



BOSTON UNIVERSITY QUESTROM SCHOOL OF BUSINESS PROTECTS CRITICAL LEARNING MANAGEMENT

**BOSTON
UNIVERSITY**

INDUSTRY EDUCATION

LOCATION BOSTON, MASSACHUSETTS

KEY CHALLENGES

- Increasing reliance on digital learning redefines data protection requirements
- Robust disaster recovery required to maintain continuous web presence and access to vital learning system
- Limited space in data center and computer labs
- Comply with university's Cloud First initiative for cost savings and agility

SOLUTION

The Questrom School of Business at Boston University protects an essential learning management system with VMware vCloud® Ai™r Disaster Recovery, giving students and faculty uninterrupted access to online learning tools and resources while reducing costs.

BUSINESS BENEFITS

- Enhanced school's ability to deliver a 21st-century learning environment
- Achieved enterprise-class recovery objectives (30-minute RTO/1-hour RPO)
- Reduced costs versus on-premises DR solution or managed services
- Quickly and reliably test DR non-disruptively and at no extra cost

Boston University's Questrom School of Business places a priority on providing its 2,000 graduate and undergraduate students an outstanding education that includes technology and collaboration skills they need for success today. The school recognizes that embracing technology can not only transform the quality of education but also student opportunities long after they graduate. With that in mind, the university's Questrom School of Business offers contemporary educational experiences that not only gives students access to a wider array of digital learning but also prepares them to excel in a technology-driven world.

Central to enhancing learning opportunities is a learning management system (LMS) architected by the Questrom school's dedicated IT team and based on the Sakai open-source platform. Educators use the system to deliver a wide variety of content, from course syllabi to interactive presentations, on which quality education depends. As the school prepares to deliver its first online-only courses, the LMS will become even more critical. If the system goes down, learning can be interrupted, creating problems for faculty and students alike.

The Challenge

To enhance and expand student experiences and maintain its reputation as one of the top business schools in the U.S., Questrom must keep its LMS available, along with its web presence, even in the event of a local disaster. With space at a premium in downtown Boston, using another building on campus as a disaster recovery (DR) target wasn't cost effective. It also would not be far away enough to provide true DR.

The school's IT team also wanted to comply with the university's Cloud First initiative, which specifies that public cloud is the preferred deployment model for all new services. Questrom wanted to leverage the cloud for cost-efficient DR and operational efficiencies, but did not want to introduce complexity into its VMware vSphere environment.

"We didn't want to have to make architectural changes or do anything that would add to the maintenance requirements of our data center," says Curtis Galloway, manager of Network Operations Information Technology Services for the school of business. "There are only 13 of us supporting the school's IT systems, so reliability and ease of management are important. We wanted to be able to maintain the network security and access control policies that we have configured on premises and be able to focus on our core competencies."

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CURTIS GALLOWAY
MANAGER, NETWORK OPERATIONS
INFORMATION TECHNOLOGY SERVICES
BOSTON UNIVERSITY
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VMWARE FOOTPRINT

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APPLICATIONS VIRTUALIZED

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- Aut dolorum quam soluptatus

PLATFORM

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- Aut dolorum quam soluptatus

PARTNER

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- Aut dolorum quam soluptatus

Security was a concern as well, because much of the school’s data falls under various protection and privacy mandates. “The university’s information security team evaluates every cloud solution to ensure that security is properly vetted,” says Galloway. “We needed the flexibility of a public cloud, but couldn’t jeopardize the security and manageability of our private cloud.”

Questrom also needed a way to add capacity to its computer labs without adding physical space. “Some of our classes use Windows-only software, and many of our students use Macs,” says Galloway. “We had to find a better way to give them access besides physical PCs in the labs.”

The Solution

During a technology review with the university’s VMware account team, Galloway explained the school’s disaster recovery goals and preference for secure public cloud. The team recommended VMware vCloud Air Disaster Recovery. Built on VMware vSphere specifically for VMware environments, it works seamlessly with the school’s on-premises environment for a simple, secure, and cost-effective solution.

“We chose vCloud Air Disaster Recovery over other solutions because it’s easy to use, secure, and seamless to integrate with our existing environment, which is 100% virtualized on VMware,” says Galloway. “We did look at other public cloud DR offerings, but they were immature compared to vCloud Air. They simply could not provide the features and support we needed. It’s also good to have a single point of support with VMware for both our on-premises and cloud-based workloads.”

The Questrom team quickly deployed vCloud Air Disaster Recovery to protect its eight most critical virtual machines, including Sakai, its back-end Oracle database, and the school’s web server. Asynchronous replication occurs automatically, and DR policies are managed via the VMware vSphere® Web Client and vCloud Air Portal. Using the same management tools as vSphere, Questrom can scale up protection of its data center and prepare for disaster. “With vCloud Air Disaster Recovery we can easily conduct regular, non-disruptive DR tests, so we know recovery will be successful,” says Galloway. “Even better, we don’t pay any extra fee to test our DR.”

To add capacity to its computer labs while complying with the university’s Cloud First initiative, Questrom also turned to VMware Horizon® Air™ cloud-hosted desktops. Instead of going to a physical lab, students access the desktops from their own devices.

Business Results & Benefits

With vCloud Air Disaster Recovery, Questrom can easily achieve a low recovery time objective (RTO), keeping course materials available and maintaining an excellent student experience even in the case of a disaster. The solution is also cost effective, reducing CapEx and OpEx compared to an on-premises DR solution or managed services.

“We can go from a disaster to complete recovery in 30 minutes with vCloud Air Disaster Recovery, with a recovery point of one hour’s worth of data,” says Galloway. “It’s impressive to have numbers this low with such a cost-effective

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VMWARE FOOTPRINT

- VMware vSphere
- VMware vCloud Air Disaster Recovery
- VMware Horizon Air

APPLICATIONS VIRTUALIZED

- Sakai open-source learning management system
- Oracle, MySQL, and Microsoft SQL Server databases

PLATFORM

- HP Blade Servers
- EMC VNX5300 Storage
- Cisco UCS

PARTNER

- Presidio

solution. To put this into perspective, the university’s enterprise IT group maintains a cold site with one of the traditional DR providers, and their RTO and RPO are significantly higher than ours. Needless to say, they are paying more, too. They’re closely watching our experience with vCloud Air.”

By providing fast, reliable recovery without straining the school’s IT budget, vCloud Air Disaster Recovery helps keep student satisfaction high and reduces risk as Questrom delivers courses online. Instructors are now free to expand their use of the learning management system and other digital tools without worrying about downtime impacting classes. And with the support of Horizon Air for virtual desktops, students can do their work from anywhere, regardless of the toolsets the instructor chooses. “Modernized infrastructure is critical to providing students what they want, and giving students choice is a competitive advantage,” says Galloway.

The IT team benefits from centralized visibility of on- and off-premises workloads on a secure platform, and the VMware tools require very little administration. “Since we’ve been up and running, vCloud Air Disaster Recovery has been completely hands off for us,” says Galloway. “Instead of trying to keep mirrors in synch, we can spend our time delivering new services that enhance student and faculty experiences.”

Looking Ahead

As Boston University expands its Cloud First initiative, it seeks to maintain compatibility and portability for virtualized workloads—making VMware vCloud Air a strong candidate for secure public cloud. Other schools and departments are already evaluating vCloud Air Disaster Recovery based on Questrom’s success. “Working with VMware has been fantastic,” says Galloway. “No other vendor has consistently helped us solve our problems as effortlessly or as quickly.”