

FIVE REASONS TO RUN VIRTUAL DESKTOP INFRASTRUCTURE ON DELL EMC VXRAIL

Dell EMC VxRail simplifies infrastructure, eases scalability and offers high performing virtual desktop infrastructure solutions



Modern solutions for the modern workforce

Today's workforce is increasingly dispersed, as employees work remotely and connect to business resources through IT-managed devices, which either organizations supply or, increasingly, employees provide in a bring-your-own-device (BYOD) model. While this trend gives employees flexibility, the challenge falls to IT staff to provide employees with the same quality support and secure access to documents and applications they'd get in a centrally located workplace.

As a way of addressing these trends and challenges, IT admins are turning to virtual desktop infrastructure (VDI), also known as desktop virtualization, to transform to a modern workplace. Estimated to reach \$26B by 2025,¹ the global VDI market expands as organizations seek 1) money and time savings, 2) increased security measures to protect against data theft and malware attacks on personal devices and 3) easier management through remote administration and troubleshooting of IT infrastructure and devices. Hyperconverged infrastructure (HCI) builds upon these savings and efficiencies by offering agility, scalability and simplicity that organizations need to implement VDI solutions that support these BYOD models.

Designed exclusively by Dell EMC and VMware, VxRail is the easiest and fastest way to implement a high-performance VDI solution. VxRail integrates market-leading 2nd Generation Intel Xeon Scalable processors, Dell EMC PowerEdge servers, VMware vSAN software-defined storage, vSphere virtualization and management software from Dell EMC and VMware to provide a solid foundation for VDI.

1. Save admin time with easier deployment, configuration and management

The nature of Dell EMC VxRail HCI—which incorporates compute, storage, virtualization and management in one place—removes complexities to speed up new VDI solution implementation compared to traditional siloed IT infrastructure. Because VxRail infrastructure offers simplified remote management options and can be deployed to fit within a small footprint, organizations can reduce onsite IT staff by managing VDI clients remotely, making VxRail ideal for VDI at the edge and in remote or branch offices. For ease of management, VxRail HCI System Software automates lifecycle management, reduces complexity and boosts infrastructure security. Admins can perform updates and patch production environments with no downtime while VxRail Manager intelligently deploys important updates.

2. Scale infrastructure easily as business grows

Business growth brings new challenges. However, scaling your infrastructure to meet demand shouldn't be a hassle. Depending on the applications you run and the number of VDI instances that admins must deploy on the fly, your solution can quickly saturate compute or I/O. Dell EMC VxRail allows organizations to scale both compute and storage quickly, so you can start small at little expense and grow as needs change. VxRail scales up to 64 nodes per cluster, supporting thousands of virtual desktops. HCI management software VxRail Manager provides an easy-to-navigate, heavily automated path to fast scaling, so admins can add nodes on demand.

3. Improve performance and security

VDI is an IO-intensive workload with extreme burst conditions at times when users log on and off. This taxes the shared storage pool and degrades user experience unacceptably. Dell EMC VxRail offers all-flash storage options to handle these peak performance requirements and eliminate IO bottlenecks. VxRail also supports the latest Intel Optane SSD NVMe caching drives that provide low latency and high performance to further alleviate these bottlenecks.

Dell EMC VxRail also covers organizations whose users deal with graphics-intensive workloads, offering purpose-built GPU hardware to meet these needs. For scaling high-performance virtual graphics and compute, the NVIDIA GPU supports 2x graphics acceleration performance and 50 percent more users per board than the previous-generation GPU.²

VxRail Analytical Consulting Engine (ACE) leverages artificial intelligence and infrastructure machine learning to drive increased operation efficiencies through automation. ACE ensures healthy utilization rates and even forecasts resource consumption to keep your VxRail HCI stack operating at peak performance.

Dell EMC VxRail also offers the latest in security to ensure that your high-performing workloads keep running. Through highly redundant architecture, integrated Dell EMC data protection software and non-disruptive upgrades, organizations can remain confident that users' desktops will always be available—even during boot storms and patch updates. Additional comprehensive data protection options, including RecoverPoint for VMs, ensures quick operational recovery from disaster.

What customers are saying: Rent-A-Center

Aging VDI meant that Rent-A-Center IT staff spent more time on day-to-day systems administration that should be necessary and reached limits on performance and scalability. RAC moved to a hyperconverged infrastructure with the all-flash Dell EMC VxRail and these problems vanished.

The results:

- Increased agility and performance to support growth
- Reduced administrative management overhead
- Cut deployment time from weeks to hours
- Reclaimed storage space, easing pressure on power and cooling costs
- Scaled to support business expansion with economical cost per user

“With the efficiency of fully integrated VxRail and VMware management tools, we're getting the most bang for the buck out of our infrastructure. For example, our systems administrator now has more time for user-facing engineering efforts. That means we're serving the business units in a more meaningful way.”

— Mike Conroy, Director of Technical Operations, Rent-A-Center



4. Enjoy a seamless experience thanks to joint engineering between Dell EMC and VMware

Dell EMC and VMware teamed up to create VxRail, the only fully integrated, preconfigured and tested HCI appliance powered by VMware vSAN. The fully loaded, secure VxRail HCI with full stack integration creates the most automated VMware experience for desktop virtualization. IT administrators benefit from the simplicity of streamlined management of both hardware and software layers, which means they spend less time coordinating maintenance and updates through disparate vendors and have more time to ensure employees' VDI sessions are running smoothly across the sea of BYOD devices. For organizations implementing VDI via hybrid cloud, VxRail offers VMware Cloud Foundation on VxRail as the platform for Dell Technologies Cloud, allowing workload deployment automation of VMware Horizon VDI environments for a true turnkey experience that integrates the HCI infrastructure layer and cloud software stack in one.

VxRail offers a single point of global 24x7 support for both hardware and software, reducing administrator hassles and making challenges easier to manage in cases where onsite staff is limited.

5. Save on total cost of ownership for VDI

Dell EMC VxRail hyperconverged infrastructure enables organizations to reduce their VDI footprint and the associated capital outlay for initial hardware purchase. The consolidated VxRail infrastructure also shrinks ongoing operating costs by reducing administrator burdens through simplifying infrastructure, lowering energy consumption and reducing physical space and cabling. VxRail Manager's automation of routine management tasks gives administrators time back, which allows them to dedicate resources to the adoption of emerging technologies rather than spending their time on routine tasks. A recent IDC study showed adopting the Dell EMC VxRail improved IT team efficiency by as much as 60 percent and delivered a 489 percent five-year return on investment.³

**60% More efficient
IT teams**

489% Five-year ROI

¹ Market Research Future, "Global Virtual Desktop Infrastructure Market Research Report,"

<https://www.marketresearchfuture.com/reports/virtual-desktop-infrastructure-market-7673>

² NVIDIA, "NVIDIA TESLA P40 GPU Accelerator,"

<https://www.nvidia.com/content/dam/en-zz/Solutions/design-visualization/documents/nvidia-p40-datasheet.pdf>

³ IDC commissioned by Dell EMC, "Delivering Efficient Business Expansion with Dell EMC VMware-Based HCI," October 2018.



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