INDUSTRY
Local government

REGION:
Americas

SIZE
More than 978,000 residents, 5,800 employees, and a $1.2 billion budget

ABOUT THE BUSINESS
Mecklenburg County—home to the City of Charlotte, North Carolina—was formed in 1762. Employees are dedicated to making Mecklenburg County a community of pride and choice for people to live, work, and recreate. How well the county is meeting this vision is measured in four focus areas: community health and safety; effective and efficient government; social, educational, and economic opportunity; and sustainable community.

PRODUCT
• VMware® Horizon View™

• VMware vSphere®

• VMware® ThinApp®

VMware Horizon View Improves the Mobility, Security, and Productivity of Mecklenburg County Workforce While Reducing Local Government Costs

Snapshot
The Mecklenburg County technical services team chose to deploy VMware Horizon View—over Citrix and Microsoft solutions—to securely mobilize and empower nearly 6,000 county employees. As part of the North Carolina county's "One Person, One Device" initiative, executives, Youth and Family Services social workers, Park and Recreation employees, and Food Service inspectors use tablets and virtual desktops to securely access and input information on the go. Now more productive employees better reach and serve constituents while saving the county an average of $3.2 million per year.

Business Challenges
• Productivity: Improve the reach and availability of services throughout the county

• Security: Better protect citizen data that county employees collect and process, increase the security of county employees working in the field, and meet compliance requirements for Health Insurance Portability and Accountability Act (HIPAA), Personal Health Information (PHI), and Personally Identifiable Information (PII)

• Mobility: Enable county employees to access data and applications from anywhere on tablets and mobile devices

• Costs: Achieve "One Person, One Device" initiative goals and reduce computer replacement equipment purchases (CREP)

Solution
Horizon View enables Mecklenburg County employees to better protect and serve its community of nearly one million residents.

Benefits
• Enables the county to better serve its constituents—from protecting its children to simplifying recreation service payments to streamlining inspections

• Saves the county approximately $3.2 million per year by empowering employees to be more productive and reducing CREP costs

• Enables secure access to data and back-end systems for compliance with HIPAA, PHI, PII, and Payment Card Industry (PCI) standards

• Improves employee quality of life by eliminating data reentry and improving physical security

Use Cases
• Secure workforce mobility

• Remote office access

• Centralized, high-availability desktop

vmware®

> **"The benefits of using VMware Horizon View are in hardware cost and time savings. It equals out to be about \$3.2 million savings per year for the organization. That's money that we can put back into services for the citizens of Mecklenburg County."**
>
> Cliff DuPuy
> Director of Technical Services
> Mecklenburg County, North Carolina

Situation

The most populous county in North Carolina, Mecklenburg County is a hub of activity. Its nearly one million citizens—living in and around the city of Charlotte—benefit from the county's services, which include park and recreation, school nurses, food inspections, and youth and family services. Like most local governments, Mecklenburg County continually seeks ways to better protect and serve its citizens while operating within budget.

Increasingly mobile employees, heightened security concerns, and issues with workforce productivity and interdepartmental collaboration led the technical services team within the Mecklenburg County Business Support Services Agency to take a closer look at improving its workforce user experience. The team was using mobile device management (MDM) software, yet it was struggling to manage the thousands of desktops, mobile devices, tablets, and laptops county employees were using to do their jobs.

"Our challenge was that some of our employees had multiple devices—and they were county executives so at every office, they might have a desktop, a laptop, and an Android or iOS mobile device," explains Cliff DuPuy, director of technical services for Mecklenburg County. "We didn't have a good system in place to manage their devices or an effective way to get the correct applications on them so employees could have the same experience on all of their devices. We were constantly having to rewrite log in scripts and change profiles, which made it very difficult to provide a user with a good experience."

Throughout the day, county employees also collect and capture citizen data, and responsibility for protecting that information is a high priority for the county's IT team. "Security is a huge concern for us," explains DuPuy. "It's our job to keep information secure and reduce risks related to personally identifiable information (PII), personal health information (PHI), Health Insurance Portability and Accountability Act (HIPAA), and Payment Card Industry (PCI) data."

Instead of managing yet another device with its existing MDM, Mecklenburg County needed a solution that would enhance the user experience while enabling the technical services team to focus on securing employee profiles and the applications individuals are authorized to access.

Device proliferation, security, and significant IT management challenges led the county to undertake an aggressive "One Person, One Device" initiative, which aims to provide all county employees with a tablet as their primary computing device. By giving each person a single device and streamlining the management of every device with Horizon View, the county expected to improve employee productivity and reduce costs.

Solution

Mecklenburg County's technical services team chose Horizon View for several reasons. "The county had already standardized on vSphere for server virtualization," explains DuPuy, "Citrix was horribly expensive and Microsoft Hyper-V wasn't mature enough. We had institutional knowledge with vSphere, so in a very short timeframe, we made the decision to begin testing Horizon View."

Horizon View is a complete virtual desktop infrastructure (VDI) solution that simplifies desktop management and provides users with what they need, when they need it.

Mecklenburg County began its Horizon View rollout with a small group of executives before expanding the pilot to 100 day-to-day users. Employees testing the solution included social workers, building code permit and enforcement inspectors, and park and recreation personnel. A select few were permitted to log in from home after complying with the county's bring your own device (BYOD) policy.

Technical services deployed Horizon View on Cisco Blade Servers. The team also chose to deploy Tintri zero-management storage to support its "One Person, One Device" initiative. Tintri's rapid boot experience, flexible storage pool, and consistently high level of performance made it an ideal choice to support all of the county's employees.

> **"Once I received the tablet with the VMware Horizon View application on it, it actually made my job a lot simpler and I was able to respond more quickly to families. Using Horizon View in the field not only increases productivity, it helps with morale. You're able to be out in the community more. It also helps with safety because you can look in our system to see if there are any safety concerns before going to visit a family."**
>
> Lisa Forster
> Child Protective Services Supervisor
> Mecklenburg County, North Carolina

"We have a very proactive relationship with VMware and Tintri and that's been critical to our success," says DuPuy.

Nonpersistent Dell Latitude desktops running Windows 8 with Horizon View Persona Management optimize the handling of user profiles at login and logout for virtual desktops. Because of the minimal amount of data uploaded at login or logout, performance is better than with Windows roaming profiles, and boot storms are eliminated or reduced. Horizon View Persona Management also manages user profiles within the Horizon View environment without relying on Active Directory and without affecting desktops outside of Horizon View.

Mecklenburg County also uses ProfileUnity from Liquidware Labs as a simple and scalable solution to decouple persona, data, and configuration elements from being statically bound to OS/machines. Instead, user personalization—including the policies, data paths, and all customizations—are tied to the users' identities and can be delivered in Windows native formats, to any workspace they utilize. This allows the technical services team to balance giving users the freedom to customize their workspaces for maximum productivity with giving administrators a context-aware method to provide local resources, as well as enforce configuration and policy elements.

Because Horizon View stores data only in the data center and never on an endpoint device, the solution helps ensure that citizen PII is always protected. "When a Horizon View session is closed, the data is gone and that provides us with a robust security model," says DuPuy.

Today, Horizon View supports the work the county's employees do to protect and serve their community.

Youth and Family Services

Youth and Family Services (YFS) social workers assess home situations, process intakes, and generally oversee the health and well-being of the county's most vulnerable citizens—the children. Traditionally YFS records were all maintained on paper. YFS social workers would carry their paperwork to a home for a site visit and take notes about what they saw. If an emergency call came in while the social worker was in the field, he or she would have to go back to the office and print out the details before heading back out to handle the emergency, which could mean a 40-mile drive across the county.

"Our social workers go into very stressful situations—sometimes in less safe areas—and they have to decide whether to remove a child from a dangerous environment," explains DuPuy. "Inefficient paper processes and large, bulky case files were making an already difficult process even more challenging."

Instead of relying on paper files and returning to the office to handle each emergency, YFS social workers now remotely access and enter information on their Apple iPads that might literally save a child's life.

From wherever they are in the county, social workers can conduct an evaluation, update an existing file, or create a new one using virtualized applications—including case-management and document-imaging applications—and a Topaz electronic signature and capture pad to collect required signatures. Some social workers also use biometrics technology for logins.

If a particularly difficult situation or question arises, social workers can turn on their iPad camera and use Microsoft Lync video conferencing and instant messaging to immediately connect with a supervisor in the office. Through enabled mobile hotspots in their Apple iPhones, social workers also can fax documents back to the office from the field.

"Social workers have told us that getting immediate access to their applications and replacing their bulky paper case files with a small tablet has improved their safety. Without all of that paperwork, their risk of being targeted is lower," says DuPuy. "They enjoy coming to work more now. They say their travel time has been greatly reduced while their productivity and safety has been significantly increased."

> **"What this [change in delivery of programs or services] means to our citizens is that they will be able to pay for things like park entrance fees and boat rentals without having to carry cash and without having to incur ATM-related fees. We can serve the customers onsite, by the lake, or in the park, in the most convenient manner. The possibilities for increased customer services are really endless with this technology."**

Sandy Goodwin
Senior Information Technology Business Analyst for Park and Recreation
Mecklenburg County, North Carolina

Horizon View and mobile devices are estimated to be saving Mecklenburg County social workers about two hours per day. They are also increasing collaboration among county departments. Hearing a family express concern about not receiving food stamps on time, a social worker was able to log into a different organizational system and see that there was an issue with a birth certificate. The social worker quickly resolved the issue and the family could once again receive its benefits.

Park and Recreation Department

Like YFS, the Mecklenburg County Park and Recreation department is benefitting from technical services' investment in mobility and virtual desktops. Previously, the department required cash-only for all services because it had been challenged to find a solution that would integrate with its existing back-end financial systems.

For its annual Bark in the Park Top Dog Festival, the county added a mobile point-of-sale system as an option in 2013 for customers to purchase event T shirts using a debit or credit card. More than half of the purchases were conducted electronically.

"Using a Dell Latitude 10 setup with a USB receipt printer, over a 4G cellular mifi hotspot, [we] were able to connect to our CLASS system just as if we were in one of our centers. The setup worked flawlessly and the virtual desktop performed like a champ. Almost half of our sales were credit card/debit sales.

"The virtual desktop and the entire system was fast and effortless. I am sold on this technology! I can't wait to get some of these setups in our parks for entrance booths, boat rentals, etc… the possibilities are endless!" wrote Sandy Goodwin, senior information technology business analyst for Park and Recreation, in an email to Business Support Services Agency Information Technology and Park and Recreation leaders and staff involved with the project.

Proceeds from the new electronic payment system enabled Mecklenburg County to donate more than ever before to a local animal shelter from the charity event.

School Nurses

The return of health departments to local government in North Carolina has meant that Mecklenburg County is now responsible for serving the IT needs of more than 165 school nurses. To overcome concerns about Microsoft Office 365 providing Web-based email, the technical services team deployed Horizon View on all of the nurses' systems to give them the full desktop experience as they travel from school to school. Robust security and policy-based automation enables these systems to remain in compliance with HIPAA and the new omnibus rule.

Food Service Department

Mecklenburg County Food Services personnel have recently embraced virtual desktops on mobile devices for restaurant inspections. With the solution, they can quickly and easily access back-end reporting systems while reducing sync times.

In every department, virtual desktops and mobile devices, as well as VMware ThinApp, make it easier for Mecklenburg County to on-board new employees and keep existing employees current—saving time and money. ThinApp accelerates application deployment and simplifies application migration with agentless application virtualization. Departments can determine which applications new employees need, and technical services can deploy them. Because IT staff use Horizon View to remotely update applications and eliminate reimaging, Mecklenburg County saves an additional 10–15 hours of IT staff time per device.

Benefits

The success of the "One Person, One Device" initiative has resulted in increased productivity and cost savings of more than $3.2 million for Mecklenburg County. Productivity improvements account for approximately $1.2 million, and continuing to reduce CREP each quarter saves the county approximately $1,000 per user, per year.

Instead of most employees carrying multiple devices that are difficult to manage, now many employees use just one tablet supported by an 18-person technical services team—3 of whom are focused on VDI. In less time, the IT team is able to deliver the same experience securely and reliably across applications on every device for the county's nearly 6,000 employees.

To date, the technical services team has virtualized more than 140 applications. Using a virtualized application catalog it created with ThinApp, the team is improving application performance, as well as application compatibility, for both internally developed and commercial off-the-shelf applications that require certain browser versions—Internet Explorer 7, for example—or Java virtual machines.

DuPuy believes that "virtualization and our one-one initiative allow us to make our customers more successful and reduce costs at the same time."

In recognition of its outstanding IT efforts, Mecklenburg County received the 2013 Digital Government Achievement award for its "One Person, One Device" initiative.

Mecklenburg County expects to expand its virtual-desktop and mobile-device deployment to enable additional services, such as collecting boat-dock fees and conducting building-code enforcement.

Because every citizen and every second counts, Mecklenburg County continues to rely on Horizon View to increase workforce productivity and information security while reducing costs for employees working to protect and serve.

About VMware Horizon Suite

VMware® Horizon™ Suite, the platform for workforce mobility, connects end users to their data and applications on any device without compromising IT security and control. The suite includes the following products:

VMware Horizon View

Simplify desktop management, security, and control while delivering an optimum end-user computing experience across all devices and networks.

VMware® Horizon Mirage™

Gain centralized, zero-touch physical and virtual desktop image management with native performance and flexibility for end users.

VMware® Horizon Workspace™

Streamline the end-user experience and reduce costs with a single workspace for applications and data, delivered securely on any device.

VMware® vCenter™ Operations Manager for Horizon View™

Monitor and optimize the health, performance, and efficiency of your entire VDI.

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