Transform Education Services with Your Cloud

Meet Demand for Student and Staff Services

IT leaders in academic institutions are embracing datacenter consolidation as a way to reduce capital and operating costs. Yet, datacenter consolidation is only the first step in IT transformation. Truly accelerating IT—and, consequently service delivery to students, faculty and staff—requires advanced automation, a standard for sharing services and the adoption of a cloud computing approach with virtualization as its foundation.

As institutions of higher learning consider new IT models to support future services, today's realities weigh heavily on IT leaders' minds. Education is facing severe budget challenges, requiring IT leaders to find effective ways to partner with private companies, government agencies and other institutions to enhance learning. Constrained financial and IT staff resources have resulted in the aging of brittle and fragmented computing environments that are difficult and costly to manage. Throughout the world, new demands from students and faculty to raise service levels and enable timely and secure access to information from portable devices—without raising fees—are causing IT leaders in academic institutions to assess how they can respond more quickly to changing requirements.

With virtualization and cloud computing, academic institutions can enable greater cooperation among and within universities, colleges and departments. They can transform the delivery of existing and new student, staff and faculty services by supporting them on an increasing variety of devices—where and when users need them.

Amplify Value with Cloud Computing

Virtualization paves the way to your cloud—the right private, public or hybrid cloud to meet unique education needs. With your cloud, universities, colleges and departments can gain tremendous agility advantages from key cloud characteristics (see Figure 1):
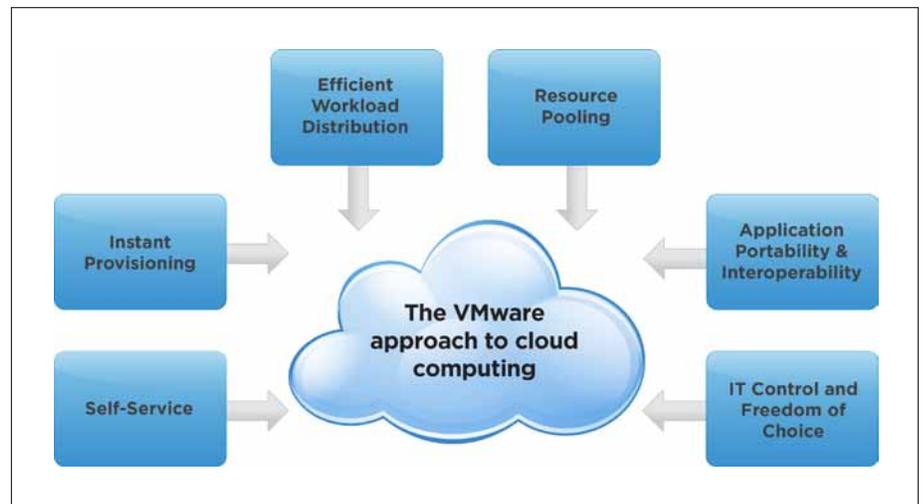

Figure 1. VMware offers virtualization and cloud infrastructure features that enable greater agility.

Self-service – Standardize and automate IT service provisioning and management. Instead of waiting for manual provisioning, academic departments can deploy standardized, preconfigured IT services from a catalog that is available via a self-service Web portal. Departments get tailored services on demand, and central IT administrators reduce maintenance burdens.

*"By reducing the time and costs
associated with maintaining our IT
infrastructure, VMware lets us put
more resources into our primary
business, which is delivering an
exceptional learning environment
to our community."*

— Michael Russell, Ed.D., VP of
Instructional and Information
Technology and Chief
Information Officer, Montgomery
College[1]

Instant provisioning – Quickly deploy a single virtual machine, multiple virtual machines or a pool of virtual desktops to save time and money. With instant provisioning, IT teams can eliminate extensive funding-justification processes that can stall the development and deployment of new applications for months.

Resource pooling – Abstract and pool IT resources into logical building blocks of storage, network and server units—effectively creating virtual datacenters. To increase efficiency, IT teams can dynamically allocate these resource containers to various applications on the basis of defined business rules and user demand.

Efficient workload distribution – Move workloads seamlessly across private or shared college and department clouds and external clouds, according to academic-institution and application requirements. By freeing deployments from consisting of custom projects and applications that are tightly coupled to a particular cloud, the hybrid model can increase IT automation and reduce manual operations.

Policy management – Map business rules, policies and defined service levels to IT resources after they are virtually pooled. Through intelligent policy management, IT organizations can create highly efficient, self-managing infrastructure in which IT is available as a service.

Application portability and interoperability – Support a shared management and security model—based on open standards—to prevent vendor lock-in and help enable application portability between internal datacenters and external clouds hosted by service-provider partners. The right cloud infrastructure enables developers to build robust modern applications that are portable, dynamic and optimized for elastically scalable deployment on hybrid clouds.

IT control and freedom of choice – Enjoy all of the cost-saving and agility benefits of an institution-wide cloud deployment while preserving departmental IT control over policies, compliance and internal chargeback. Department IT teams can maintain autonomy and gain the flexibility to make the right implementation choices to meet their specific requirements.

Upgrade Existing Services and Offer New Ones

Whether your institution of higher learning wants to enhance an existing service offering in a private cloud or create and federate new services through a shared or consortium cloud, virtualization is the ideal foundation for your cloud.

Student Services

Vital links exist between academic institutions and their student populations. Through virtualization and your cloud, IT leaders can optimize learning resources to improve access and responsiveness. They can also help to increase student productivity and the timeliness of service delivery. Academic institutions that deploy cloud-based and virtualized services can deliver dynamic resources that accommodate periods of intensive IT infrastructure use. For example, an academic institution can automate course enrollment periods and tuition payments, which can improve student satisfaction while reducing the institution's costs.

Staff Services

Constrained resources have made cooperation among academic institutions and departments more important than ever. With virtualization and your cloud, central IT can federate applications for IT production, such as file and print servers—as well as human-resources and other administrative applications—to increase the agility of all departments while lowering costs. Although offered as centralized IT services, a shared or consortium cloud does not require specific departments to surrender IT control. These IT teams can maintain autonomy and have the IT flexibility to make the right choices for their internal teams and the students and faculty they serve.

[1] VMware. "Roadmap to Your Cloud for Academic Institutions." Brochure, 2011.

"While most organizations were focusing on the recent economic crisis, Lone Star took calculated bold steps to build the technology infrastructure to support our vision of becoming the nation's premier community college system. VMware provides flexibility and high availability while reducing operational costs."

— Shah Ardalan, Vice Chancellor/ Chief Information Officer, Office of Technology Services, Lone Star College System[3]

"Our customers don't know how our new virtualized environment works," explains Cory Bradfield, senior systems administrator for Lone Star College System. "All they know is what used to take weeks now only takes a few days at the most. With one customer, the product review cycle actually took longer than the virtual server implementation. Once we determined what they needed and they approved the plan, we implemented the new service in only a few hours."[2]

VMware Enables Your Cloud

The comprehensive VMware cloud infrastructure suite (see Figure 2) enables your cloud and establishes a technology standard for building and delivering critical shared services within and among colleges and departments. With your cloud, education IT leaders can increase the efficiency and delivery of student, staff and faculty services.
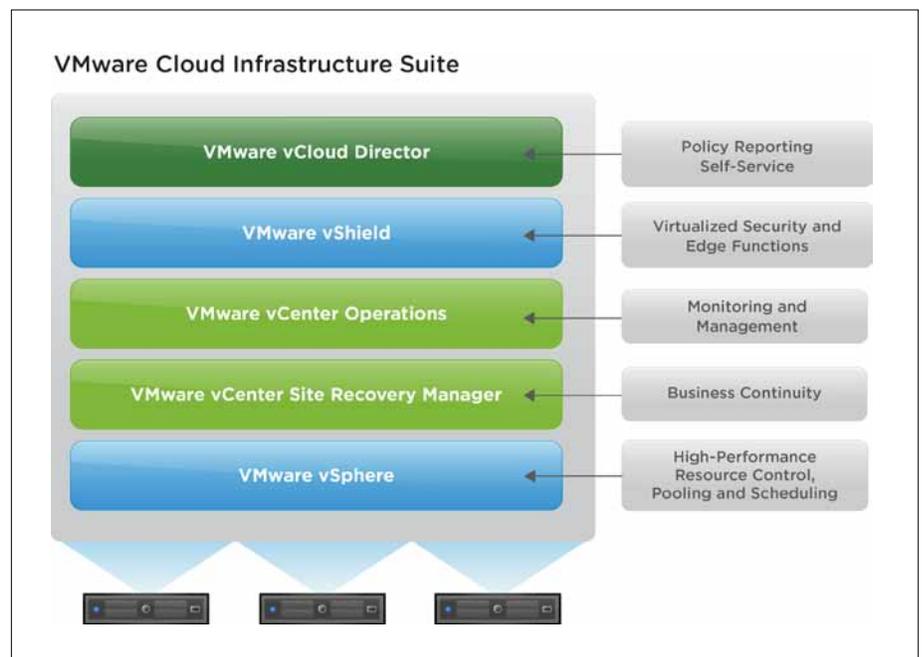

Figure 2. VMware solutions support academic institutions' cloud computing initiatives.

Built on VMware vSphere®—the most widely deployed virtualization platform in education—the VMware cloud infrastructure suite enables a shared or consortium cloud environment with high performance, comprehensive security and high availability. The suite also supports academic institution requirements for interoperability and scalability, giving IT leaders the flexibility to move applications between clouds without rewriting them—from private clouds to VMware vCloud® enabled public clouds and back.

The VMware cloud infrastructure suite also includes VMware vCenter™ Site Recovery Manager™ (SRM) to help enable continuity and disaster recovery across shared clouds. Academic institutions can use SRM together with vCenter Operations to proactively monitor and manage expected and unexpected changes in their cloud environments. Concurrently, VMware enhances cross-cloud security with VMware vShield™, an adaptive security model that protects hosts, networks, applications, data and endpoints in the cloud.

---

[2] VMware. "Lone Star College System." Case study, 2010.

[3] Ibid.

- More than 350,000 customers
- Open, standards-based technology
- Proven results in academic institutions of all sizes
- Extensive partner network with more than 50,000 partners

To simplify and accelerate provisioning, the suite includes VMware vCloud Director®. It enables IT leaders in higher education to create a catalog of approved IT services to share, complete with customizable configurations and security settings that individual IT departments can modify for their own services.

VMware View™, the leading virtual-desktop infrastructure, complements the VMware cloud infrastructure suite. Built on vSphere, VMware View centralizes, manages and secures data on a wide variety of end-user devices for delivery across clouds. With VMware end-user computing solutions, academic institutions can more effectively reach student, staff and faculty populations—any time, anywhere—on the devices they choose to use.

To help enable your cloud to work seamlessly and securely, VMware supports a broad community of public vCloud providers. VMware solutions are based on open standards so that academic institutions have freedom of choice when building and managing cloud deployments.

Leverage Best Practices for Enabling Your Cloud

Successful cloud deployments align people, processes and technology. VMware Professional Services experts use a VMware best-practices methodology (see Figure 3) that couples proven technology with the right transformation processes and best skill sets to deliver proactive insight into your cloud environment.
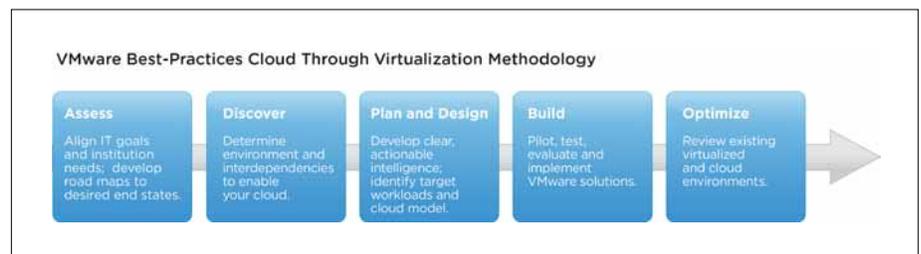

Figure 3. VMware offers a comprehensive approach to enabling your cloud.

VMware supports academic institutions throughout the transformation phases as they seek to maximize the benefits of virtualization and adopt cloud computing. With VMware, IT organizations learn from best practices based on customer experiences, and they can take advantage of comprehensive VMware account management, education and certification services.

VMware and more than 50,000 partners offer complete solutions to help academic institutions transform education services. To learn more about enabling your cloud, visit http://www.vmware.com/solutions/education or call VMware at (877) 4-VMWARE or (650) 427-5000.