infraray

Reference Project

Flexible, yet secure, Network for 20+ Hospital System

Multi-Tenant Network Access Control (NAC) enables Security & Compliance across Healthcare Leader's Networks

Initial Situation

A regional healthcare provider group operates 21 hospitals and nursing homes, with more than 8,000 beds and 14,000 employees, serving 250,000 patients annually. Known for pioneering new technology to advance clinical care and enhance patient comfort, the group has implemented an innovative solution from Infraray for multi-tenant IT network infrastructure control, protection, and security compliance.

Challenge

In the rapidly changing landscape of medical technology, a multi-hospital chain needs to protect all its networks and patient data, yet allow test instruments and life-saving devices to access the appropriate parts of its networks to do their jobs.

The group had insufficient access control over its combined networks of roughly 50,000 switch ports and 23,000 endpoints. A security audit had highlighted this vulnerability. Lack of a current inventory and view of all IT assets made the diagnosis and locating of equipment faults a manual process, marked by guesswork and inefficiency.

The healthcare provider depends on network heterogeneity every day. The in-house IT group connects medical and computing devices, from a broad set of hardware vendors, to the network. The group defined its need for a robust, vendor-independent security solution to automate Network Access Control (NAC) for new endpoints, and replace its manual database of IT assets.

Solution

The in-house network management team studied the available options for both network port security and access control. Their goal was to find a solution that could cover both, and was also capable of profiling diverse endpoints over multiple networks. Ease of

"In just one week, Infraray technicians and our system administrator installed Infraray BICS at the pilot site. After a successful proof of concept, we moved to a full multi-tenant implementation. This gives all our hospitals local control and provides us with centralized control as well. This improves productivity, while ensuring ongoing endpoint security and audit compliance."

IT-Manager, Healthcare Provider Group

installation, the ability to oversee multiple networks, and security features to block network access by guests (patient and visitor) or unauthorized users, were also must-have criteria. In addition, they sought 802.1X-security capability for future deployment.

The IT team found that Infraray's Business Infrastructure Control System (BICS) met all these criteria, supports multi-tenancy, can interface with the group's SAP database, and persistently monitor all IT infrastructure.

Implementation

The pilot program began with two hospitals located in nearby cities. The primary BICS appliance was installed in a data center at company headquarters. A backup BICS appliance was installed at a remote data center 125 miles away.

One staff technician was able to complete the simple installation process, placing the BICS appliance at headquarters, where it tracks both the MAC address and IP address of each device and endpoint, on all the group's networks, along with their physical locations.

BICS also provides real-time updates to the SAP asset management database, enabling a current view of all the hospital networks.

Outcome

The group has progressed to a full multi-tenant environment. Each hospital and facility in the group now has a full, real-time view of its own network with security, control, and management over every port and endpoint, while headquarters oversees all the networks from one "single pane of glass."

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Benefits: Fast payback and ongoing command of the infrastructure

- ✓ **Confidentiality with Flexibility** - Patient records and medical devices are more secure. Vital medical devices can safely access the appropriate network at each hospital, enabling faster testing and treatment.
- ✓ **Stability -** Protects robustness of the network by immediately blocking misconfigured or rogue devices that could disrupt or impact the network.
- ✓ **Complete Information -** The networks now operate with precise, accurate information, enabling highly automated control and policy enforcement.
- ✓ **Confidence -** The IT department has confidence in both its network access control, and the quality of data about the IT infrastructure that BICS delivers.
- ✓ **Automation -** The BICS solution replaced a difficult network control process that was largely manual, making educated guesses as to where problems originated.
- ✓ **Accurate Internal Accounting -** BICS constantly monitors usage of every port on the network, enabling 100% accurate chargebacks to the correct user department.
- ✓ **Productivity -** IT staff now spends significantly less time and travel to diagnose and fix networkproblems.
- ✓ **Compliance -** BICS has closed the security gaps identified in a compliance audit.
- ✓ **Future Ready -** The healthcare group can add 802.1X security network by network; BICS was designed to handle 802.1X and MAC Layer-2 side by side.

This provides an efficient balance between centralized responsibility for the network, and site-by-site operational control

Now, every IT asset and medical device in each hospital's inventory is tagged and its profile maintained in the BICS virtual CMDB. BICS also helps with internal accounting, detecting and charging for the usage of each port to the appropriate business unit

Get in touch with us!

Infraray
Stromstr. 5
10555 Berlin / Germany

Tel. +49 (0)30 726 118 0
info@infraray.com