> *"We are flat-out thrilled with the success we've had in upgrading our 911 call center without any disruption to key public safety services. That achievement in itself speaks volumes about VMware's technology and the ability of the project team at synergIT to effectively leverage it."*

— Dan Briner, Director of Information Technology, Washington County

KEY HIGHLIGHTS

Challenge

Upgrade 911 call center facilities without disrupting service

Solution

VMware Infrastructure 3 creates a virtual platform that can be leveraged to create a highly redundant and resilient public safety system

Washington County

VMware Technology Allows Disruption-Free Upgrade of 911 Call Center

Southwestern Pennsylvania's Washington County has a population of 208,000 within its land area of 863.6 square miles. First formed in 1781, the County boasts a major university, three colleges, three premier hospitals, a horse track, casino, outlet mall and several large mixed-use technology centers and efficient access to all cultural, retail and sports activities in the Pittsburgh region. The junction of I70 and I79 interstates in the center of the County increases the Public Safety responsibilities with a high volume of traffic and the associated problems.

The Challenge

Washington County's public safety call center handles roughly 800-1000 calls per day and is responsible for dispatching all fire, police, and emergency medical services for the entire County 24 hours a day, seven days per week.

As part of its vision for evolving its public safety services, the County sought to upgrade the datacenter in its 911 facilities by transitioning from physical servers to a virtual IT infrastructure powered by solutions like VMware Infrastructure 3. Performing this upgrade was easier said than done, however.

"The biggest constraint was the fact that we were not constructing a new building—this was an in-place upgrade," says Dan Briner, director of information technology at Washington County. "That meant we couldn't just shut things down and move people into another facility while we were performing the upgrade; the call center needed to stay up and running while the upgrade occurred."

The Solution

To help ensure the success of its virtualization project, Washington County retained the services of synergIT, a Pittsburgh, Pennsylvania based IT services company. synergIT's combination of partnerships, best practices, and deep industry expertise led them to select VMware Infrastructure 3 as the virtualization platform that could best support the project.

GOVERNMENT

"The ability to leverage VMware technology as a migration facilitator is what made some of the most risky and challenging parts of the project feasible," says Bob Walker, Director of Enterprise Services at synergIT. "Keeping the center operational during this multi-year upgrade would have been significantly more challenging (and risky) without the options that VMware tools provided."

The Results

Using VMware Infrastructure 3 to create hardware-independent, highly available virtual machines enabled the project team to perform the major technology upgrade of its working 911 center—without a single interruption which might have resulted in a lost call or an inability to dispatch emergency services.

VMware Infrastructure 3 features like VMware vMotion—which allows live migration of running virtual machines—and VMware High Availability—which enables virtual machines to automatically restart on another host in the event of hardware failure—played a key role in ensuring this continuity of services.

"During several of the key facilities upgrades, while we upgraded the electrical service or installed new UPS units, VMware provided the means to migrate key services to different ESX hosts—again, while live 911 calls were being dispatched," says Walker. "In most cases, the dispatcher wasn't aware that sessions were being migrated between datacenters."

"VMware's migration capabilities has also enabled us to perform across the board firmware and driver updates to all of the hardware components in the back office environment without a loss or interruption of dispatching capabilities." says Keith Martin, Senior Systems Engineer with synergIT Inc.

Beyond allowing the technological upgrade to proceed without a hitch, VMware Infrastructure 3 has helped to deliver greater availability and redundancy for the Washington County 911 call center. "We have seen several examples in the past year of VMware allowing the center to continue operations when either planned or unplanned outages occurred," says Briner. "Basically, we've been able to move our call center light-years ahead of where it was in terms of survivability. Prior to virtualization, it could have taken anywhere from an hour to days to get all our public safety systems up and running after an outage. With VMware Infrastructure 3, the systems fail over in less than a few seconds."

The Pennsylvania Emergency Management Authority (PEMA), which provided the grant money to fund the upgrade, audited Washington County's call center project and was impressed with the results. "We are the only center in the state that has reached such a high level of compliance with their technological requirements," says Briner. "Considering there's 67 counties in the state, that's pretty noteworthy."

The pressure and risk of making changes to a 24x7x365 environment like a 911 call center are tremendous, but VMware's technology has allowed all the parties involved to rise to the challenge. "This has been a very good collaborative effort between Washington County, PEMA, synergIT, and not least of all, VMware," concludes Briner.