The new version includes added user functionality and will connect the whole organisation and all end users, allowing everyone to share the benefits of using one network.

The CCM V6.1 design consisted of 7 Cisco MCS 7825 and MCS 7835 servers, with telephony servers placed at strategic points around the network, such as hospitals and health centres, to ensure maximum uptime, end user features and legacy interoperability.

Additionally, a Cisco Unified IP IVR was added to aid with call distribution and to ease the burden currently placed on reception staff in both main sites and Health Centres, helping customers to achieve their desired service far quicker. Many other services have also been added to the IVR, including information for customers on topical events such as Pandemic (Swine) Flu.

Several Cisco voice gateways were deployed to not only cater for local breakout from each site and incoming calls, but also to keep the sites' local phone facilities up and running in the event of a network breakdown.

An additional function within the new version, is a high availability Cisco Unified Unity Voicemail system built using 2 Cisco MCS 7835 servers and integrated into the current North Staffs deployment of MS Exchange (email and calendar). This enables the increasingly busy end user to collect their personal voicemail when they are at their desk, but also to have it delivered to their Email Inbox, so they can forward, save or listen to voicemail messages whenever they have email access.



The migration to the new configuration in figure 2 could not be implemented in one step and a staged approach was opted for to minimise the disruption to existing telephone services while the project was implemented. The individual stages are listed below:

- Build a new CCM V6.1 cluster.
- Connect CCM V4.3 cluster to CCM V6.1 cluster with an inter cluster trunk.
- Migrate existing 750 devices from CCM V4.3 cluster to CCM V6.1 cluster.
- Move interfaces to Ericsson MD111, Featurenet and O2 (Mobex link) to CCM V6.1 cluster
- Remove CCM V4.3 cluster.
- Migrate sites from Featurenet to CCM V6.1 cluster.

The project is currently in stage 6. Figure 3 shows the current telecommunications configuration. The CCM V6.1 cluster contains:

- 750 devices migrated from CCM V4.3 cluster.
- 1,300 devices migrated from Featurenet.

By the end of the financial year the plan is to have migrated a further 250 devices off the Ericsson MD111 to CCM V6.1., leaving approximately 1,500 devices to migrate over the next 2 years.

The Business Benefits

Despite the scale of the project, the implementation and distribution process has run smoothly. Thus far, all previously used phone systems remained interoperable with each other until the migration was complete, resulting in minimum downtime (which was pre-arranged to take place out of hours). This resulted in a near seamless changeover from an end-user perspective.

Business benefits include the elimination of recurring revenues estimated to be in the order of £150,000 to date, ease of management and maintenance which will directly benefit the IT Department by freeing up staff resource. The increased functionality is of direct benefit to the end-user, and the ease of deployment means limited disruption to all users. The full hardware refresh eliminated risks to the business, as the telephony system is now running on the latest Cisco technology, bringing with it additional functionality and the ability to run more applications in the future depending on business requirements.

