

# Dell VxRail

The first HCI solution built for VMware, with VMware, to enhance VMware.

## Transform with Dell VxRail

- Intelligent lifecycle management (LCM) delivers rapid, automated full stack patching and upgrading to ensure clusters are in a **continuously validated state**.
- Eight hundred thousand test hours run on major new releases ensure customers can upgrade with certainty and significantly improve IT productivity.
- The flagship HCI foundation for Dell Private Cloud, VxRail is the first jointly engineered HCI system with deep VMware integration.
- Supports any HCI use case, including graphics intensive VDI, AI/ML, remote office, cloud native application development, high performance computing and deployments in extreme environments.
- Flexible deployment models with VxRail dynamic nodes, satellite nodes and the rugged and small VD-4000.
- **Single point of global support 24x7** for both the hardware and software through the entire lifecycle.

Agility is a key element to accelerating IT transformation. The agility, scalability and simplicity of hyperconverged infrastructure (HCI) drives IT transformation and operational efficiencies. Dell VxRail™ accelerates and simplifies IT transformation through standardization and automation. With VxRail, you don't just deploy a server, you transform your infrastructure.



## The VxRail Advantage

Whether you are accelerating data center modernization, deploying a private cloud or creating a developer-ready Kubernetes platform, VxRail delivers a turnkey experience that enables users to automate operations, innovate with seamless technology integration, and accelerate business value.

VxRail, powered by Dell PowerEdge server platforms and VxRail HCI System Software, features next generation technology to future proof your infrastructure and enable deep integration across the VMware ecosystem. VxRail invests in the complete lifecycle, including advanced automation, making it easier for you from day one forward, allowing you to further simplify IT infrastructure and operations.

VxRail is the only fully integrated, pre-configured, and tested HCI system optimized for VMware vSAN and is the standard for transforming VMware environments. VxRail provides a simple, cost effective hyperconverged solution that solves a wide range of your operational and environmental challenges and supports almost any use case, including tier-one applications, cloud native and mixed workloads.

## VxRail HCI System Software

VxRail HCI System Software, a suite of integrated software elements that sits between infrastructure components such as vSAN and VMware Cloud Foundation, delivers a seamless and automated operational experience.

VxRail offers native integration between VxRail Manager and vCenter, all VxRail management is done within the familiar vCenter Server interface. Intelligent lifecycle management (LCM) automates non-disruptive upgrades, patches, node addition or retirement while keeping the VxRail infrastructure in a continuously validated state to ensure workloads are running and clusters are optimized.

VxRail HCI System Software includes cloud-based multi-cluster management and orchestration for centralized data collection and analytics that uses machine learning and AI to help customers keep their HCI stack operating at peak performance and ready for future workloads. IT teams benefit from actionable insights to optimize infrastructure performance and improve serviceability. Plus, experienced customers can utilize the Configuration Portal to self-deploy VxRail on their own timeline.

## VxRail on the Latest PowerEdge Servers

VxRail on the latest industry-leading PowerEdge servers offers next generation technologies that accelerate IT transformation and future proof your infrastructure. With multiple configuration options including choice of 4th Generation Intel® Xeon® Scalable processors or AMD EPYC processors, VxRail offers millions of configuration options to optimize the platform for your workload requirements. NVMe drives provide additional caching options to dramatically bolster application response time. Additionally, NVIDIA graphic cards and Intel GPUs are used for scaling high performance virtual graphics and compute.

## Scalability and Networking

VxRail offers flexible deployment options including ruggedized deployment, a single-node satellite node or two-node cluster for the edge, three-node clusters at the core, and entry level four node or standard eight node on-premise cloud with VMware Cloud Foundation on VxRail. For those needing more storage flexibility, VxRail dynamic nodes – compute nodes with full VxRail LCM, can utilize VMware cross-cluster capacity sharing or external storage arrays to address data centric workloads. There's also an option for an integrated rack deployment with networking flexibility. Mixed generations of hardware in the same cluster, non-disruptive scaling and storage expansion provide a simple, predictable, "pay-as-you-grow" approach for future scale up and out as your requirements evolve. Additionally, enterprise capabilities such as batch node expansion, REST APIs for cloud extensibility, and flexible object renaming, accelerate growth and save time.

## Direct Path to Private Cloud

VxRail is the first hyperconverged system fully integrated with VMware Cloud Foundation SDDC Manager to deliver a simple and direct path to the private cloud with one, complete, automated platform. Full stack integration means VxRail Manager and SDDC Manager have been integrated to allow for an automated and seamless update and upgrade process orchestrated by SDDC Manager. This means the HCI infrastructure layer and VMware cloud software stack lifecycle are managed as one, complete, automated, turnkey private cloud platform, significantly reducing risk and increasing operational efficiencies.

VCF on VxRail enables consistent management and orchestration between private and partner public clouds, allowing organizations to run, manage, connect and secure their entire application portfolio across multiple clouds. VCF on VxRail supports remote clusters, enabling customers to extend existing VCF operational capabilities to the edge.

## Data Services, Security and Resiliency

Security is built into every level of the VxRail HCI stack, starting with each processor and PowerEdge server through the VxRail HCI System Software including the integrated VMware software, to efficiently minimize risk and create a secure infrastructure foundation. Enhanced security includes FIPS 140-2 validated cryptography and automated hardening scripts and VxRail Security Technical Implementation Guide (STIG) for customers who want to comply with DISA and STIG requirements.

Industry-leading enterprise data services, including HCI-native data-at rest encryption, in-transit encryption, replication, backup, and file services make VxRail ready for the most demanding application or workload. All flash models can leverage compression, deduplication, and erasure coding for further efficiency. VxRail supports 2-factor authentication, allowing you to avoid limited options and high cost of self-encrypting drives. vSAN encryption is built for compliance requirements and simple key management with support for vSphere compatible KMIP compliant key managers.



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