



## GASTON COUNTY LEADS THE WAY WITH LOWER STORAGE TCO



The residents of Gaston County, N.C., may enjoy magnificent magnolias and a slower pace of life, but they expect performance from social services like emergency medical services, Medicare, Medicaid, child protective services and public safety.

For Brandon Jackson, the county's chief information officer, supporting these programs and the vast amounts of data they produce has been a challenge. IT team fought to support the more than 1,000 IT users at 25 different sites and disk failures became a regular headache.

The previous IT environment comprised 40 Windows servers with direct attached storage. The county's more than 85 different Microsoft SQL server-based applications struggled to manage the more than a million documents required for state and federal compliance.

Gaston County sought to eliminate server sprawl, implement a reliable disaster recovery plan and consolidate applications using Compellent as the storage foundation.

With nearly half of the county's servers nearing obsolescence and plans underway to upgrade a data-intensive ESRI geographical information system (GIS), Jackson decided to modernize the data center. After comparing storage vendors, Jackson selected the Compellent SAN because it integrated all of the functions the county needed.

"Since 40 percent of the fleet needed to be replaced, we had to be creative with how we would replace them," Jackson says. "No other vendor we looked at offered such advanced functionality for the same cost as Compellent. Features such as Boot from SAN and Thin Provisioning enabled us to save by buying diskless servers."

## REMOTE SITE INCREASES SERVICE AND SECURITY

Gaston County immediately deployed a Compellent SAN to consolidate existing third-party and custom enterprise applications, including the ESRI GIS and new systems such as workgroup collaboration tools and a digital document repository. Jackson has since increased capacity twice and installed a second Compellent SAN for instant disaster recovery. Each SAN can house nearly 20 TB of data. Almost three-quarters of the county's servers are diskless and boot from the Compellent SAN.

"Relying on the SAN has saved us about a third of the costs of replacing our server fleet had they been standalone RAID 5 with tape backup capability," Jackson adds.



"No other vendor we looked at offered such advanced functionality for the same cost as Compellent. Immediately we saw that Compellent offered us the avenue we were looking for to modernize our systems, reduce administrative overhead and implement an effective disaster recovery plan."

BRANDON JACKSON  
Chief Information Officer Gaston County

## RESULTS REPORTED BY GASTON COUNTY

- » Boot from SAN and virtualization technology has saved over \$100,000
- » Cost-effective disaster recovery ensure compliance legislation
- » Ease of use dramatically reduce administrative time and total storage cost of ownership, leading to estimated yearly savings of over \$50,000
- » Advanced collaborative applications have led to a projected \$512,000 in user productivity gains
- » Continuous snapshots provide recovery in minutes instead of days

## OPERATING SYSTEMS

- » Microsoft Windows

## KEY APPLICATIONS

- » Microsoft SQL Server
- » ESRI GSI
- » Laserfiche digital document repository
- » Microsoft Exchange 2003
- » VMware ESX Server

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## WORKING WITH VMWARE

Virtualizing the data center has never been easier or more attainable. The Compellent SAN simplifies integration with VMware ESX Server using advanced disk-level virtualization, raw device mapping and intuitive wizards. These features combine to consolidate and share resources, establish test and development environments and create and store space-efficient snapshots.

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### Secondary Quote

“We worked with our local VMware consultant--a highly-regarded regional expert. He was amazed at how smoothly Compellent integrated with VMware.”

MICHAEL MILLER  
Chief Information Officer  
National Print Group

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## COMPELLENT

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Downtime is now a thing of the past. Previous system disk failures typically resulted in a whole day of processing losses. Today, Jackson and his team can respond to issues within minutes to keep users up and running.

The county uses asynchronous replication over Fibre Channel to the remote site to increase flexibility and satisfy compliance audits. Continuous snapshots, known as Replays, of each data volume ensure continuity and data protection in a disaster. The Replays also allow Jackson's team to easily facilitate vendor upgrades and maintenance by enabling them to quickly back up vital data.

## VIRTUALIZATION INCREASES AVAILABILITY, DECREASES FOOTPRINT

To take advantage of the flexibility offered by virtualization, the county has also created a VMware ESX Server® environment. Compellent's storage virtualization paired with VMware technology enables IT staff to switch applications between servers and sites without disrupting users, helping ensure high availability.

As the county continues to offer advanced services, Jackson sees virtualization as key to keeping IT costs down. Several new functions, including a Web server hosting electronic public records, are running in the high availability, virtualized environment.

“Virtualization will enable us to better serve the public by consolidating IT resources, reducing our data center footprint, and improving energy efficiency in the data center,” Jackson says. “Compellent's virtualized storage is the backbone of our new highly-available enterprise environment.”

## MANAGEMENT TOOLS STRETCH RESOURCES

Compellent's Thin Provisioning allows Gaston County to allocate any size virtual volume upfront, but only consume physical capacity when data is written by the application. This gives Jackson the ability to quickly respond to the common demands for more space.

“The GIS system in particular grows and shrinks rapidly. At the drop of a hat we might need an additional 200 GB for detailed flyover pictures.” Jackson explains. “Even our developers are surprised when we only need 15 minutes to allocate the space.”

Compellent's Data Progression provides Fully Automated Tiered Storage, helping Jackson improve resource utilization and optimize Fibre Channel drive usage.

“We couldn't believe how Compellent's Data Progression™ automatically identified high-use data and moved it to a faster tier to improve performance.” Jackson says. “Compellent helped us eliminate time consuming manual data classification and transfers.”

## ADVANCED FEATURES FUND THE FUTURE

Jackson's team also saved time savings in many other routine administrative tasks. “Our nightly process to export data from two SQL Server databases took two hours on the old system. Now, that process takes 20 minutes,” Jackson explains.

Jackson says simplified administration has played a huge factor in cost savings. He estimates Automated Tiered Storage, Thin Provisioning and Boot from SAN saved the county about \$65,000 in hardware costs and downtime in the first year. Integrating workgroup applications has saved an estimated \$152,500. Adding VMware, a second Compellent SAN for remote replication, an electronic documentation system and other modernization initiatives have contributed a projected annual savings of more than \$512,000 in productivity gains.

“We experienced a 20 percent reduction in reactive administration and server maintenance during that first year, and that was only with a quarter of the servers moved over to the SAN,” Jackson says. “The Compellent SAN alerts you if anything needs attention. When you do need to take action, the system is intuitive and easy to use.”