



Salem Hospital

June 2001

A community hospital's technology renovation includes adding state-of-the-art diagnostic equipment and installing reliable, wire-speed Foundry Networks™ BigIron™ Layer 3 switches to power the network core.

About Salem Hospital

Salem Community Hospital, situated in Salem, Ohio, offers a number of modern medical services. The hospital strives to meet the needs of area residents by offering convenient, in-house services using state-of-the-art equipment, and administered by compassionate healthcare professionals. Advanced radiology equipment such as the computed tomography (CT) scan, nuclear medicine's SPECT camera, and magnetic resonance imaging (MRI) are recent additions that provide non-invasive methods of viewing the body's internal systems. This new technology provides patients with peace of mind by allowing physicians to more accurately and quickly to diagnose illnesses.

Salem Community Hospital is planning for continued growth and enhancing the health care services provided to its community in the new millennium. Upgrading the network is a vital part of Salem's technology renovation. The network infrastructure is a crucial part to the growth of any organization, requiring scalability without impacting performance. Foundry Networks™ delivers products that meet, and often exceed, this requirement.

Meeting the Current and Future Needs

Like many of today's complex networks, Salem Hospital's network grew from basic data connectivity requirements, utilizing an RS-232 based infrastructure to an Ethernet based LAN. In 1996, a small LAN infrastructure was deployed to allow many of

the departments within the hospital to share files and records. Over time, the demands for network access spread to more departments including the Lab, Medical Imaging and Payroll. Additional network applications were deployed, including a scheduling system and a surgery system. Given the natural growth of the network, additional resources have been added, including seven IBM RS/6000s and multiple Microsoft Windows® NT Servers. The existing network infrastructure was unable to cope with many of the new bandwidth-hungry applications, which include high-resolution image transfers and storage of large sound files.

The hospital decided to evaluate and deploy a new data network that would provide guaranteed performance to accommodate the ever-increasing bandwidth requirements of the hospital. A team of IT professionals at the hospital evaluated all available vendors to choose and implement a solution that met these goals. The team evaluated products and solutions based on a large number of criteria. Most critical of all were the ability to provide guaranteed performance to cope with current bandwidth requirements, scalability to meet increasing demand over the next five years, reliability, and availability.

Salem Hospital Chooses to Deploy the Foundry Solution

"There's no advantage in having a clear freeway if all of the on-ramps are backed up," says Mark L'Italien, Director of Information Systems at Salem Community Hospital. "When the time came to upgrade our network to support our current network bandwidth and 'future-proof' the growing infrastructure for the next five years, Foundry Networks™ was



the only vendor that could meet the requirements."

Foundry's FastIron™ and BigIron™ product families provided the foundation for Salem to build the network infrastructure to their specific requirements. The FastIron™ products provide a modular solution for the network edge, allowing for high-density 10/100 Ethernet and Gigabit Ethernet combinations for routing and switching. The BigIron™ products provide a modular solution for the network core, allowing for high density 10/100 Ethernet, Gigabit Ethernet, and Packet over SONET (POS) combinations for routing and switching.

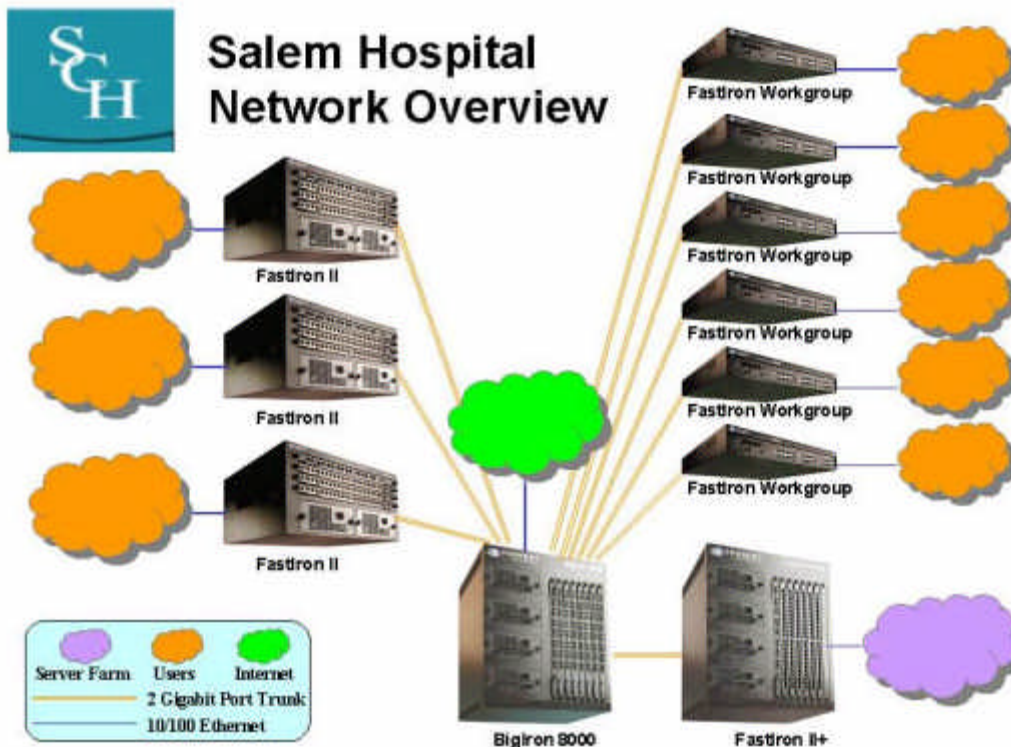
The design for Salem Hospital's network required distributed access of 10/100 Ethernet ports at the network edge, all collapsing back into a high-speed core switching fabric with Gigabit Ethernet ports. By implementing FastIron products at the network edge, Salem was able to take advantage of many features offered in the product line, including redundancy for both management modules and power supplies, superior scalability providing seamless growth paths, and industry leading performance to meet the demands of the network intensive

applications. For the smaller workgroup access, the FastIron Workgroup switch is a perfect fit, providing 24 10/100 Ethernet ports and two Gigabit Ethernet uplinks, which were trunked together to provide high bandwidth and redundancy. For the larger concentrations of end users, the FastIron II and FastIron II Plus products were used to provide 4 and 8 slots respectively for flexible configurations, allowing a mixture of 10/100 Ethernet ports and Gigabit Ethernet flexibility. Each FastIron chassis provides Gigabit Ethernet port trunking, which allows high bandwidth and availability for connecting to a Gigabit Ethernet core.

The Foundry Networks™ BigIron product family was selected for the network core, allowing aggregation of the edge Gigabit Ethernet trunks into a single high-speed non-blocking switch fabric. Taking advantage of such features as redundant management modules and power supplies, seamless growth paths to meet the future network needs, Salem was able to ensure high availability of the network core.

At the heart of Foundry Networks' products is IronWare, the software that powers the BigIron and FastIron™ solutions. By using

IronWare, Salem is able to configure individual VLANs for each of the edge switches; , using the Integrated Switch Routing feature, all the VLANs are distributed to and routed on the BigIron at the core. Further, Foundry's products offered Salem hospital with a cohesive, integrated and easy to use management interface across the BigIron and FastIron product line with enhanced security and seamless scalability options. This helped lower the overall total cost of ownership (TCO) of the network and increase the return on investment.



Along with the performance and growth requirements, Salem also required a product that would be easy to deploy and manage. Hospitals don't send patients home at the end of the day, lock the doors, and turn off the lights. In fact, hospitals run on a 24 x 7 schedule with few opportunities for down time, and Salem Community Hospital is no exception. One of the biggest issues that Salem faced was introducing the new network infrastructure without disrupting existing users. With a legacy IP subnet scheme in place, as well as other protocols (including IPX), Salem needed a solution that would allow for easy transition from the legacy environment to a new routed infrastructure.

Foundry Networks™ IronWare provides a unified, cohesive, easy-to-use familiar Command Line Interface (CLI) along with Web based GUI, minimizing the amount of training required for the engineers within Salem to deploy and manage the network. Through the use of Foundry's IronWare, Salem used integrated switching and routing to maintain existing subnets while allowing new DHCP users to be converted over time. In addition, the IPX connectivity was maintained without the need for overly complex routing scenarios. Foundry's IronWare allowed Salem to introduce the change one piece at a time and eliminated the need for a "flash cut" change.

IronWare provides extended features that enhance the versatility and manageability of the network. Some of these features include:

- Integrated Switching and Routing
- Enhanced VLAN tools, including subnet and protocol based VLANs.
- Security
 - Access Control Lists (ACL's)
 - Denial of Service (DoS) attack protection
- QoS
- Rate Limiting
- DHCP Assist (in the closet and in the core)

Salem also required an intuitive, easy-to-use method for managing the new infrastructure. Running on Microsoft Windows® NT, Salem has implemented Foundry Networks'™ IronView as a trap receiver and all around configuration and management tool. While Salem's engineers are well versed in the CLI,

IronView gives them one place to go for information on all of the deployed equipment, and makes it easy to train the operations staff.

By choosing to partner with Foundry, Salem Hospital is able to provide the best of breed network with industry leading performance, and ease of use. Ensuring that as network requirements grow, Foundry's product families will be there ensuring industry leading performance with seamless scalability and integration.

About Foundry Networks

Foundry Networks, Inc. (NASDAQ: FDRY) is a performance and total solutions leader for end-to-end switching and routing including Layer 2/3 LAN switches, Layer 3 Backbone switches, Layer 4-7 Web switches and Internet routers. Foundry's 3,750+ customers include the world's premier ISPs, Metro service providers, and enterprises including e-commerce sites, universities, entertainment, health and wellness, government, financial, and manufacturing companies.

Visit Foundry Networks on the World Wide Web at <http://www.foundrynet.com>

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