



SOLITON AND SUMITOMO BESSHI HOSPITAL: A COMPLEX NETWORK MADE SIMPLE AND SECURE

Sumitomo Besshi is the largest hospital in the Toyo District of Ehime, providing healthcare to the local population. It values the partnerships it builds with patients and continually tries to innovate its services to be more flexible and secure.

Sumitomo Besshi Hospital deals with around 800 outpatients per day and has 360 beds to manage. Hundreds of staff members rely heavily on the hospital's IT network to run an efficient operation.

However, the hospital's network infrastructure had become increasingly complex and less secure after years of development. The need for an overhaul ultimately led Sumitomo Besshi to Soliton Systems.



The Challenge

"The hospital's network had become more complicated after a spate of renovations, and it was hard to respond when there were problems," explained Atsushi Norimatsu, the hospital's Information Systems Office Chief. "I wanted to build a simple network that was able to cope with the increase in renovations."

"We realised that we needed to integrate our separate networks," revealed Norimatsu. "After speaking to Soliton, it became clear that [the solution] would enable us to combine everything into one physical network and divide it into multiple networks via software."

There were three critical improvements required:

- a revised hospital network;
- the migration of 40 systems used for medical records; and
- improved patient services and amenities.

The hospital had five separate networks. Each network had its role, from personal patient information to staff communication and even an independent network for patient internet access.

This complicated setup was both a challenge to administer and difficult to keep secure. But it was further complicated by the physical wiring, which was cumbersome, unreliable and expensive to maintain.

This benefit alone would positively impact network management for the Sumitomo Besshi Hospital IT team, but another concern also needed addressing.





NetAttest EPS and NetAttest D3 provide complete device

Implementing NetAttest EPS and NetAttest D3 enabled the hospital to consolidate five previously separated networks, not by joining them together but by determining which network a device should connect to at connection time.

Sumitomo Besshi Hospital uses NetAttest EPS and NetAttest D3 to create VLANs on each network, delivering an efficient way to manage five separate networks. With the new solutions in place, hospital staff needed a way to connect their devices securely.

“I was looking for a product that could control the devices which connect to the network,” explained Norimatsu. “NetAttest EPS and NetAttest D3 was the right combination of solutions which provided the advanced installation we needed. The alternative solutions we considered proved to be too complex.”

The platform makes access decisions based on user and device credentials. NetAttest EPS provided the answer by ensuring users could only connect to specific networks. Then, once connected, NetAttest D3 issues an IP address to each device to ensure they reserve a place on the chosen network.

The additional stability and security provided by Soliton’s systems was a substantial improvement. It also benefits from the fact that each VLAN is independent, doesn’t interfere with adjacent networks and requires strong authentication to access.

Protecting personal data

“With so much confidential patient data and communication occurring across each network, secure device authentication was crucial.” Norimatsu explained, “It was essential to be able to prevent equipment from connecting to the network unless approved by system personnel.”

Then there’s the added complication in hospitals of medical devices that cannot use certificates for authentication. It could be because they are running on an old operating system or the vendor does not allow certificate installation. In these cases, the embedded features in NetAttest EPS to also handle MAC addresses make life easier for hospitals. It is possible to use MAC-address authentication to place these devices in a specific VLAN. The MAC address on the device will not change, and attackers do not have access to these machines. Norimatsu confirms, “with NetAttest EPS, you can easily perform MAC address authentication.”

From hospital-owned terminals to personal devices, there’s a diverse range of devices connecting to the hospital’s network each day. With NetAttest D3 acting as a DHCP server, there are no longer any fears over network congestion or data security.