



NetScout Improves Application Service Delivery for National Health Service Wales

Ensures Well-Being of Essential Medical and Business Services for Patients, Doctors, and Administrators in the U.K.'s Publicly-funded Healthcare System

Overview

Region

EMEA, Cardiff, Wales, United Kingdom

Business Challenge

- Maintain cost and operational advantages of a centralized network and applications management approach serving a geographically dispersed organization
- Ensure high availability of critical medical and business applications across a network of 200 hospitals, 1,200 general practitioners, and 60,000 users
- Reduce time and resources required to identify problem areas and rapidly resolve issues which could impact the application environment

NetScout Solution

- Delivers a unified platform to support monitoring and analysis of bandwidth utilization, application performance, and key indicators such as latency and response times
- Provides visibility into all medical and business applications on the network
- Brings visibility to traffic on servers within the virtualized network environment

Business Value

- A network that provides the economies of scale and cost benefits associated with a reliable, centralized application environment
- Cost savings by enabling more efficient use of available bandwidth and infrastructure with the NHS Wales Informatics Service network
- Reliable communications between remote sites and hospitals by ensuring that prioritized applications are consistently available



Customer Profile

The NHS Wales Informatics Service is an IT-based organization which provides network and application services to the National Health Service organization in Wales, including hospitals. Services include the development and support of specialized software packages for medical and business applications. A number of the software packages developed by the NHS Wales Informatics Service are also deployed throughout the United Kingdom as part of the National Health Service, the nation's publicly-funded healthcare system. NHS Wales Informatics Service manages IT-based clinical systems, web-based applications, children's health applications, business applications such as prescription management as part of the U.K.'s National Hospital Pharmacy System, echogram delivery, remote access applications for doctors, and WAN links between the various organizations that are part of the network.

The NHS Wales Informatics Service team is responsible for managing two sets of networks which support delivery of applications and services to patients, medical professionals, and administrators: The NHS Wales network, which is a LAN consisting of 300 users; and the NHS WAN, consisting of 1,200 General Practitioners, 200 hospitals, and a total of 60,000 users distributed throughout Wales. The advanced network infrastructure is based on the Cisco Nexus® solution, with Axial Systems providing managed service and support for the network equipment.

NHS Wales Informatics Service Challenges

With such a large and physically-dispersed network supporting life- and business-critical applications, NHS Wales Informatics Service sought a more effective way to leverage IT resources as its network and application domain

continued to grow. NHS Wales Informatics Service sought to maintain cost and operational advantages of a centralized network and applications management approach serving a geographically dispersed organization, ensure the high availability of critical medical and business applications across a network of 200 hospitals, 1,200 general practitioners, and 60,000 users, and reduce the time and resources required to identify problem areas and rapidly resolve issues which could impact the application environment.

The NHS Wales Informatics Service went on an ambitious search for a solution that would enable them to track IP traffic and response times, monitor bandwidth and network usage, and distinguish between network and application performance issues. After thoroughly evaluating several vendors over a period of months, the NHS Wales Informatics Service selected the nGenius® solution. During the evaluation process, the nGenius solution was able to clearly identify network and application problems and significantly reduce issue resolution times. These test results were thus used as a business case to expand the solution.

NetScout Solution

The installation of the nGenius solution immediately provided the NHS Wales Informatics Service with visibility into all applications on network. The IT team can now monitor and categorize traffic and packets into different applications. nGenius Intelligent Data Sources generate key performance metrics, such as traffic, application and service utilization, conversations, error conditions, resource utilization, response time, and data captures on physical and virtual links. NHS Wales Informatics Service also makes use of the nGenius appliances in its application development environment to measure key performance indicators. The IT team can now look at application response times at

different points in the network to identify potential problems, and resolve traffic abnormalities. Added network visibility enables them to tell what is running on a particular network link, how much bandwidth is being used, and determine the latency.

The NHS Wales Informatics Service has deployed additional products that are part of the nGenius solution, including NetFlow analysis and nGenius Virtual Agents. nGenius Virtual Agents provide a software-based Intelligent Data Source that extends the reach of the nGenius solution to virtual computing environments, an ideal approach for the network's extensive virtual server environment. The nGenius Virtual Agent brings visibility to traffic inside virtualized servers for the IT support team, and complements the investment that the NHS Wales Informatics Service has made in existing hardware instrumentation. Using the Virtual Agent gives the IT team, in the management center, visibility into the network from multiple locations across the network without the expense of having to install expensive dedicated hardware.

Business Value

The nGenius solution is enabling the NHS Wales Informatics Service to make more efficient use of IT resources and reduce overall operating expenses even as the network expands. Most importantly from a business and operational standpoint, the IT team can confidently maintain a network that provides the cost benefits associated with a reliable, centralized application environment. For example, a single set of pharmacy applications can be deployed across the NHS Wales network of 200 hospitals, bringing consistency, simplified operation, and economies of scale that would be lost in a more distributed environment. The centralized pharmacy applications can track prescriptions, labeling, doctors, and patients, and be monitored anywhere using the nGenius solution.

Bandwidth utilization can now be closely monitored for cost savings, and reports can be generated and shared with other organizations within the National Health Service groups that NHS Wales Informatics Service supports. Conversely, the nGenius solution can be used to identify and report the need for greater network resources for prioritized applications that require more than best-effort bandwidth, such as video and Voice over IP (VoIP). Voice traffic between hospitals across Wales is handled by SIP trunking, and has specific minimum bandwidth requirements which must be met at all times. NHS Wales Informatics Service also supports the Wales Health video network, and x-rays and real-time echograms on live high-definition video screens must be monitored from any location to ensure consistent performance and high availability, and this can be done with the NetScout solution.

The extra VoIP reporting capabilities on the nGenius InfiniStream® appliance have saved the NHS Wales Informatics Service from having to replace costly servers and disrupt network services. The nGenius InfiniStream appliance can analyze packets to quickly identify VoIP service problems at local and remote sites. This saves the IT team significant time and expense, and helps ensure that the voice network is operating at optimum levels of service, a critical requirement when emergency medical services are at stake.



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