Charles County Improves Citizen Services and Boosts Safety

Growing county in Maryland uses the Cisco Business Communications solution to save money while delivering innovative new services.

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EXECUTIVE SUMMARY

CHARLES COUNTY, MARYLAND
- Government
- La Plata, Maryland
- 800 employees

BUSINESS CHALLENGE
- Improve citizen services and enhance public safety.
- Enhance employee mobility.
- Reduce operational costs and make network administration more efficient.

NETWORK SOLUTION
- Cisco Business Communications Solution supports voice and data communication for county and state agencies via a converged IP network.
- Cisco Aironet solution provides secure wireless remote access to network resources.
- Converged IP infrastructure provides centralized management and facilitates business continuity.

BUSINESS RESULTS
- Improved communication, mobility, and service continuity enhances citizen safety.
- Extending service reach to more citizens in more locations improves service effectiveness and fosters participation.
- Converged, manageable IP infrastructure expected to deliver $150,000 annual savings.

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Business Challenge

With 140,000 residents, Charles County is the fastest-growing county in Maryland. The gateway to historic Southern Maryland, Charles County offers a rich combination of history, wildlife, and natural beauty. Yet technology also plays an important role in the quality of life of Charles County. Like most government organizations, Charles County depends on phone and data communications to support essential services for citizens and employees.

When the network and phone systems at its schools began to show their age, the County's IT staff realized that additional performance issues could lie ahead for its other agencies. The County was planning to enhance its network to deliver innovative new services to constituents and improve public safety and employee responsiveness.

"The scalability of our existing system was a real problem for us," says Ty Fuqua, network manager, Department of Information Technology at Charles County. "We were at the point where we had reached maximum capacity on much of our network equipment. We also needed the ability to add new services like video and audio conferencing, which was difficult to do with a standard PBX (private branch exchange)."

Network administration was an important concern as well. Charles County wanted to bring its disparate voice and data networks together to facilitate disaster recovery and improve manageability.

"We needed to centralize the management of our phone systems, because our existing system had a separate PBX at each location," says Richard Aldridge, CIO and director of information technology at Charles County.

Charles County needed to devise a solution that could help its schools and other agencies deliver services more effectively, while keeping costs under control. The solution would have to be secure and manageable, as well as scalable to support new applications as needs changed.

Network Solution

Charles County determined that a converged IP network would deliver the combination of rich media communication, mobility, and manageability that it needed. The County had already negotiated an agreement with its local service provider to provide fiber to 84 sites, including county government agencies, its board of education, sheriff's department, libraries, and several state agencies.

Migrating to a converged network would provide a unique opportunity to take advantage of the high-performance infrastructure that it already had in place.

"We knew that converging our voice and data would eliminate many of the expenses associated with our leased lines," says Fuqua.

After evaluating several vendors, Charles County chose the Cisco® Business Communications Solution, a complete set of communications applications and infrastructure products designed to deliver secure, effective communication. At the forefront of the solution is Cisco Unified Communications Manager, an intelligent call-handling application that lets Charles County support a variety of advanced telephony services like unified messaging, extension mobility, and interactive multimedia response systems.

The Cisco Business Communications Solution lets Charles County run its voice communications over its converged IP network, which makes phone communications more efficient and easier to manage. The County has deployed Cisco IP phones throughout its departments, offices, and school classrooms.

To improve safety and emergency responsiveness at schools, the County integrated its e-mail system with Cisco Unified Communications Manager's E-911 feature. An emergency 911 call from a school automatically generates an e-mail that arrives at the response center in real time.

"The e-mail gives the response center the exact location of where that call is coming from within the school," says Aldridge. "When you have 3000 classrooms with IP phones spread out over a 400-square-mile county, you need that capability."

The Cisco network also provides the bandwidth and quality of service (QoS) required for video. Using a Tandberg videoconferencing solution, Charles County employees can collaborate with video as easily as they can over the phone, saving time and travel expenses.

"We are partnering with our Human Resources department to provide remote site connectivity through videoconferencing to offer training this coming year," says Fuqua.

The County is also using videoconferencing for public safety applications such as video surveillance of its water treatment plant, and to maintain better communication with emergency response organizations throughout the United States.

"The Cisco solution gives us a great deal more flexibility in terms of rolling out new services over our IP phones, such as weather updates and school attendance applications," says Fuqua. "We could not even think about offering some of these services before, either because of cost or simply because the functionality was not there."

Mobility and employee responsiveness are top priorities, so the County deployed an extensive wireless network. Staff installed Cisco Aironet® Wireless Access points for sites and users that could not access its wired network. The County also uses a microwave wireless network infrastructure to extend its network to rural areas.

PRODUCT LIST

Security and VPN
- Cisco Secure Access Control Server (ACS)
- Cisco VPN 3002 Hardware Client

Voice and IP Communications
- Cisco Unified Communications Manager
- Cisco Unity Unified Messaging
- Cisco 7900 Series Unified IP Phones

Wireless
- Cisco Aironet 1100 Series Access Point
- Cisco Aironet 1300 Series Access Point

"Our employees use a secure Web-based application to access permit management, inspections tools, and other applications from the field," says Aldridge. "They authenticate through our Cisco VPN solution, and they can work just as though they were at their desks."

"Our emergency services managerial staff need to stay connected to the network all the time, especially when they are traveling away from the office or at home," says Fuqua.

Network reliability and manageability have improved as well, because the Cisco solution enables the County to centralize its network to perform backups and better manage continuity planning and disaster recovery.

> **"Over the next five years, as administrative costs continue to drop, we expect our Cisco network to save approximately $150,000 a year on communications expenses."**
>
> **—Richard Aldridge, CIO and Director of Information Technology, Charles County**

Business Results

Migrating its operations to a single converged network has enabled Charles County to reach out to citizens in new, innovative ways. The result is better, more effective services to more constituents. For example, the interactive voice response support on Cisco Unified Communications Manager makes it easier to initiate and track common tasks like permit applications, providing better service and more transparency to citizens.

The County is also using its Cisco network to automate data collection at its senior recreation centers. Using self-service kiosks with touch screen computer monitors and text-to-voice technology, the County can efficiently track and report on which activities seniors are participating in.

"We found that our survey statistics went up because the seniors actually enjoyed using the system," says Dina Barclay of the Department of Community Services. "We were also able to reduce our data entry time from two weeks a month down to minutes."

Improving the speed and accessibility of the County's services has also enhanced public safety. The Cisco network was put to the ultimate test during a recent emergency. After a major tornado struck the area, the County was able to quickly recover its network, thanks to its secure, fail-safe computing environment. Administrators then deployed a wireless network to rapidly restore connectivity and services.

"An F4 tornado went from one side of the county to the other and left a path of destruction," says Fuqua. "We set up an emergency operations center here in our government building, along with a campus of recreational vehicles and Federal Emergency Management Administration staff. In less than two days, using Cisco Aironet equipment, we were able to provide a network to support them. We won an award for best of breed in wireless communications from the Center for Digital Government."

Charles County has been able to reduce its network expenses even as it rolls out new services. The County has standardized on a converged IP network for all new facilities, and is rapidly replacing its aging PBX units as their contracts expire.

"We realized an immediate savings by being able to eliminate 12 T1 lines," says Fuqua. "We saved $4800 a month, as well as their maintenance and repair costs. We have also been able to bring network administrative tasks in-house, reducing telephony vendor charges."

"Over the next five years, as administrative costs continue to drop, we expect our Cisco network to save approximately $150,000 a year on communications expenses," says Aldridge.

County leaders are convinced of the effectiveness of the Cisco solution. With their scalable converged network in place, the citizens of Charles County can look forward to many more new services in the years to come.

"In the past, unless we could show our Board of Commissioners an immediate cost savings, it was difficult to promote technology initiatives," says Aldridge. "Now we can simply demonstrate the return on investment, and our board is quite supportive."

For More Information

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To find out more about Cisco Wireless Solutions, visit: http://www.cisco.com/go/wireless

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