

Case Study

Newcastle NHS Trust

Siemens Enterprise Communications speeds up patient care by delivering on their promise of Open Communications

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Summary

Newcastle NHS Trust is undergoing one of the biggest renovation projects in its history to create state-of-the-art facilities across its four hospitals. Upgrading to Siemens HiPath 8000 delivered scalability and has delivered on Siemens’ Open Communications philosophy with an open standards-based platform on which to integrate new applications and devices. In addition, IP telephony has simplified MACs as staff relocate from one building to another during construction of the new site. It means users have portability to work anywhere within the corporate network without losing their phone number or voice preferences.

Newcastle NHS Trust has also invested in Siemens HiPath OpenScape, a unified communications application that lets users locate and collaborate more easily with colleagues. This not only has productivity benefits, but in a hospital environment being able to assemble teams of doctors rapidly can also save lives.

Challenges

- Provide a scalable, robust and secure communications platform
- Enable IP telephony to ease MACs and give users portability
- Minimise disruption to patients and staff
- Adhere to open standards in line with the Trust’s IT policies
- Seamlessly integrate a native SIP platform into a large iSDX / HiPath 4000 network

The solution

- Siemens HiPath 8000 dual server, split node
- Siemens HiPath OpenScape
- Telephonetics VIP speech recognition, and voice messaging

Top benefits

- The Trust now has one of the most advanced communications network in the NHS
- Applications can be easily integrated into the Trust’s new SIP-based communications platform

- Carrier grade resilience ensures that even calls in progress are not lost. In the unlikely event of a failure of one of the servers, the call instantly switches to the second server
- MACs are much simpler using IP telephony, reducing operational costs as the hospital relocates to its new site and helps minimise the management burden
- Users are embracing Siemens’ vision of LifeWorks, in which communications are seamless regardless of location, network or device
- Users can retain the same phone number wherever they’re based on the network
- OpenScape speeds up patient care by making it easier for multi-disciplinary teams of doctors to communicate and collaborate more flexibly
- Teams can also be assembled rapidly in times of urgency, for example when a transplant operation is necessary
- The presence aware capabilities within OpenScape open up new ways of working in the future
- Newcastle NHS Trust has a partner in Siemens that it can trust

Communication for the open minded

Siemens Enterprise Communications: www.siemens.com/open

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Sue Wicks
Telecommunications Manager at Newcastle NHS Trust.

Newcastle NHS Trust

The Newcastle upon Tyne Hospitals NHS Trust was established on April 1, 1998 following the merger of the Royal Victoria Infirmary (RVI) and Associated Hospitals NHS Trust and the Freeman Group of Hospitals NHS Trust.

The Trust employs 12,500 staff in the region and is currently embarking on the largest construction project in its history – and certainly the biggest project in healthcare ever to be undertaken in the North East. The ‘Transforming the Newcastle Hospitals’ project involves the re-location of all acute hospital services from the Newcastle General Hospital site to modern state-of-the-art facilities at the current site of the RVI and Freeman hospitals. The project is costing £300m and is due to finish in 2013.

The communications challenge

Undertaking an office move is demanding at the best of times, but in a hospital the challenges are magnified tenfold. NHS Trusts need to consider not only the needs of employees, but also those of patients who cannot put their treatment on hold until new facilities are built and ready for use.

Patient care is of utmost importance to Newcastle NHS Trust, so the ‘Transforming the Newcastle Hospitals’ project is being carried out in stages to minimise disruption to patients during their stay. There are also the needs of staff to consider: with traditional telephony systems, moving people’s desks requires a substantial amount of rewiring to ensure they can re-connect to the network and retain the same telephone number. This is expensive and time-consuming for the communications team.

An IP network eliminates these problems by enabling people to carry their number and preferences with them to different

locations on the corporate network. Newcastle NHS Trust had already invested in an IP network when it purchased the HiPath 4000 in 2004 from Siemens Enterprise Communications. It was also relying largely on its analogue and DECT communications. DECT is used at the Trust instead of the more traditional bleeper system and has been a success with some 1,300 users currently spread over 3 sites. However, the Trust wanted a solution that could support more users, as it had already invested in extra extensions. With the ‘Transforming the Newcastle Hospitals’ project underway, it decided to see what options were available to upgrade and future-proof its communications investment for the years ahead.

Siemens HiPath platforms deliver scalability and open standards

It was around the time that Newcastle NHS Trust was considering its options that Siemens Enterprise Communications launched the HiPath 8000, a SIP-based real-time IP system. There was the option of building on the present HiPath 4000 which already had over 350 IP extensions in place. The Trust were conscious their existing investment in the HiPath 4000 could be developed and really brought into the fore through using Session Initiation Protocol (SIP) open standards rather than the proprietary H323 protocol.

The Trust was invited to see the HiPath 8000 in action and based on that meeting, decided that this was the way it wanted to develop its communications for the future. “The Siemens Open Communications philosophy closely matched our own vision” explains Sue Wicks, Telecommunications Manager at Newcastle NHS Trust. “We already had a Siemens voice environment and this enabled us to future-proof our network by bringing together our IT and

telephony, whilst ensuring we have a flexible and scalable solution.” Keen to protect the Trust’s existing investment whilst following the migration path, the Siemens team were able to SIP-enable the HiPath 4000 systems already in place, providing direct connectivity to the HiPath 8000 using the existing HiPath 4000 IP interfaces and phones. The HiPath 4000 will also act as the DECT, analogue and PSTN server and will remain as a part of the new solution.

The Trust is moving towards IP telephony in stages in line with its building schedule. So far, there are 350 users on the HiPath 8000 communications system, most of which are based on the Royal Victoria Infirmary site. As staff transfer to the new building on the Freeman site, this will increase to more than 1,000 extensions. In the medium-term, the Trust intends to provide the ultimate in resilience through connecting approximately 10,000 users across differing sites in Newcastle, through two fully redundant HiPath 8000 servers located in separate areas across their campus. This means that should one fail or connectivity between them be lost, the other server will instantly take over.

Voice communications at Walkergate Hospital, the smallest site belonging to the Trust, are already based entirely on IP telephony. The advantage for the communications team of having IP telephony is simplicity when making moves, adds and changes (MACs) as staff move from one building to another. “From a telephony point of view, the continual shifting means hundreds of MACs,” explains Peter Batey, IT Manager at Newcastle NHS Trust. “By using IP telephony, users can just take their phone with them when they move, plug it in and start making calls straightaway.”

One of the major advantages of moving

to Siemens HiPath 8000 is that it is based on the open standards Session Initiation Protocol (SIP), which means that Newcastle Hospitals will be able to easily integrate applications into the new IP-based communications environment. "It's our philosophy to use open standards where possible in the telephony area, as it makes it easier to integrate different applications and devices," continues Peter.

One such application is Siemens' presence and collaboration communications software suite HiPath OpenScape, which enables users to locate and contact colleagues quickly and easily. Newcastle NHS Trust plans to use OpenScape to speed up patient care by enabling multi-disciplinary teams of doctors to collaborate and communicate with one another faster than they were able to before. "To be honest I haven't really seen a comparable product," says Peter. "It's also very easy to integrate with the HiPath 8000."

There can be up to ten doctors in each multi-disciplinary team working across the region, who meet to discuss certain diseases and patients in their care. "OpenScape will make it easier to collaborate virtually, as at the moment we're using video conferencing. It will enable doctors to see when others are available and give them greater flexibility to hold meetings at much shorter notice," says Peter.

OpenScape can speed up internal decision-making and nowhere is speed more important than in the specialist transplant unit at the hospitals. When an organ becomes available, there's only a short period of time in which the hospital has to contact the medical teams that are required. OpenScape offers the potential of speeding up this process by connecting people quickly and effectively.

There's also the potential to integrate OpenScape with other applications, such

as the Picture Archiving Communication System (PACS) or electronic patient records, so consultants can refer to X-ray images or lab results when discussing patient care.

"Other target users are senior executives, who are highly mobile and need to stay in touch," adds Peter. "All in all, we estimate we'll have about 200 users of OpenScape eventually."

Newcastle NHS Trust benefits from advanced communications

Newcastle NHS Trust certainly doesn't believe in taking half measures. The construction project will give the Trust state-of-the-art medical facilities, while its investment in Siemens' communications technology provides it with the one of the most advanced communications networks in the NHS.

Leadership achievements aside, Newcastle NHS Trust is already seeing the benefits of its communications investment. "The move to IP telephony delivered benefits straightaway and can be managed remotely, so I don't have to call separate phone and IT engineers anymore, we don't need to spend time routing cables to let people move buildings and we can work a lot more efficiently," says Sue. "There's also a cost saving, as before we would have been putting in a new network point and PSTN socket. So we expect the cost savings to be pretty phenomenal."

"We don't want to run multiple networks anymore for access control, voice and data," agrees Peter. "Using the data network makes it more flexible, helps us achieve economies of scale and, of course, there are operational cost savings too."

Through developments to its communication infrastructure, Newcastle NHS Trust is now embodying Siemens' vision of LifeWorks, in which

communications are seamless regardless of location, network or device. "From a portability perspective, the HiPath 8000 makes life a lot simpler for our staff when they're moving office, as all they need is a network point to plug their phone or PDA in, before they're back in service," adds Sue. "It doesn't matter how many times they move around the building as they can take their number with them wherever they roam on site."

HiPath OpenScape may only be in trial phase but already the Trust envisages new ways of working based on its presence aware capabilities. For example, GPs could be included in the patient consultation process to provide background on individual patients. OpenScape makes virtual collaboration much easier, so doctors wouldn't even need to leave their local surgery to contribute to discussions, improving productivity and reducing waiting lists.

The networking team at Newcastle NHS Trust feel they have a partner in Siemens that they can trust. "Siemens keeps us on track with how technology is moving and is always on hand if we have any questions," says Sue.

"Their engineers are always very helpful and we have a four-hour response time for maintenance, which works for us. We're like a family really," she laughs. "It's certainly not a one-sided relationship: they'll approach us if they think we'll be interested in any new products and we're not afraid to ask them any questions. Ultimately we're investing to improve the Trust's communications and when the building work's finished, we'll not only have a fabulous modern hospital but also one of the most advanced communications systems in the NHS."

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