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Success Story

CNM Expands Student Services, Boosts Online Enrollment 40% with INX and NetApp



KEY HIGHLIGHTS

Industry

Higher education

The challenge

Centralize the storage infrastructure, simplify its management, and implement a reliable backup solution to enable delivery of and ongoing access to student services and online curriculum.

The solution

Deploy NetApp® FAS unified storage systems with NetApp SnapManager®, SnapMirror®, and SnapRestore® software.

Benefits

- 100% successful backups and restores
- 5-figure savings achieved by decommissioning tape
- 80% reduction in backup time
- 50% decrease in break/fix man hours
- 6-fold increase in dev/test productivity

CUSTOMER PROFILE

Founded in 1965, Central New Mexico Community College (CNM; www.cnm.edu) is a two-year higher learning institution dedicated to serving the greater Albuquerque and Rio Rancho metropolitan areas. Fueled by the downturn in the U.S. economy, CNM has experienced a massive surge in interest from students preparing for today's challenging job market, and overall enrollment is the highest in the school's history. CNM's enrollment has grown 22% during the last 2 years, and the distance learning program has grown by more than 40% over the past 2 semesters alone. In fact, with over 27,900 students at 5 locations in the city and another campus set to open in Rio Rancho in the fall of 2010, CNM is now the largest postsecondary educational institution in New Mexico in terms of enrollment, surpassing even the University of New Mexico.

THE CHALLENGE

Direct-attached storage, unsuccessful backups

Direct-attached, decentralized storage at each of CNM's five campuses made backup and recovery a huge concern for the IT staff, headed up by Joe Gieri, executive director of IT Services. "Backing up to tape at each

location was a hit or miss proposition, mostly a miss," he says. The backup success rate was approximately 40%, and it was extremely difficult to validate the success.

Key applications such as the school's SunGard Banner Unified Digital Campus enterprise resource planning (ERP) system, powered by an Oracle® Database; Microsoft® Office SharePoint® Server, Microsoft Office Project Server, and Hyland OnBase enterprise content management (ECM) system running on Microsoft SQL Server®; and Microsoft Exchange Server for faculty and staff e-mail were endangered by the inability to ensure consistent backups and recoveries. "We needed a centralized storage solution for backing up and recovering data and to provide the foundation for a disaster recovery solution," says Gieri.

One of Gieri's principal considerations when evaluating storage solutions was the limited number of system administrators he had available to address storage issues. "I was looking for an easy-to-manage storage solution that we could handle with the IT people we had," says Gieri. "And because we have a regular turnover in staff, it was important that the training process be simple and fast."

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Joe Gieri

Executive Director of IT Services, Central New Mexico Community College

THE SOLUTION

Unified storage delivers flexible, scalable solution

After experimenting with an EMC storage solution that was cumbersome to support and unable to scale like they needed it to, Gieri turned to Houston-based INX, Inc. for advice. A leading U.S. provider of unified communications and virtualization solutions, INX is a Star-level solutions partner in the NetApp Partner Program and has achieved Virtualization Specialization. As the architect of its core network offerings at all five campuses, INX was already a highly regarded partner of CNM. When INX heard the college was looking for a new storage solution, they jumped in to make Gieri aware of the potential benefits of NetApp storage, NetApp Snapshot™ technology, and its easy-to-manage, easy-to-verify backup strategy for enterprise data.

“We were impressed with INX’s presentation of the NetApp solution for centralized storage,” says Gieri. “Nevertheless, we conducted a competitive RFP procedure that pitted the NetApp proposal against EMC and HP. INX was able to bring a detailed response to the table that really sold the value of NetApp, and they outlined a very good plan for rolling it out.”

CNM’s long-term plans for a new data center were taken into account when the

NetApp storage solution was designed, and NetApp Professional Services was onsite to assist with the initial implementation. A NetApp FAS3140 cluster was installed in one of two buildings at the Main Campus that house the current data center, and a NetApp NearStore® system on FAS was set up in the second building to provide near-line storage. CNM’s use of higher speed lines within the metro area eliminated the need for distributed storage, and all data is centralized at the Main Campus data center. A FAS250 storage system is located at the CNM Westside Campus data center, which acts as the disaster recovery (DR) site.

The NearStore system has subsequently been replaced with another FAS3140, and the next steps in the implementation will include the move to a single building on the Main Campus that is currently under construction. In conjunction with this step, the second FAS3140 will be moved to the Westside Campus. This will enable Gieri to scale out CNM’s data center DR plan to include other critical systems in addition to the ERP system.

“INX is a solid business partner,” says Gieri. “They understand our environment and the importance of having our applications online and accessible. That’s become even more evident recently as we design our future data center network. Right at the heart of the

project my people are working with INX people. We can really count on them to help us through this: their assistance in the deployment and support of the NetApp storage solution has been invaluable. “

Easy-to-use, integrated management software

The storage systems are one part of what makes CNM’s solution so successful, and the easy-to-use, integrated NetApp data management software is the other key to the equation. To automate and simplify the complex, manual, time-consuming processes associated with backups, restores, and recoveries, CNM relies on NetApp SnapManager, SnapMirror, and SnapRestore software. SnapManager makes Snapshot copies of Exchange, SharePoint, Oracle, and SQL Server data stores that are replicated using SnapMirror to the FAS3140 now located in the secondary data center. Banner data is also replicated to the Westside Campus data center where it is subsequently backed up to tape. With SnapRestore, data from a single file or a multi-terabyte volume is restored in seconds from any Snapshot copy on the CNM system.

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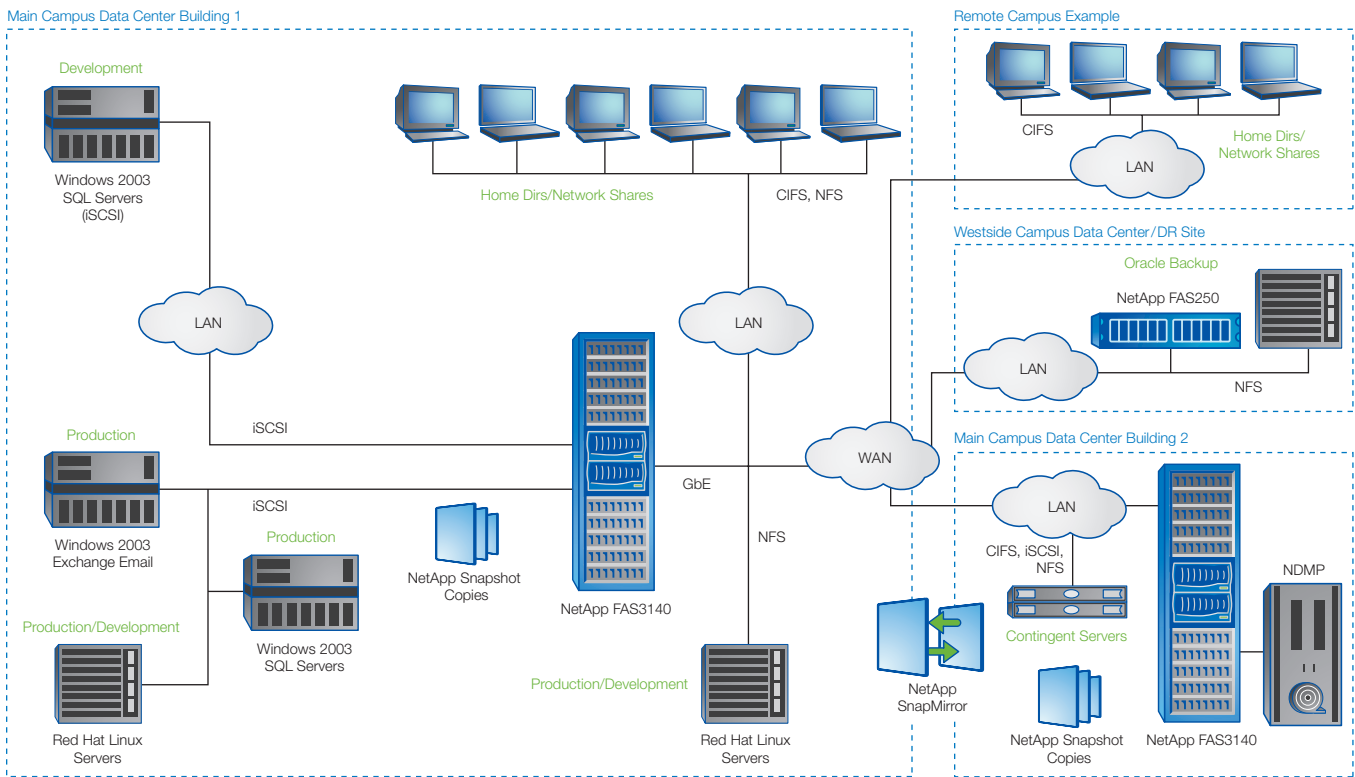


Figure 1) Central New Mexico Community College's storage infrastructure.

BUSINESS BENEFITS

100% successful backup and recovery, 80% reduction in backup time

Prior to the NetApp solution, CNM could not guarantee the safety of its critical Banner system running on Oracle because its backup success rate hovered around 40%. Now, with NetApp SnapManager for Oracle, backups are 100% successful. "The NetApp backup software just works. And with SnapManager for Oracle, we can verify that every backup is complete and accurate."

Backups used to take 15 hours per week and occupy the time of 5 administrators. Today it is a 3-hour-per-week job for one administrator—80% less time—and most of that time is spent rotating tapes, as the backups themselves take very little time.

Major restores in hours instead of days

With the NetApp storage solution in place, CNM can afford to keep backups for 30 days on disk, so it is rarely necessary to go to tapes for restores. Using SnapRestore the college now experiences 100% success on restores, as opposed to the 30% failure rate they had been dealing with before NetApp.

"I used to hear about recoveries all the time," says Gieri. "Now I don't hear about them at all. To me, it's just something my technicians know how to do, and they do it."

Gieri's storage team runs a drill annually to see how long it takes to restore the Banner ERP system after disconnecting from the main network. In the most recent test, it took only two hours to bring up the entire system, a task that would have taken days or weeks using tape.

Five-figure cost savings from decommissioning tape backups

CNM used to have diverse methodologies for the tape-based backups that were conducted at its five campuses, utilizing different hardware and software. Today most of that has been decommissioned. "Now everything is centralized and very consistent, and all the tape backups are limited to the Westside Campus data center," says Gieri. "We've saved five figures in tape costs because we've retired all but one tape system."

Sixfold increase in dev/test productivity

Using replications of the Oracle Database created by SnapMirror, CNM can safely generate more test and development cycles for technology projects. "We may have five projects going at one time against our Banner ERP system that all require a separate instance of the database," says Gieri. "We couldn't do that in the past because there was no easy way to get a full copy. Now we use SnapMirror to very quickly build an instance of the database. We can finish

from half a dozen to a dozen projects per year, such as patches, patch releases, upgrades, or just new technology in the Banner system. Before it was a struggle just to get one upgrade in place per year."

The college also uses NetApp FlexClone® technology to create true clones of the production database to support the needs of specific college departments. For instance, twice a day the storage team creates a FlexClone copy that populates an electronic dashboard used by the planning department. In the past, an Excel spreadsheet had been used to capture enrollment data, and for years a member of the department had to update the spreadsheet manually on a daily basis. Now the data is updated real time and can be accessed instantly, significantly improving that department's productivity.

SharePoint facilitates "green" environment

The college's SharePoint environment has been deployed for over a year now and has been rapidly gaining popularity. Professors use the collaboration system in ways Gieri had not foreseen, such as creating menuing environments to develop and distribute information electronically. The reduction in paper consumption has resulted in unexpected but welcome support for CNM's "go green" initiatives.

“NetApp gives us excellent support with SupportEdge Premium, and INX partners with us to provide solutions that will be beneficial to our roadmap. With NetApp and INX, we can focus on the areas that help us grow.”

Joe Gieri

Executive Director of IT Services, Central New Mexico Community College

Future virtualization

CNM is also in the process of virtualizing its servers using VMware® vSphere and aims to have 60% of its systems virtualized within 3 years. “Thanks to the support and solutions from NetApp and INX, most of our time is focused on innovation now,” says Gieri. “We used to be 50% occupied with break/fix and maintenance; now we spend at least 60% on projects such as virtualization and standing up SharePoint. NetApp gives us excellent support with SupportEdge Premium, and INX partners with us to provide solutions that will be beneficial to our roadmap. With NetApp and INX, we can focus on the areas that help us grow.”

SOLUTION COMPONENTS

NetApp products

FAS3140 and FAS250 storage systems

Data ONTAP® 7G operating system

FlexClone software

SnapManager for Exchange Server, SharePoint Server, SQL Server, Oracle, and Virtual Infrastructure software

SnapMirror and SnapRestore software

SnapDrive® for Windows® software

Protocols

NAS: CIFS, NFS

SAN: FC, iSCSI

NetApp Global Services

NetApp SupportEdge Premium

Environment

Applications: Microsoft Exchange Server 2007, Microsoft Office SharePoint Server 2007, SunGard Banner Unified Digital Campus, Hyland OnBase Integrated Document Management

Databases: Microsoft SQL Server 2005, Oracle 10g

Server platforms: Dell, HP, VMware ESX

Operating systems: Linux®, Windows

Users: 28,450 students and staffers

Third-party products

VMware vSphere; Oracle Data Guard

NetApp partner

INX, Inc.

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