

# City Maximizes Network for Improved Reliability and New Capabilities

City of Westerville, Ohio ensures business continuity by deploying a Cisco Unified Wired and Wireless Network to minimize downtime and maximize applications.

## Situation

The City of Westerville is tucked in the northeast corner of Ohio's fastest-growing region. This city of 37,000 residents is located just 10 miles from the state capital of Columbus, and is a leader in job creation in the region. Todd Jackson, director of IS for the City of Westerville, was concerned about the city's aging network infrastructure. The outdated equipment was causing reliability and impasse problems, while vendor support would soon become an issue. Jackson's greater concern was the way that the network was set up: a power disruption in City Hall would sever network connectivity to all facilities 'downstream' from the site, including the police station and 911 center.

"I wanted to get a network solution that would provide business continuity and give city employees the level of service that they needed to effectively serve the public," says Jackson. "We also had a lot of new applications and services we wanted to launch that required technology to support them, so we wanted a solution in place that would support us long term and give us options in the future."

To get started, Jackson contacted local Cisco® representatives who reviewed the city's needs and recommended Netarx, a Cisco partner that had the right skill set and which was included on the State of Ohio contract. Although Jackson and his team met with several companies, they liked that

### Business Challenge

- Outdated equipment led to areas of impasse and reliability issues
- Outages at one location caused problems at 'downstream' locations
- Wireless access needed for police and fire departments

### Network Solution

- Cisco Mesh network to provide multiple network paths to multiple buildings
- Cisco Unified Wireless Network with access points and wireless LAN controllers

### Business Results

- Ability to offer enhanced city services by leveraging the wireless network
- Solution provides improved connectivity, backup, and business continuity
- Network infrastructure in place to support future vision such as a community-wide network

Netarx was a local company that could provide the right level of support.

"We needed a company that would train us to ultimately become self-sufficient in managing this solution, but would also give us a personal touch along the way," says Bryan Mundy, the City's network operations manager. "As IT employees we may think we know what we want, but we also know the value of working with a company with the

experience of many installations and that is really on top of technology.”

Netarx provided everything that we were looking for and met every requirement,” says Jackson. “Because we are using public funds City Council requires us to use a competitive selection process to help ensure the City receives the best price possible. The State contract provided that competitive process.”

Local Cisco representative John McKenna, with his experience in the public sector, worked closely with Netarx to help bring the project to fruition. Because of the city’s budget cycle and other demands, the project would take six months or more of preparation.

“Once the proposal was presented and approved to the city council through the annual budget process, we could not go back and change any numbers,” says Kirk Horn, Ohio district manager for Netarx. “Our focus is tied to advanced technologies, not specific vertical markets. John has a thorough understanding of how the public sector works, and his expertise there and negotiating on behalf of Cisco was invaluable.”

## Network Solution

Headquartered in Farmington Hills, Michigan, Netarx is a Cisco Gold Certified Partner with offices in Missouri, Ohio, and Indiana. Netarx strives to combine advanced technology products and services to deliver solutions that help clients achieve their business goals.

“We like to say that Netarx is your pre-thought—we are thinking about your network before you are,” says Horn. “Our job is to find the new advanced technologies and

bring them to clients and prospects. We have worked hard to establish a reputation of providing cost-effective solutions, customer satisfaction, and integrity.”

Netarx started the design and implementation phases by conducting a thorough walk-through of the city’s existing environment.

“The public sector has very specific needs as to how it runs its business,” says Horn. “Its customers are the constituents and citizens who live there, and the city has to plan three to five years in the future because of their budgeting process and the oversight they have in the political realm. There were many considerations to make before recommending a solution.”

To meet the business needs, the Westerville team wanted to deploy a solution that provided multiple network paths to the city’s multiple buildings, so that in the event of a power outage or other failure, no other sites would be directly affected. It also wanted to provide the city with an open-ended solution that would accommodate the services that it needed immediately and in the future. It recommended a Cisco mesh network that would provide multiple network paths to every building, helping to alleviate many of the concerns about power outages negatively affecting other buildings. Deploying a network in a mesh configuration and having multiple points of failure at the core significantly decreases the risk of one outage affecting other buildings. Alerts in place would help assure that network issues are addressed before they cause problems. Netarx recommended and deployed Cisco Wireless access points and a Cisco Wireless LAN Controller, a Cisco Catalyst 6513 Switch for the core, Cisco Catalyst 3750 Series

Switches, and Cisco ISR (Integrated Services Routers).

Additionally, the city wanted to deploy Wi-Fi wireless network access in all of its buildings to accommodate a business need and for use by the general public. Secure wireless network access would allow the fire and police departments to transform their operations and services by changing the way emergency and first responder applications and information are shared and accessed. The solution would provide redundancy across critical departments such as public safety, City Hall, and the IT department. The speedier LAN would deliver increased bandwidth for city workers for their applications, and provide constituents with faster access to the City's Web site.

## Business Results

With all of the city's 16 buildings and one electric substation now operating on a new Cisco mesh network, concerns over power outages and other issues are a thing of the past. Not only does the mesh design provide multiple paths to every city building, but proper monitoring is in place, allowing Jackson's team to address issues before they affect end users.

"We used to get a call from a department about a problem before we even knew their network was down," says Jackson. "Now we detect and address issues before end-users even know about them." The new Cisco solution also cuts in half the time that the IT staff used to spend on individual PC configuration and application deployment. An IT employee can now do an on-the-spot configuration of any one of the city's several hundred PCs, rather than having to bring it to the technology department. Application

delivery has also been quicker, allowing the end user to keep up-to-date with the applications that they need, and their computers are safe from security threats.

The new technology also provides the city of Westerville with a much-improved data backup solution. Before the deployment of the new system, the IT department could conduct full system backups only over a weekend as it would take 36 hours. The new gigabit network cuts that in half.

"We only need 18 hours for a full backup, which gives us more time to deal with any problems that we might need to address," says Mundy. "And we're not confined to weekend backups; we can conduct them during a workday along with differential backups, and end users do not notice, because the network speed is not affected."

The deployment of secure wireless controllers and access points allows the police department to maximize its in-car digital cameras. The city of Westerville's police department was the first in central Ohio to provide digital in-car cameras, but that high-quality video demanded a lot of space and bandwidth. Rather than load the image on a VCR tape that needs to be driven to headquarters, an officer now pulls into an area covered by a wireless access point and transfers hours worth of video files in minutes. The wireless solution will also allow a new application for the fire department to perform correctly.

The general public has Wi-Fi connectivity for their laptops or other wireless devices in all city facilities. This will potentially increase revenue, particularly for the Parks Department, which hosts corporate retreats and other events. The department has seen

an increase in event bookings due to the availability of wireless connectivity.

The Senior Center, which offers tax preparation assistance, used to be limited to the number of ports available. Wireless access has enabled the center to expand that service and offer more assistance.

Jackson has an overall vision to set up a community-wide network that will connect into the local K-12 schools, library, and local liberal arts college, and become the foundation for sustainable economic development. This would enable the sharing of resources and the ability to better position the City from an economic development perspective.

“Almost daily we are identifying new ways to reconfigure and move hardware to make it work more effectively,” says Mundy. Jackson adds, “We have the flexibility to improve our end users’ experience. Technology is not getting in the way anymore, so now we can tell people ‘yes’ instead of ‘no’ and help make them more effective. I am excited about where the City of Westerville can go with this technology.”



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