

# Mobilizing Healthcare for More Efficient and Accurate Delivery

Customer Case Study



With Cisco BYOD Smart Solution, NHS Tayside makes staff more productive while bringing care closer to patients

## EXECUTIVE SUMMARY

**Customer Name:** NHS Tayside

**Industry:** Healthcare

**Location:** Scotland

**Number of Employees:** 15,000

### Challenge

- Take advantage of growing trend for personal device use in workplace
- Improve access to medical information and services without compromising network and data security

### Solution

- Cisco Borderless Network foundation
- Cisco BYOD Smart Solution secured with Cisco Identity Services Engine
- Cisco Prime for unified management

### Results

- Improved access to clinical applications and information
- Much greater return from digitizing healthcare services
- Centralized policy-based control helps ensure compliance and greater IT efficiency

## Challenge

With 15,000 staff working across 120 sites, NHS Tayside prides itself on being a world leader in applying innovative IT solutions to improve the quality of care and operational efficiency. For example, it has pioneered the use of Cisco TelePresence® to deliver remote healthcare, and implemented a Cisco® Borderless Network to improve connectivity to medical information and services.

The latest challenge was to embrace mobility and the bring-your-own-device (BYOD) revolution. Consultants and clinicians especially wanted to access core applications, such as imaging and e-prescriptions, on their iPads and laptops from the patient's bedside and elsewhere. Other staff expressed a similar desire to use their own smartphones. Given strict patient data compliance requirements, NHS Tayside needed to be able to apply granular policies to allow or deny users access to particular applications and services from specific devices and locations.

"We needed a whole new level of security," says Paul Tovey, head of IT infrastructure at NHS Tayside. "One that was context aware so we could see when, where, and how individuals were connecting to the network."

## Solution

NHS Tayside complemented its existing Cisco Borderless Network by adding a Cisco BYOD Smart Solution, the foundation of which is the Cisco Identity Services Engine (ISE) forming an all-in-one enterprise control platform. "The BYOD Smart Solution gives us a universal method capable of working across all networks and sites, with the flexibility to extend those controls to partner sites and remote locations in the future," says Tovey.



**“Before, we required numerous systems and processes to deliver limited remote and mobile access to staff; it was a huge burden. Now, we meet requests faster with an approach that’s both open and, where it needs to be, locked down and protected.”**

Paul Tovey  
Head of IT Infrastructure  
NHS Tayside

The Cisco platform makes possible a universal method because, unlike traditional security approaches, Cisco ISE has powerful new capabilities that support the consistent enforcement of context-based policies, with complete visibility across wired, wireless, or VPN domains. Other features include:

- Integrated authentication, authorizing, and accounting (AAA), profiling, posture, and guest services
- Device identification using probes, embedded device sensors, endpoint scanning, and device feed services
- Greater visibility and control of endpoints, and simplified BYOD on-boarding through self-service registration

To make best use of its IT investment, NHS Tayside has deployed other Cisco Borderless Network innovations. For example, Cisco AnyConnect®, combined with OfficeExtend, provides reliable, effective VPN access, helping staff working from home or on the move to be more productive. Security is enhanced with Cisco ASA 5500 Series Next-Generation Firewalls, which deliver a powerful suite of security services. Added to this, Cisco Wide Area Application Services (WAAS) has improved application performance, especially important for moving images and big data around the network.

Wireless reliability was also given detailed attention. “Hospitals tend to have lots of reflective surfaces, such as glass and metal, which can cause wireless LAN performance issues,” says Tovey. “So we’ve used the latest Aironet® access points with CleanAir® technology to minimize radio frequency interference.” Finally, Prime™ brings everything together by providing a common management platform to simplify network configuration, administration, monitoring, and troubleshooting.

## Results

Currently some 250 users are taking advantage of BYOD on iPads, smartphones, Androids, and laptops. They range from clinicians, administrative, and technical staff to external consultants, partners, and contractors. “Before, we required numerous systems and processes to deliver limited remote and mobile access to staff; it was a huge burden,” says Tovey. “Now, we can meet requests faster with a network approach that’s both open and, where it needs to be, locked down and protected.”

BYOD is making a huge difference to operational efficiency and the way healthcare is delivered. For example, extending access to pharmacy applications makes it easier for medical staff to automate and validate patient medication, thereby mitigating the risk of paper-based errors.

As NHS Tayside continues to digitize and move clinical services online, the Cisco BYOD Smart Solution will help grow return on investment by helping ensure these services can be extended safely to the widest audience possible. Already clinicians, for example, can view high-resolution images on iPads as they walk around the wards. Underpinned with Cisco WAAS bandwidth optimization and remote caching, these images transfer rapidly and consistently from data center servers to users’ tablets.

Using Cisco ISE to administer network policy management, the organization can specify precisely how authorized personnel can connect, from which devices and locations, and what they are allowed to do. For example, staff might be granted secure VPN access to systems using AnyConnect and OfficeExtend. Users can be automatically recognized, authenticated, and granted (or denied) access based on how and where they are trying to connect. “With our BYOD Smart Solution, we can facilitate and secure access centrally. The move to ISE has vastly simplified the process, which is easing both compliance and management burdens,” says Tovey.

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Arranging guest access is simple. Visiting consultants and clinicians are granted wireless access to particular applications for a set period, usually a day, and from authorized wireless locations only. “Previously, guest access had to be arranged in advance,” says Tovey. “They would have to physically visit beforehand to have their device authenticated, which was time consuming for everyone.”

### Next Steps

NHS Tayside has ambitious plans for the future. By combining Cisco ISE with AnyConnect, for example, community-based nursing will benefit from being able to access up-to-date medical records while visiting patients in their homes. “We can facilitate, prioritize, and restrict access to any web-based application as appropriate,” says Tovey.

Already, the organization is looking to extend ISE across the wired domain, realizing the vision of unified access management for all users, fixed and mobile. It is also in the process of deploying Cisco collaboration tools such as Jabber®, IP telephony, and WebEx®—as well as video-based training—to mobile users on Androids and iPads.

### For More Information

Learn more about Cisco architectures and solutions featured in this case study go to:

[www.cisco.com/go/borderless](http://www.cisco.com/go/borderless)

[www.cisco.com/go/byod](http://www.cisco.com/go/byod)

[www.cisco.com/go/ise](http://www.cisco.com/go/ise)

[www.cisco.com/go/prime](http://www.cisco.com/go/prime)

### Product List

#### Management

- Cisco Identity Services Engine
- Cisco Prime

#### VPN and Security

- Cisco AnyConnect
- Cisco OfficeExtend

#### Wireless

- Cisco Aironet 3500 Series Wireless Access Points with CleanAir technology

#### Application Networking Services

- Cisco Wide Area Application Services



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