

# City Brings Communities Together with Network Technology



City of Raleigh implements end-to-end networking solutions to improve services and revitalize its downtown area.

## Executive Summary

### City of Raleigh

- **Industry:** State and Local Government
- **Location:** Raleigh, N.C.

### CHALLENGE

- Standardize, improve, and integrate technology across city
- Revitalize downtown Raleigh by providing 21st century technology
- Extend Internet access to thousands of low-income families

### SOLUTION

- Implemented Cisco UCS, VoIP, video, and wireless mesh network solutions
- Upgraded network technology at city's convention center and teen center
- Provided Wi-Fi service to entire downtown area

### RESULTS

- City government's network is better able to meet needs of users and constituents
- Businesses, workers, and students have returned to downtown Raleigh
- Nearly 2000 low-income households have wireless Internet access

## Challenge

When Gail Roper became the City of Raleigh's first CIO in 2006, the city did not have a unified vision for technology and how it could drive improvements for the city and its citizens. Disparate legacy technologies were in use throughout the city government, and technology was seen as a footnote rather than a key to the much needed revitalization of downtown Raleigh.

According to Roper, "The overall challenge was that the technological infrastructure was not driving the mission and vision of the organization. It was solely used for internal purposes; it was a support organization. They never went to where it should be. There was no communication of what they were trying to do and how technology could get them there."

One of the first major project challenges facing Roper was how to revitalize the convention center. Many people in and outside Raleigh had given up on it. Revenue was down, and it was increasingly difficult to attract large trade shows and conferences to the city with a venue that had outdated technology. This lack of visitors, in turn, adversely affected local retail shops, restaurants, hotels, and other businesses.

Meanwhile, the Fayetteville Street mall was also in decline. What was once the main thoroughfare in downtown Raleigh was no longer frequented by businesspeople or students as it had been in the past. This trend had severe consequences for the financial well-being of the area.

Complicating matters further was the need to keep Raleigh citizens in low-income neighborhoods from falling behind the technology curve, as computer literacy is increasingly important for workers and students. Yet such efforts would require a major overhaul of the existing technological infrastructure.

## Solution

The City of Raleigh and Cisco partnered to revamp the city's entire network infrastructure, using a mesh access architecture, power over Ethernet, and Cisco Unified Computing System™ (UCS™), and then deploying voice over IP, video, and wireless connectivity.

This infrastructure extended to the conference center, which now has a fiber optic data network and high-speed Internet access, with both wired and wireless connectivity.

# City Brings Communities Together with Network Technology



City of Raleigh implements end-to-end networking solutions to improve services and revitalize its downtown area.

**"We now call ourselves a service-aligned organization, because the infrastructure is aligned with the needs, mission, and vision of the organization as a whole."**

**Gail M. Roper**

Chief Information and Community Relations Officer, City of Raleigh, N.C.

In addition, the city's comprehensive technology initiative, "Raleigh Connected," provides free Wi-Fi throughout the downtown area, including Fayetteville Street, which attracts businesspeople and students. It also extends wireless access to nearly 2000 households in low-income areas.

"Cisco and the City of Raleigh have been working together since 2007 to improve the delivery of services to our citizens. Now the Raleigh Connected initiative is using Cisco technology to bring the community together," says Roper. "Downtown revitalization is an important initiative for Raleigh. We are making a huge difference."

Other community initiatives have been implemented as well. Through a partnership with One Economy, a technology nonprofit, the city received federal stimulus funds and corporate support to make technology available and affordable for those who need it. They also started a "Digital Connectors" program, which offers computer training, in Cisco networking and technology in general, to people ages 14 to 21 who are from low-income households.

At the technologically advanced learning lab in the historic Saint Monica Teen Center, teens use high-definition video conferencing and collaboration equipment provided by Cisco, and they learn about technology that will help them succeed in life. Through the Digital Connector program, they have access to materials, experiences, and resources, such as virtual field trips and mentoring, that they would otherwise not have. Raleigh is also working on connecting the Teen Center to Shaw University, so these teens will have access to college professors.

"The value of the Digital Connector program is not only their introduction to Cisco networking, but their exposure to what they can do from a professional standpoint and a community perspective as well," says Roper.

## Results

In the years since 2006, everything has changed. The city's technology infrastructure has been modernized. Businesses, workers, and students have returned to downtown Raleigh. And nearly 2000 low-income households have wireless access to the Internet.

The city has made such great strides with technology that Forbes magazine named Raleigh "America's Most Wired City" in 2010.

The convention center, formerly a symbol of decline, is now a state-of-the-art example of the city's progress, and it can compete with any other in the world. In fact, in April of 2010, the 19th International World Wide Web Conference (WWW2010) was held at the Raleigh Convention Center, where some of the

# City Brings Communities Together with Network Technology



City of Raleigh implements end-to-end networking solutions to improve services and revitalize its downtown area.

## Product List

### ROUTING AND SWITCHING

- Cisco LAN Infrastructure

### NETWORK MANAGEMENT

- Cisco Unified Computing System

### VOICE AND IP COMMUNICATIONS

- Cisco Unified Communications

### WIRELESS

- Cisco Wireless LAN Infrastructure
- Cisco Wireless Mesh Technology
- Cisco WAN Infrastructure

greatest minds in technology, including the “Father of the Internet,” Vint Cerf, gathered to discuss the future of the web. And, in November of 2011, the Internet Summit will take place there as well. At the Summit, more than 1500 attendees will converge at the convention center to hear dozens of industry leaders discuss the latest online trends and opportunities.

The city continues to pursue improvements. Within the next two years, the city plans to have an optical ring, consisting of 125 miles of fiber that is part of its traffic light network, connecting the city to the local university and other governments to support the community in even more ways. In addition, since the fiber is already in place, the city will realize tremendous cost savings by leveraging existing infrastructure and getting rid of many leased lines.

“We now call ourselves a service-aligned organization, because the infrastructure is aligned with the needs, mission, and vision of the organization as a whole,” says Roper.

## For More Information

To find out more about Cisco wireless, go to:  
<http://www.cisco.com/go/wireless>

To find out more about Cisco Unified Communications, go to:  
<http://www.cisco.com/go/uc>

To find out more about Cisco LAN infrastructure, go to:  
<http://www.cisco.com/go/routers>

