

# How to connect 1,000 users in just 9 days.



**T**ake 32 buildings on two northern Indiana VA campuses. Give them a single mission—providing timely, accessible, coordinated and comprehensive care. Add aging equipment with no technical support and insufficient bandwidth to provide adequate security, response time or redundancy. Top off with a full network upgrade from GTSI. The end result? Mission accomplished. And in less than half the estimated installation time.

## First, hire an experienced team.

In the spring of 2003, the VA Northern Indiana Health Care System (NIHCS) in Marion/Fort Wayne was using antiquated, 6-year-old Cabletron® 10/100 hubs that could not maximize bandwidth, along with slow 100MB uplinks and a flat, congested network with no virtual LANs and slow response times.



The NIHCS information resources management team knew that a major network upgrade was just what the doctor ordered.

“We do network upgrades like this every day,” says Ben Jones, Cisco Certified Internetworking Expert (CCIE), the lead GTSI engineer and project manager on the installation. “Our team’s extensive networking and communications experience helps us exceed our customers’ expectations for performance.”

The original NIHCS Statement of Work (SOW) estimated that it would take two engineers 5 weeks to complete the installation. With the help of NIHCS staff, three GTSI engineers got the job done in less than 2 weeks.

“The key concerns for VA were the age of its equipment and the lack of available technical support and upgrades,” says Tom Ervin, technical sales consultant for the GTSI Networking & Communications Technology Team.™ “We were able to give them a comprehensive solution that put these concerns to rest.”

## Get key questions answered first.

“We ask a lot of questions before building the solution,” says Ervin. “How are they using these applications? What systems would be most vulnerable to network shutdowns? Once we get the answers, we can more thoroughly meet the customer’s needs. VA wanted equipment that could intelligently handle voice, video and data traffic, as well as an upgrade in speed and flexibility.”

The installation was so smooth, because of expert pre-planning and pre-installation, that the schedule was shortened. The team only encountered one minor power supply problem onsite and quickly fixed it. Adds Ervin, “We resolved, on the spot, any hardware inventory issues that might have slowed the installation process.”

## Follow the right sequence.

Network upgrades like this usually involve three steps:

1. Develop a parallel network
2. Test/run the new network
3. Switch over to the new network

During development, the facility continues to run on the old network to ensure no service interruption.

The GTSI installation team, which included engineers Michael Todd and Brian Taggart (both CCIEs), took site surveys and equipment inventory; provided onsite staging, configuration and installation management; did connectivity testing; and tested and debugged applications.

As an extra bonus, GTSI engineers integrated the facility's legacy applications to the new, faster network. "After this installation," adds Ervin, "the new inline power switches set the stage to use Voice over IP (VoIP) if VA chooses. Being a Cisco® Certified Gold partner specializing in IP telephony, we have the engineering and procurement expertise to develop and install a VoIP solution using proven Cisco technology."

#### **Use only the best technology.**

The GTSI team, working with longstanding vendor partner Cisco Systems®, recommended Cisco Catalyst® 6500 Series Switches as the core of the solution.

According to Traci Grant, Cisco VA account manager, "As a trusted Cisco partner, GTSI knows that Cisco Catalyst gives VA exactly what it needs—maximum network uptime, increased user productivity, comprehensive network security and operational consistency." Installing the Cisco Catalyst intelligent multilayer switches gave VA the capability to support a converged network on a single, highly manageable platform.

#### **Tap one resource to get the right solution.**

The NIHCS got everything it wanted plus increased bandwidth, increased uptime and redundancy, and faster application response time—all on a network that's secure, well-managed and connected to the facility's legacy applications. VA also gets full technical and warranty support from one source, GTSI.

Subsequently GTSI has upgraded other legacy equipment. These two campuses now have VoIP capability and an up-to-date, supported network that will carry it into 2008.

So why did VA choose GTSI for this installation over all the other PCHS-2 contractors? Ervin puts it this way: "GTSI has many resources committed to serving VA's needs: our dedicated PCHS-2 sales team, our Cisco support and engineering staff, and our exclusive GTSI Technology Teams.™ Our Indiana customers knew that they could depend on us to build a great solution."



## SOLUTION SYNOPSIS

### VA CUSTOMER PROFILE

The VA Northern Indiana Health Care System (NIHCS) was formed in 1995 by the integration of the VA Medical Centers in Fort Wayne and Marion. The NIHCS has 243 hospital beds and 180 nursing home care unit beds. The Marion campus has 25 buildings and offers a full range of psychiatry services, nursing home care and extended care services. The Fort Wayne campus includes seven buildings and offers primary and secondary medical and surgical services.

### CHALLENGE

Both campuses had antiquated, end-of-life Cabletron hubs (not functioning as switches), a flat network with no virtual LANs and a congested network with slow response times. The key concerns were age of the equipment and lack of available technical support/upgrades.

### SOLUTION

GTSI provided and installed the network upgrade featuring new Cisco switches with inline power, as well as APC backup power supplies. This provides quality, volume of service and traffic management for a converged network. All users are now connected to a high-speed network. GTSI sales and engineering staff worked with GTSI Professional Services staff to provide complete project management for the installation.

### BENEFITS

The NIHCS enjoys increased bandwidth, increased uptime and redundancy, and faster application response time. The network is secure and well-managed. In addition, VA's legacy applications are integrated into the new, faster network. While not part of the original SOW, this added service was provided by GTSI as part of the installation, without going over budget. GTSI provides full technical and warranty support to VA for this equipment.

### RESULTS

GTSI continues to provide troubleshooting services to resolve any post-installation issues. Since the original upgrade, NIHCS has come back to GTSI to upgrade to newer equipment. The NIHCS, now well-positioned to implement newer technologies in the future, is VoIP capable with an up-to-date, supported network that will last for at least the next 5 years.

### TECHNOLOGY

- Cisco Catalyst 6500/4507/3500 Series Switches
- Black Box® fibre patch cables
- APC® Smart-UPS 5000VA (core) and 2200VA Smart Access switches (backup)
- Wrightline® custom-made enclosures

