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Sussex Health Informatics Service

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Mark Walker | Sussex Health Informatics Service
Infrastructure Consultant

Introduction

Sussex Health Informatics Service (HIS), established by all NHS organizations across Sussex, plays a crucial role in the management and implementation of projects that form part of the National Programme for IT (NPfIT). It is responsible for the Sussex Community of Interest Network (COIN).

Sussex HIS set up the COIN to provide a single, secure private network. It connects over 200 sites, including five acute-care hospitals, connecting 25,000 users from 11 different organizations to critical applications and databases. The team implemented the Observer Performance Management Platform to provide visibility across the network.

The Challenge

Sussex HIS needed to upgrade its network to support a robust image archiving system and to replace the existing WAN with a newer, more resilient one. The project started over three years ago, and Sussex

estimates it will be completed two years from now at a total cost reaching $23.5 million.

To justify the investment, Sussex HIS required complete visibility to troubleshoot future rollouts and guarantee the delivery of sensitive, mission critical data to organizations across Sussex Health Authority.

The Solution

Mark Walker and Bruce Wright, two consultants at Sussex HIS, sought to build a solution that could implement and troubleshoot wired and wireless networks, VPNs, dial-ins and intrusion prevention systems.

They worked with PTC, a leading network tools consultancy and solution supplier, to build a blueprint for the future. A number of competitive solutions were tested, but the Observer Platform proved to be the winner.

Karen Dodson, Managing Director of PTC, explained, "The Observer Platform is the best network monitoring and analysis tool there is. It was built from the bottom up to meet the variable needs of organizations. Its beauty is its ability to hang modules off the core solution to meet differing needs of departments or seasonal fluctuations for example. It makes life very easy."

"Prior to working with PTC we took the objective decision to purchase a low-end product from a competitor. We tested the solutions with our general practitioners, but it soon became clear that it was unable to handle gigabit traffic without drops," explained Mark Walker.

The Observer Platform offered powerful application and Expert Analysis, MultiHop Analysis, and SNMP device management as its primary analyzer.

In addition, Sussex HIS deployed 15 Observer Gigabit Advanced Probes across its network and Observer Analyzer Suite to provide a portable, all-in-one field service solution.

Network Visibility

A high number of third party applications are hosted and run over the Sussex HIS WAN. Because these are not managed in-house it is vital that Sussex HIS has complete visibility to ensure they do not negatively impact network flow, and to enable potential problem diagnosis.

Of key concern was a new digital image archival system which Sussex HIS was implementing to replace traditional X-ray machines. The picture-archiving vendor told the team they would need to invest in gigabit WAN links to ensure performance. However, the Observer Platform was able to test the network and established that the existing 100 MB links were sufficient.

"Analysis showed that the need for more gigabit WAN links was only necessary on rare occasions," Walker explained. "The Observer Platform has given us immediate ROI by proving we don't need to go and invest in these huge links."

In addition, Observer's MultiHop Analysis tracks conversations through multiple segments, hops and routes, which allows the team to determine faults occurring on the applications and networks of the various organizations that make up Sussex Health Authority.

"With MultiHop Analysis, we can track all the way to the data path," Wright explained. "This is invaluable to us because we are able to trace application and network faults. It enables us to easily identify where the problem is, or who the problem is with. On many occasions it has allowed us to granularly identify exactly what a problem is with a specific supplier. This saves a lot of time and money because we're able to save on consultancy fees."

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The Business Case

Wright and Walker initially used the tools available in the Observer Platform to help them understand their network environment and then to establish the exact reasons for performance issues.

They also used the integrated wireless and VoIP functions to build a business case for encrypting vulnerable areas on the Sussex HIS network. With the platform's VoIP interface, it was easy to capture data and reconstruct phone calls to ensure future compliance and regulation.

"There were arguments against investing in encryption technologies," Walker explained. "This was resolved quickly when we were able to prove to the customer and the supplier the security issues surrounding unencrypted voice and why the investment was needed."

The Future

Sussex HIS continues to use the Observer Platform and are currently reviewing the addition of Observer Apex to provide customer-facing reports on security and performance. They have also convinced clients to purchase the Observer Platform for end-to-end analysis.

Walker said implementing the solution was simple: "It is one of the easiest analyzer technologies I have come across. It is literally plug and go — very little preliminary work, very intuitive analysis."

About Sussex HIS

Sussex Health Informatics Service (HIS) is tasked with managing the IT services and infrastructure of 11 health trusts throughout Sussex, UK.

Encompassing 200 remote sites and over 25,000 users, the HIS network carries huge volumes of critical health data, including patient histories and digital imaging files.

Sussex HIS is responsible for the maintenance, troubleshooting, planning and implementation of this complex and widespread health network.