VMware Case Study

Maricopa County Sheriff’s Office Turns to Desktop Virtualization to Reduce Downtime, Improve Productivity, and Protect Sensitive Data

As part of a move to a new 911 dispatch center, the Maricopa County Sheriff’s Office selected the VMware Horizon® solution to virtualize approximately 100 dispatcher desktops. The project addressed challenges with previous systems that caused downtime and productivity issues, high equipment and system maintenance requirements, and concerns about data security. This is the first phase in an ongoing project that will virtualize more than half of the agency’s 3,000 endpoints.

The Maricopa County Sheriff’s Office (MCSO) oversees the fourth largest county in the United States, with 4 million citizens occupying more than 9,200 square miles in Arizona. It has jurisdiction over the cities of Phoenix, Scottsdale, Mesa, and more than 30 other communities. Led by Sheriff Joe Arpaio, MCSO is recognized for its innovative use of technology to scale the reach of its law enforcement offices.

The Challenge

Since 1893, MCSO has protected the citizens in Maricopa County. As technology evolved, MCSO evolved with it, and in early 2014, it opened a state-of-the-art 911 dispatch center.

MCSO has approximately 3,000 endpoints on its network, but with its previous system, users in the 911 dispatch department sometimes found it difficult to access email, log in to certain programs, or quickly find critical information.

“If we needed to check jurisdiction, for instance, our older systems didn’t allow us to pull that information in a timely manner,” explains Kristen Godbehere, communications training supervisor at MCSO. “If I’m dealing with an accident, then I really need to find that information fast.”

Chip Lemons, senior lead systems administrator for MCSO, needed to improve the way users interacted with the network. “We’ve been talking about virtualization for many years, but it wasn’t until we got approved for a new building and a new 911 dispatch center that we were actually able to do it,” Lemons says.

There were three main drivers for desktop virtualization:

- **Improve service to citizens** – MCSO wanted to address the shortcomings of the previous system so dispatchers could respond faster to 911 calls.
- **Strengthen data security** – MCSO needed to keep sensitive law enforcement data separate from programs that access online resources.
- **Minimize hardware requirements** – The sheriff’s office wanted to reduce the amount of equipment per dispatcher console at the new facility.

INDUSTRY
State and local government

LOCATION
Phoenix, Arizona

KEY CHALLENGES
- Improve dispatcher productivity and response time
- Maintain security of sensitive law enforcement data
- Reduce hardware requirements

SOLUTION
The VMware Horizon product delivers virtualized and remote desktop applications through a single platform. It also supports end users with access to all Microsoft Windows and online resources through one unified workspace.

BUSINESS BENEFITS
- Virtualized desktops reduce latency, improve productivity
- Fewer PCs means less downtime, easier system maintenance
- Consistent user experience offers seamless integration
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Chip Lemons
Senior Lead Systems Administrator, Maricopa County Sheriff’s Office

The Solution
MCSO had already virtualized its server fleet with VMware vSphere® software, so choosing the VMware Horizon solution for desktop virtualization was a natural next step. "It made sense to continue that investment," says Lemons.

In September 2013, in anticipation of the move to the new facility, MCSO launched the Horizon solution, which provides two virtual desktops per 911 dispatcher: one for the Intergraph Computer Aided Dispatch (CAD) application, and the other for office productivity, including email, Internet access, and internal applications. This dual-desktop configuration protects sensitive data from Internet-borne attacks.

"From a technology perspective, VMware Horizon has been outstanding, and it was so much easier to implement than I was expecting," says Lemons, noting how helpful VMware support services were. "I was pleasantly surprised."

The transition to the new 911 dispatch center was seamless. "When it was time to migrate over, it was just a simple matter of standing up the new virtual desktops in the new center. When the current shift ended, the new shift came in and started work immediately in the new dispatch center without any interruption," Lemons recalls.

He also says the solution was very easy to adopt and maintain. "There is no learning curve. As a systems administrator, I'm usually multitasking. With VMware Horizon, it's easy to do what I need to do so that I can move on to my next task."

He adds, "I would definitely recommend VMware Horizon to anyone that is considering desktop virtualization."

Business Benefits
The Horizon desktop virtualization solution has delivered all the capabilities MCSO requires, and more. "I'm able to keep my users productive, to protect our data, and to easily maintain our virtualized environment," says Lemons.

Specifically, the move to the Horizon solution has significantly reduced the equipment footprint at each dispatcher console. Previously, each MCSO dispatcher had to use multiple PCs. Today, everything is virtualized, which lowers costs by reducing hardware requirements and making system maintenance much easier.

The solution also delivers two secure, consistent desktops to each of the 100 dispatchers using it, and it’s compatible with all of MCSO’s existing applications. "It’s great because the routine hasn’t changed, and I wanted as little change as possible for our dispatchers moving into the new center," notes Godbehere.

Virtualizing the desktops addresses productivity and latency issues as well. Dispatchers can log in faster, access information more quickly, and experience fewer interruptions than before. "We’re using non-persistent desktops," says Lemons. "If there’s a problem, it’s just a simple matter of logging them out and logging them back in to get a refreshed desktop so they’re able to stay more productive."

The solution also makes it easier to change or upgrade software for training or everyday use. "Every time a new class was taught or they had to install new software, we would have to go through and reconfigure all of the PCs. With virtual desktops, we can provide them with the software they need the next time they log in."

Looking Ahead
Now that the first phase of virtualization is complete, MCSO is planning to employ the VMware Horizon solution at its training facility. Lemons says phase three will be to virtualize the agency’s detention facilities—a move that would replace roughly 1,500 MCSO endpoints with thin clients running the Horizon solution.