Bartholomew County Slashes Storage Footprint by 50% and Accelerates VDI with Tintri VMstore™

VMstore

Founded in 1821, Bartholomew County is located in the southeastern part of Indiana with Columbus serving as the county seat.

The Challenge: Expanding Existing Storage Requires Additional Rack Space

Bartholomew County encountered scalability issues with its existing storage as it sought to run a mix of server and desktop VMs. The IT department looked to create a dedicated infrastructure for its virtual desktops that would both satisfy the performance needs of a growing environment and enable administrators to manage the environment more efficiently.

Bartholomew County used Fibre Channel (FC) block-storage systems to support its virtual environment. The county needed additional storage capacity to provide adequate performance for its growing pool of virtual desktops. They quickly realized that the existing storage could not support the performance demands of mixed server and desktop workloads.

"Adding more storage to support the performance needs of virtual desktops was going to be costly on two dimensions," said Jim Hartsook, Director of IT at Bartholomew County. "First, we didn't need the extra storage capacity, and second, the larger storage footprint would increase leasing costs for our data center space."

"Storage management was another major consideration," said Hartsook. "We have a small team that manages the IT infrastructure, so dedicating staff to only manage the storage environment was not possible."

Maintaining and troubleshooting the virtual infrastructure was already difficult from an administrator perspective, so any storage solution needed to be easy to manage. "Proactive monitoring and troubleshooting in an integrated manner—from hosts to storage—was cumbersome at best with our block storage system," said Jenifer Slabaugh, System Administrator at Bartholomew County.

The Solution: Tintri VMstore

"We had two main criteria for selecting storage for our VDI deployment. First, we wanted a small form-factor, high-performance storage system that minimized data center costs. Second, we wanted plug-and-play storage that could be managed by an IT generalist," said Hartsook. "We were introduced to Tintri at the Indianapolis VMware User Group and decided to include VMstore in our PoC."

Bartholomew County conducted a PoC with a number of storage solutions, including traditional block-based systems and a Tintri VMstore appliance. "We chose the VMstore appliance for our VDI deployment for its affordable performance and VM density that let us run hundreds of VMs on one node," said Hartsook. "VMstore's intuitive management and VM-aware statistics made proactive troubleshooting a breeze," said Slabaugh. The county's VDI deployment consists of two Dell R610 servers, one VMstore appliance and dedicated network infrastructure.

Challenges

- Managing and troubleshooting in virtual infrastructure was complex
- Expanding existing storage required additional rack space, increasing cost
- Existing storage needed to be upgraded, but doing so was inefficient and expensive

Solution

- Tintri VMstore

Results

- Storage footprint reduced by over 50%, reducing operating cost
- Improved end-user experience and reduced helpdesk support calls
- Cost-effective performance for a very low dollar-per-VM in the VDI environment

Tintri
Intelligent Infrastructure

The Result: Consistency, Reduced Operating Costs, Eliminated Complexity

The difference between their older standard infrastructure and new Intelligent Infrastructure was evident. "The single 3RU VMstore appliance is able to easily handle hundreds of desktops while providing a consistent experience to the end-users," said Slabaugh. "We currently run 120 concurrent desktop sessions on the VMstore appliance and still have plenty of performance and capacity left to expand the footprint thanks to VMstore's architecture, which leverages flash as first-class storage rather than as cache." Bartholomew County also substantially reduced storage operating costs by reducing the storage footprint required for VDI.

VMstore's VM and vDisk-level management eliminated storage complexity and allowed both VM and storage administrators at the county to proactively monitor and troubleshoot individual VMs. "When we considered going with VMstore, the data board at Bartholomew County that approves technology purchases was concerned about managing both our existing storage and VMstore," said Hartsook. "But, managing VMstore is so simple it exceeded our expectations on all fronts."

"VMstore allows me to keep an eye on individual desktops and proactively identify issues—at all places in the infrastructure—before they affect end-user experience," said Slabaugh. "It allowed me to eliminate a lot of end-user calls."

"Once we have replication capabilities on the VMstore appliance, we look forward to moving our server VMs—which require remote data protection—to VMstore," said Hartsook. "I know replication is on their roadmap in the near future."

"VMstore allows me to proactively manage our VDI deployment and keep ahead of problems," said Slabaugh. "VMstore met or exceeded all of our primary criteria for storage. The unique VM-aware architecture, the simplicity of management, and the cost-effectiveness set VMstore apart from competition—small and large," said Hartsook.

Experience Different! For more information on how Tintri VMstore can turbo-charge your business success through a simple, Intelligent Infrastructure, visit tintri.com/vmstore.

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> *Jim Hartsook, Director of IT, Bartholomew County*

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