



DELL EMC VXRAIL™ AND VXRACK™ APPLIANCES FOR HIGHER EDUCATION

Driving greater IT efficiency and generating cost savings

THE CHALLENGE

Higher Education institutions traditionally required data centers to refresh their entire compute, storage and networking infrastructures concurrently. The time to secure the budget—perhaps \$2-3 million—causes technologies to fall behind and hampers the education process for students and faculty.

Only 31% of higher education faculty feels their institutions have an agile IT infrastructure that responds to changing conditions and new opportunities.¹

To keep data centers moving forward, IT teams may opt to cobble together components from disparate vendors. This makes it easier for budgets to absorb the cost but adds to on-going expenses by making system support and maintenance more complex.

Each time one component is upgraded, all other components need to be patched and tested. IT spends more time keeping hardware systems in sync and less time improving performance.

Studies predict as many as 30 percent of colleges and universities are in significant financial jeopardy because their operating models are not sustainable.²

This is one of the reasons why institutions are exploring hyperconverged infrastructures to reduce operational expenses and make learning more accessible through greater automation. Another motivator is the competition from new non-traditional alternatives for higher education, many of which are applying information technology innovatively to learning and student experiences. Using technology as a strategic differentiator might be the difference between success and failure for some institutions.

THE SOLUTION: A VIRTUALIZED INFRASTRUCTURE

Many higher education institutions have reduced physical servers through virtualization. As a result, virtualizing compute resources through consolidated infrastructures is an effective solution to address tight budgets, increased service demands, and limited resources.

Leveraging hyperconverged solutions for virtualization does more than help cut hardware expenses:

- Eliminates conflicting system-refresh cycles and redundant software.
- Reduces need for specialized IT resources.
- Allows IT to allocate resources where needed most.
- Decreases cost of over-provisioning IT systems.
- Frees up office space allocated for larger servers, storage and network gear.

INTRODUCING DELL EMC VXRACK AND VXRACK APPLIANCES

As jointly-developed hyperconverged solutions between Dell EMC and VMware, VxRail and VxRack appliances are the fastest and easiest way to extend VMware environments: both devices simplify virtualization and bring software-defined data center benefits within the reach of higher-education institutions.

The VxRail and VxRack portfolios offer hundreds of configuration options for deploying and managing thousands of virtual servers and virtual desktops. The appliances also provide a full suite of industry-leading data services in a simple block, including replication and backup-and-recovery.

With integrated compute, storage and VMware software, VxRail and VxRack simplify IT operations while reducing costs. Expansion is as simple as plugging in another node; the management software automatically discovers the new hardware.

FAST DEPLOYMENT, EASY EXPANSION

With conventional IT systems, deployment can take months for planning, procurement, installation, set-up, provisioning and testing. The process requires technicians skilled in servers, storage, networking and applications. The more time it takes for deployment, the higher the costs, and the more likely budget-conscious administrators will stop the project or diminish the scope.

VxRail and VxRack help IT avoid these pitfalls because the appliances are self-contained and thoroughly tested before they ship. Wizard-based automation helps quickly set up pools of virtual machines—in just minutes from power-on to creation.

Expansion is a simple matter of plugging in a new node. The nodes are hot-swappable, so you don't have to power them down or add new software. In addition, the appliances run on a predictable and repeatable architecture, making it easy to roll-out copies of the configuration without new testing and troubleshooting.



SIMPLIFIED MANAGEMENT

More than 200 automated workflow processes simplify setting up virtual infrastructures. User-friendly wizards guide IT through assigning resources, restructuring user pools, moving workloads, building clusters, evaluating performance, and activating software updates.

With VMware software at the heart of VxRail and VxRack appliances, IT can manage infrastructures with familiar VMware operations tools. This makes it easy to respond quickly to sudden demands for greater capacity that can come from I/O storms caused by a large number of end users unexpectedly logging in.

From the virtual desktop perspective, VxRail and VxRack appliances can manage VMware Horizon with View as well as non-VMware desktops from Citrix and other popular vendors. VMware vCenter manages both appliances, empowering IT to easily manage the infrastructure using existing tools.

THE IMPORTANCE OF IT CONFIDENCE

VxRail and VxRack appliances promote confidence in your IT infrastructure with pre-configured, pre-tested solutions developed by Dell EMC and VMware. Both companies are trusted by large and small organizations around the world, backed by a single point of 24/7 global support.

Unyielding Availability, Reliability and Support

- 24/7 global support for all appliance hardware and software.
- Remote “heartbeat” monitoring, diagnostic services, and repair with proactive fault detection.
- High-availability system design with maximum component redundancy.
- Automated operational and disaster-recovery orchestration for virtual machines.
- Local and remote hypervisor-based replication.
- Continuous data protection for recovery of each virtual machine to any point-in-time.
- World-class support from Dell EMC’s single-point-of-accountability philosophy.

By deploying VxRail and VxRack, you can be confident your virtual infrastructure will work today and keep you on the path to more innovative technologies—from cloud computing to the software-defined data centers of the future.





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1. "Higher Ed CIOs list their top tech priorities," by Brendan McGowan, CIO, 10 March 2015.

2. "Top 10 IT Issues, 2016: Divest, Reinvest, and Differentiate," by Susan Grajek, EDUCAUSE Review, 11 January 2016.