UNIVERSITY OF NEW MEXICO AUTOMATES IT AND SECURELY MODERNIZES ITS DATA CENTER TO REDUCE COSTS AND OUTAGES

INDUSTRY
HIGHER EDUCATION

LOCATION
ALBUQUERQUE, NEW MEXICO

KEY CHALLENGES
- Automate IT to speed provisioning of infrastructure and application delivery
- Provide departments and researchers with a centralized self-service IT model
- Modernize data center for secure, easy connection to public clouds

SOLUTION
University of New Mexico deployed VMware vRealize Automation and VMware NSX to build a software-defined data center to automate its environment, scale, and meet the growing needs of its researchers and 100 departments.

BUSINESS BENEFITS
- Improved educational opportunities with fast, consistent, secure service delivery
- Empowered departments and researchers to self-deploy new technology quickly
- Achieved threefold service increase and enhanced compliance with same IT staff

The University of New Mexico wanted to enable central IT to act as a service provider for the entire university by providing a single self-service portal to all of its constituent departments and researchers. The university began a journey toward a software-defined data center, using VMware vRealize Automation and VMware NSX to automate service delivery and define networking and security policies for its private cloud. University of New Mexico can now efficiently, securely, and cost-effectively deliver tools for effective learning, teaching, and administration.

The University of New Mexico (UNM) is a tier-1 research institution with multiple campuses and branches, offering more than 200 degree programs serving approximately 35,000 students, and 9,100 faculty and staff.

The Challenge

To support the varied learning environments and keep the university business running smoothly, IT services needed to be delivered quickly and be available on-demand — a goal that could only be achieved by centralizing and automating IT. UNM wanted to modernize its data center to offer a more cost-effective and efficient option, be less reliant on physical servers, reduce extensive manual work, and put service level agreements (SLAs) and automated processes in place to guarantee service delivery.

"We wanted to give departments the autonomy to manage their own IT functions while enjoying the advantages of a centralized infrastructure that can be consumed on demand," says Brian Pietrewicz, Deputy CIO, University of New Mexico. "But to become a true service provider to the university and remain compliant with HIPAA and FERPA regulations, we needed improved security, micro-segmentation, and multi-tenancy—without being hardware dependent."

The Solution

UNM began looking for a cloud automation platform that would allow it to provide IT infrastructure as a service (IaaS) with policy-based governance. As a long-time VMware vSphere customer, the university chose VMware vRealize Automation to automate service delivery for Lobo Cloud, a private cloud named for the school's mascot.

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BRIAN PIETREWICZ
DEPUTY CIO
UNIVERSITY OF NEW MEXICO

"With vRealize Automation, we're not locked into any specific hardware platform, giving us more choice and flexibility," says Pietrewicz. "By automating manual processes, we've transformed an extremely inconsistent service process into a streamlined self-service experience that's as easy as ordering a meal in a restaurant."

However, delivery of applications and services was bottlenecked by the slow, manual, and error-prone process of provisioning networking and security resources. The university decided to maximize its investment by using vRealize Automation in conjunction with VMware NSX, a network virtualization platform for the software-defined data center. Used together, the two solutions eliminate this bottleneck and empower central IT to completely automate the delivery of full-stack secure, scalable, and high performing multi-tier applications.

"The combination of VMware vRealize Automation and NSX is a game-changer for us," says Pietrewicz. "The security, speed, efficiency, and portability benefits are very tangible."

Using VMware NSX, UNM can pick up workloads and move them anywhere in their environment and to the cloud—at any time, and for any reason—without manually reconfiguring network settings or security policies. "With VMware NSX, we can replicate our data to a remote location and spin up virtual machines without any manual reconfiguration," says Pietrewicz.

Business Results & Benefits

Using Lobo Cloud, departmental IT staff can now deploy virtual machines in 20 minutes instead of waiting three weeks for delivery, knowing that the VMs are fully compliant with HIPAA and FERPA regulations. Soon the university will extend the benefits of IaaS to its researchers, helping them shave off up to 12 weeks of lead time for new projects and get results faster. "We're an R1 university, which means we do a lot of research," says Pietrewicz. "With VMware vRealize and NSX, we'll be able to give researchers faster time to discovery while securing their science networks."

By modernizing its data center, transforming security, and integrating with multiple clouds, UNM is ahead of many other universities with its digital transformation. Central IT staff can reduce the tedious manual effort of day-to-day operations and instead focus on more strategic priorities. "The combination of VMware vRealize Automation and VMware NSX is going to allow us to double or even triple in size without increasing central IT staff," says Pietrewicz. "It brings CapEx savings as well—instead of spending $15,000 to procure their own systems, departments and researchers can pay us $1,200 and have what they need right away."

With consistent, automated infrastructure provisioning, the risks of compliance breaches or outages caused by human error are much lower. As more departments move into the private cloud, timely systems availability increases university-wide.

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VMWARE FOOTPRINT
- VMware vSphere Enterprise Plus
- VMware vRealize Automation Enterprise
- VMware NSX

APPLICATIONS VIRTUALIZED
- Blackboard Learn
- Ellucian Banner
- Microsoft SQL Server

PLATFORM
- Cisco UCS

Self-service deployment also allows departments and researchers to take advantage of new technology faster, improving educational opportunities and research results. "With VMware vRealize and NSX, we're well positioned to support the entire university with cost-effective, secure cloud services," says Pietrewicz.

Looking Ahead

UNM is now evolving its private cloud into a hybrid cloud, extending automated provisioning to the public clouds that departments have already been using. UNM also now has the freedom to use Cross-Cloud Services to take advantage of hybrid cloud while protecting data and controlling costs.

"The ability to have portable networks and seamless connections to hybrid cloud is the coolest thing I've seen in my 20-year IT career," says Pietrewicz. "We'll be able to keep up with university demands and student expectations by escorting people to the cloud."

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