University of New Mexico Takes IT to the Cloud to Centralize Services While Maintaining Departmental Autonomy

University of New Mexico (UNM) Central IT implemented VMware vRealize™ Automation™ to enable department IT organizations to consume infrastructure as a service. Today, faculty and staff are accessing these central infrastructure services via a private cloud while still maintaining control of their own department-level IT functions. As a result, UNM automated formerly manual tasks, reduced deployment times for new machines, and decreased operating costs while delivering personalized IT services.

Located in the heart of Albuquerque, New Mexico, the main campus of University of New Mexico has served as the state’s flagship educational institution since its 1889 founding. Today, UNM offers highly regarded degree programs in a variety of disciplines for a student population of more than 25,000, supported by faculty and staff numbering more than 20,000.

The Challenge

Few organizations are more decentralized than universities, which typically encompass myriad academic and nonacademic departments, most of which operate largely autonomously. University of New Mexico is no exception.

When Brian Pietrewicz joined UNM as director of computing platforms more than two years ago, each of the school’s more than 100 departments had its own IT organization. This was fine when it came to disseminating core curriculums and missions but not so good when it came to managing IT infrastructure. “The departments simply did not have the resources to run things like data centers, servers, storage, disaster recovery, and backup efficiently,” Pietrewicz said.

Although Central IT had virtualized most of its servers to reduce costs, the department-level IT groups weren’t seeing any benefits. Explained Pietrewicz, “Central IT did sell virtual machines with database backups and all kinds of interesting services to the departments that serve as our customers, but there were no service-level agreements or processes wrapped around them. As a result, service delivery was inconsistent.”

Indeed, Pietrewicz and his team estimated that even with server virtualization in place, deploying a single virtual machine could take more than 100 manual steps from six separate groups within UNM’s IT organization. Not surprisingly, this combination of manual processes and lack of standardization was extracting a huge toll on deployment time. “You can imagine how painful it was when it took 20 minutes to spin up a virtual machine but three weeks to deploy it to a customer,” Pietrewicz said.
VMware Case Study

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Brian Pietrewicz
Director of Computing Platforms, University of New Mexico

The Solution

Pietrewicz knew there was a better way, and he believed UNM could achieve it by providing IT infrastructure as a service (IaaS). By doing so, Pietrewicz explained, “we could allow the various departments and groups to focus on their core academic and operational missions without worrying about the heavy lifting of the infrastructure pieces.” But before UNM could realize Pietrewicz’s goal of delivering push-button infrastructure services, Central IT needed to standardized service definition and delivery processes.

Once services were standardized, virtual machine deployment time dropped from three weeks to three days. But Pietrewicz knew UNM could do better still. “We looked at the manual processes and found steps that could be easily automated,” he said. “That’s when we turned to VMware vRealize Automation.”

By deploying vRealize Automation and giving department-level faculty members and IT staff self-service on-demand access, Central IT was able to provide its UNM customers with exactly what they wanted: the ability to deploy machines at will—without worrying about the underlying infrastructure.

Business Results & Benefits

With the university’s private Lobo Cloud (named for the school’s mascot), departmental IT staff can now go online and deploy a machine within 20 minutes—a far cry from the three-week deployment times that Pietrewicz encountered initially. “With the help of VMware solutions,” he said, “we’ve transformed an extremely inconsistent service process into an experience that’s the equivalent of going into McDonald’s and ordering a Big Mac.”

And while it’s difficult to quantify the cost savings of this virtualization and automation (statistics weren’t collected by the previous system), Pietrewicz knows they are considerable. “Anybody who works with virtualization quickly learns that once you hit a certain size, it becomes significantly less expensive,” he said. “Instead of buying a $10,000 server from an outside vendor, a department can buy a $1,000 virtual machine from us to do the same thing. And when the department no longer needs that server, it can turn it off and stop paying.”

This is powerful stuff for an institution that wants to give its departments the autonomy to manage their own IT functions while also enjoying the advantages of a centralized infrastructure that can be consumed on demand. The virtualized cloud-based environment confers the agility required to adopt new technology quickly, boost innovation, and increase efficiency—all of which are key for a public university intent on maintaining academic standards and advancing research while making the most of limited funds.

Looking Ahead

Even though UNM’s Central IT organization is nearly 100 percent virtualized, many departments have yet to give up their physical servers—a situation Pietrewicz believes will change as they experience the benefits of on-demand infrastructure services. UNM also has plans to evolve its current private cloud into a hybrid cloud, extending automated provisioning to the public clouds that departments have already been using—a task that should be easy with vRealize Automation.