



NetApp®



Joint Customer Story

McNeese State University Boosts Disaster Preparedness with NetApp and VMware



Another NetApp solution delivered by:



KEY HIGHLIGHTS

Industry
Higher education

The Challenge
Brace for the threat of hurricanes and other potential disasters by proactively protecting university operations and infrastructure.

The Solution
Implement a robust disaster recovery plan with NetApp® FAS3210 and FAS2040 storage systems in primary and secondary data centers and VMware® for virtualization.

Benefits

- Established critical replication between onsite and offsite data centers for disaster recovery
- Reduced physical servers from 30 to 5 through server virtualization
- Accelerated recovery times from hours to minutes

Customer Profile

McNeese State University is located in southwestern Louisiana in Lake Charles, with its freshwater marshes, scenic rivers, and warm sandy beaches. The university, founded in 1939, has a current enrollment of almost 9,000 students. At McNeese, students from 56 parishes, 34 states, and 49 countries can choose from more than 75 undergraduate and graduate degree programs. McNeese is a member of the University of Louisiana System, one of the largest public higher education systems in the United States.

The Challenge Protecting Operations and Infrastructure

McNeese State University is committed to excellence in teaching and research across its 500-acre campus, including 68 buildings. The campus is located a mere 30 miles from the Gulf of Mexico, which offers a great getaway for hard-working students, but also the potential each year for hurricanes.

Although the university provided shelter for New Orleans residents and univer-

sity students fleeing from Hurricane Katrina in 2005, McNeese faced a hurricane closer to home when Hurricane Rita struck the Louisiana coast later that year. The category 5 hurricane caused \$12 billion in damage along the Gulf Coast and devastating damage to McNeese campus facilities and infrastructure and disruption to university operations.

“Just before the hurricane hit, our IT department relocated operations to Louisiana Tech University in Ruston, but maintaining operations was a struggle without an offsite disaster recovery site,” says Chad Thibodeaux, chief information officer, McNeese State University. “We had hoped to resume classes the following week, but the McNeese campus and most of Southwestern Louisiana lost power for two weeks. In addition, nearly every building on our campus sustained damages, ultimately costing tens of millions of dollars to repair.” Through the remarkable determination of the McNeese community, the university reopened and resumed a portion of its classes five weeks later.

“With a robust disaster recovery strategy backed by NetApp and VMware capabilities, our IT department is better prepared to manage the data center and maintain university operations in the event of another hurricane or other disaster.”

Chad Thibodeaux

Chief Information Officer, McNeese State University

The university’s recovery effort demonstrated its resilience while sparking a commitment to restructuring its disaster recovery plan. The phased project involved establishing disk-based replication processes that would protect university data through a secondary site, eventually located remotely at a Louisiana Tech University data center. Reliable replication practices would help the university maintain operations and educational activities in the event of another disaster. Moving the secondary data center to a remote location would also eliminate network outages that resulted from an overzealous raccoon population known to interfere with on-campus electrical circuits.

McNeese also wanted the new storage solution to help move its server virtualization strategy forward, which would further enhance the disaster recovery plan by eliminating most of its physical servers. Other important storage criteria included the flexibility and scalability to support future IT projects that would enable the IT staff to continue to support the university’s important educational mission and to do so cost effectively. The university worked with CDW—a participant in the NetApp Partner Program and provider of technology products and services for business, government, education, and healthcare—to select the right storage solution to meet current and future storage requirements.

The Solution

Rapid Deployment and Quick ROI

McNeese turned to NetApp Professional Services for assistance in implementing NetApp FAS3210 storage systems in its onsite data center. NetApp Rapid Deployment Services for Storage Implementation consultants first collaborated with McNeese storage administrators to design the layout of the storage controllers. The NetApp field engineers then fully configured, tested, and deployed the tailored NetApp solution. “Working with NetApp Professional Services ultimately resulted in rapidly deploying a solution that immediately met our needs, which saved us valuable time and money,” says Thibodeaux.

The university’s growing VMware virtual server environment, supported by VMware vSphere® 5 and vCenter™, also runs on the FAS3210 production storage system. Through the NetApp OnCommand® Virtual Storage Console, the IT team uses Virtual Storage Console to protect the local VMware environment. The team leverages SnapMirror® in combination with VMware vCenter Site Recovery Manager to replicate applications to the remote site. Using the integrated disaster recovery solution, IT automates disaster recovery activities, prioritizing related workloads. The team can test and verify the disaster recovery plan nondisruptively in a separate environment, simulating a disaster and using

NetApp SnapMirror and VMware vCenter Site Recovery Manager to rapidly recover data and solidify the plan.

The unified NetApp storage platform, running on Data ONTAP® 8.0 operating in 7-Mode, offers a new level of flexibility and cost efficiency to the university. NetApp backup and recovery capabilities provide an important level of data protection for the university’s six academic colleges, which include Business, Education, Engineering and Engineering Technology, Liberal Arts, Nursing, and Science, plus the William J. Doré, Sr. School of Graduate Studies. NetApp supports and protects mission-critical applications such as Blackboard Learn, Moodle Course Management System, and VMware Zimbra® Collaboration Server supporting 1,500 staff e-mail accounts and 9,000 student accounts, Web servers, an extensive Red Hat Enterprise Linux® 5 and 6 environment, and others.

McNeese uses NetApp SnapMirror to replicate university data daily to FAS2040 storage systems in the Louisiana Tech University data center for disaster recovery purposes, with a dedicated connection that doesn’t compete with other network traffic such as its campus Internet. SnapMirror network compression reduces McNeese’s bandwidth utilization, decreases network costs, accelerates data transfers,

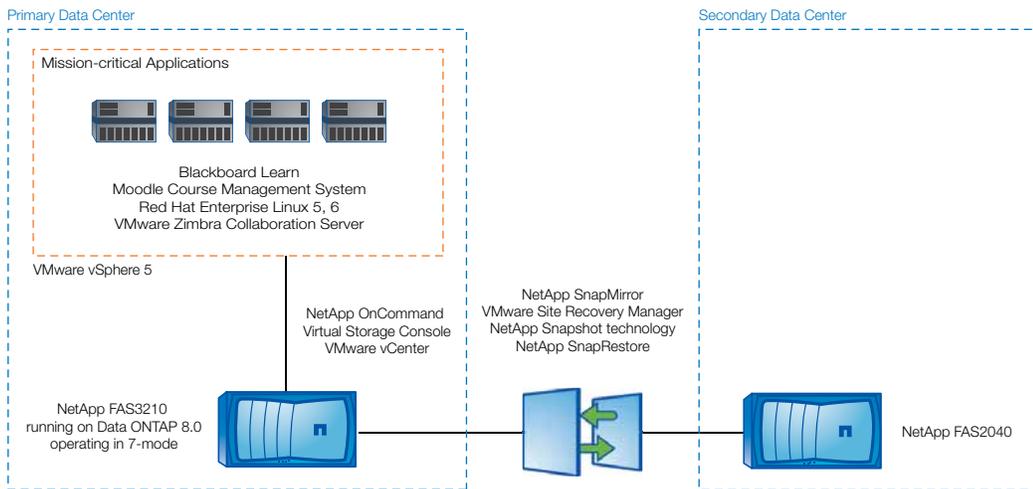


Figure 1) McNeese State University Storage Infrastructure.

The university's growing VMware virtual server environment supported by VMware vSphere 5 and vCenter runs on the FAS3210 production storage system. Through the NetApp OnCommand Virtual Storage Console, the IT team uses Virtual Storage Console to protect the local VMware environment. The team leverages SnapMirror in combination with VMware vCenter Site Recovery Manager to replicate applications to the remote site.

and reduces recovery point objectives (RPOs). The university protects data locally with NetApp Snapshot™ and SnapRestore® technologies.

Business Benefits

Rising to a New Level of Disaster Preparedness

McNeese State University's core values include academic excellence, student success, university and community alliances, and fiscal responsibility. As a component of these institutional goals, the organization is committed to "utilizing the role of technology to increase the efficiency and effectiveness of campus operations."

"With a robust disaster recovery strategy backed by NetApp and VMware capabilities, our IT department is better prepared to manage the data center and maintain university operations in the event of another hurricane or other disaster," stresses Thibodeaux. "We learned valuable lessons from Hurricane Rita about the importance of investing in the right technologies and establishing the best practices that make sure that our vital university systems remain protected no matter what."

Because it used the NetApp Rapid Deployment Services for Storage Implementation base service, the university benefited from complete verification testing for hardware and cluster failover, as well as demonstration of

data availability on CIFS and NFS data. The NetApp Professional Services team also provided Snapshot configuration on volumes. A complete service handoff that included documentation and knowledge transfer, combined with free NetApp University training, equipped the McNeese IT staff to maximize NetApp data protection and disaster recovery capabilities.

Cost efficiency is also at the center of McNeese's enhanced disaster recovery plan. IP-based replication with SnapMirror enables the university to avoid expensive dual Fibre Channel-to-Ethernet switches at its primary and secondary data centers. SnapMirror disk-to-disk replication also eliminated most of McNeese's costly, time-consuming tape backup processes. Virtual Storage Console helps the university achieve greater returns on its VMware environment. Snapshot and SnapRestore technologies accelerate recovery times and reduce the resource requirements of IT staff members tasked with recovering inadvertently deleted data.

Additional Protection with Server Virtualization

McNeese is achieving additional cost efficiencies and disaster recovery improvements through server virtualization on NetApp storage, enabled by tight integration between NetApp and VMware technologies. To date, the university has reduced its physical servers

from 30 to 5, which reduces hardware costs while simplifying IT management. Also important, server virtualization further supports the university's disaster recovery plan.

In the past, if a physical server went down, the university typically spent hours rebuilding the operating system and reloading data. With NetApp Snapshot and SnapRestore technologies and Virtual Storage Console, it now takes only minutes for point-in-time recovery.

Virtualizing mission-critical applications on NetApp storage makes it much easier and faster to bring systems and services back up, if needed. "By virtualizing on NetApp storage, even in the extreme case of an evacuation where everyone is scattered, I feel confident that we could continue to provide vital IT services such as e-mail and learning systems to our instructors, administrators, and students," notes Thibodeaux.

Helping Students and the University Succeed

The commitment of the McNeese faculty and staff to excellence in higher education remains steadfast. The university motto of "Excellence with a Personal Touch" extends beyond the classroom to the IT department, where the team will continue to respond to the needs of students and deliver the innovative services that help them succeed in the 21st-century global economy.

“Working with NetApp Professional Services ultimately resulted in rapidly deploying a solution that immediately met our needs, which saved us valuable time and money.”

Chad Thibodeaux

Chief Information Officer, McNeese State University

“We’ve bounced back from hurricanes, budget cuts, and other significant challenges with a world-class data center that enables us to reduce our IT costs while bracing for potential hurricanes with tenacity,” says Thibodeaux. “Additionally, the flexibility and scalability inherent in NetApp storage will allow us to embark on new IT projects and services that will help us remain competitive in the changing higher-educational environment.”

SOLUTION COMPONENTS

NetApp Products

NetApp FAS3210 and FAS2040 storage systems

Data ONTAP 8.0 operating in 7-Mode

Snapshot technology

SnapRestore

SnapMirror

OnCommand Virtual Storage Console

Protocols

CIFS

NFS

Third-Party Products

Blackboard Learn

Moodle Course Management System

Red Hat Enterprise Linux 5, 6

VMware vSphere 5, vCenter

VMware Zimbra Collaboration Server

VMware vCenter Site Recovery Manager

Partner

CDW

www.cdw.com



www.netapp.com



NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Discover our passion for helping companies around the world go further, faster at www.netapp.com.

Go further, faster®

© 2012 NetApp, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of NetApp, Inc. Specifications are subject to change without notice. NetApp, the NetApp logo, Go further, faster, Data ONTAP, OnCommand, SnapMirror, SnapRestore, and Snapshot are trademarks or registered trademarks of NetApp, Inc. in the United States and/or other countries. Linux is a registered trademark of Linus Torvalds. VMware, vSphere, and Zimbra are registered trademarks and vCenter is a trademark of VMware, Inc. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such. CSS-6566-0712