beta systems

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 lifesaving 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.

Benefits: Fast payback and ongoing command of the infrastructure

- **Secure Networks:** Medical devices have secure access, patient data is protected.
- **Stability:** Suspicious or incorrectly configured devices are automatically blocked.
- **Transparency & Automation:** Highly automated control replaces manual processes.
- **Productivity:** Less time spent on IT diagnostics and problem solving.
- **Accurate Internal Accounting:** Monitoring of all ports enables precise chargebacks.
- **Compliance:** Security gaps identified during audits have been closed.
- **Future Ready:** 802.1X security can be introduced step by step; BICS processes Layer 2 and 802.1X in parallel.

> *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

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 IT team was looking for a solution that would provide port security, access control (NAC), and device profiling, monitor multiple networks, block unauthorized access, and support future security features in accordance with 802.1X. Infraray BICS met these requirements, supports multi-tenancy, integrates with the group's SAP database, and monitors the IT infrastructure end-to-end.

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." 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.