



CASE STUDY Healthcare

Plymouth Hospital Goes Wireless With Aruba To Enable Mobile Electronic Patient Records

Plymouth Hospitals NHS Trust is an acute and general hospital located in the South-West of England. The Trust provides services to 460,000 people in the local area as well as specialist treatments to a population of up to two million. The Trust turned to Aruba to deliver a secure wireless LAN to support key medical applications and support the introduction of mobile Electronic Patient Records

In 2006, The Trust's planned deployment of i.Clinical Manager (iCM) – an application allowing phlebotomists to order and receive blood tests online - meant that they needed to deploy a wireless LAN (WLAN) to support mobile access to clinical records. Integrating with Electronic Patient Records, the WLAN would allow clinical staff to place orders, access blood results and obtain other information from their laptops without having to go back to their offices or nursing stations.

“At the outset we recognised that security was a key issue that had to be addressed in choosing a WLAN solution,” said Jason Scott, senior telecom engineer at Plymouth Hospitals, “We reviewed and tested a number of different vendors and came to the conclusion that Aruba Networks offered the best security, and, it turned out, the lowest costs.”

Two years later, the hospital has deployed nearly 300 wireless Access Points from Aruba Networks and has installed three 6000 series controllers to allow expansion of the network.

Plymouth has not looked back.

With some 85% of the hospital covered by the WLAN, not only has the iCM application been successfully deployed; but so have a number of other key applications, including an initial deployment of 30 Spectralink wireless voice over IP (VoIP) phones.

The hospital is now starting to look at extending the VoIP application – possibly with solutions specifically designed for healthcare environments - and this may even lead to deployment of the WLAN into the open spaces outside the hospital building. Real time location tracking is also being considered: Running over the same WLAN as the other applications, it will reduce the time taken to locate key equipment, and potentially help with security at the hospital.

The deployment of the wireless network and its associated applications has been managed in-house by the IT department using existing resources. “It only took a month to get the wireless network up and running.” said Scott. “The support we received from Aruba during the testing phase made deployment easy, and the engineering support from our chosen integrator has been excellent.”

Compared to an open plan office environment, a hospital is inherently more challenging for wireless networks. Wards of varying shape and sizes, small offices, long corridors, loads of electronic equipment, and a lot of people, mean that the radio frequency environment is cluttered and constantly changing. To accommodate this, Plymouth took advantage of the built in adaptive nature of the Aruba wireless network by which the wireless access points co-ordinate their operation via the mobility controller to provide the best coverage, channel and power settings automatically.



Requirements:

- Secure transmission of confidential data across the WLAN
- Support for Voice over IP
- WLAN that adapts to a constantly changing RF environment.

Solution:

- 3x Aruba 6000 mobility controllers equipped with M3 modules
- 300 x AP65 Access Points
- PEF license
- WIDS license
- Voice license

Benefits:

- Access to patient data throughout the hospital
- Adaptive Radio Management automatically compensates for changing RF environment
- Single point of management

“A wireless network is one technology that clearly changes our working practices for the better: It’s easy to see the benefits it brings to staff and patients, and the return on investment is straightforward.”

Jason Scott
Senior Telecoms Engineer
Plymouth Hospitals NHS Trust



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