DELL Technologies

What is hyperconverged infrastructure?

Hyperconverged Infrastructure (HCI) integrates compute, storage and networking into a single appliance coupled with data management and consolidation capabilities that can scale-out according to application needs, thus eliminating the need for a traditional SAN or NAS. The simplicity, scalability, and agility of HCI will continue to be a catalyst for datacenter modernization and help customers transform their IT operations.

What is Dell EMC VxRail?

Dell EMC VxRail is the hyperconverged infrastructure foundation for the Dell Technologies Cloud; a turnkey HCI platform proven to drive IT transformation by accelerating data center modernization and simplifying the path to hybrid cloud. Designed with VMware, for VMware; VxRail supports the most demanding workloads with end to end lifecycle management, full stack integration, and highly differentiated HCI System Software.

Common use cases

- Desktop virtualization (VDI)
- Enterprise applications (Exchange, SharePoint, SAP, S/4HANA, etc.)
- Enterprise databases (SQL, Oracle, SAP HANA)
- Server virtualization
- Big Data applications (Splunk)
- VMware Cloud Foundation (VCF) on Dell EMC VxRail Private-/Hybrid-/Multi-cloud
- Dev/Test environments, Container Services TKGI, Kubernetes
- AI/Machine Learning, Data Inferencing
- Remote office/Branch office

Ideal scenarios for Dell EMC VxRail

- New datacenter builds
- Server and storage refreshes
- Deploying new workload or project
- Workload consolidation
- Growth pains of existing traditional infrastructure
- Budgetary challenges–need to reduce TCO
- Resource constraints or limited staff of skilled specialists
- Performance challenges with legacy and virtual applications
- Hybrid/Multi-cloud deployments
- Need to influence innovation within organization

Key TCO metrics

According to IDC, Dell EMC HCI customers realized
- 52% lower cost of operations
- 60% more efficient IT teams
- 90% less downtime
- Expected on average a 489% 5 years ROI

Additionally, those customers provisioned
- Compute resources 48% faster
- Storage resources 54% faster than with traditional 3-tier infrastructure while lowering infrastructure costs helping facilitate business expansion and enable faster development cycles.[*]
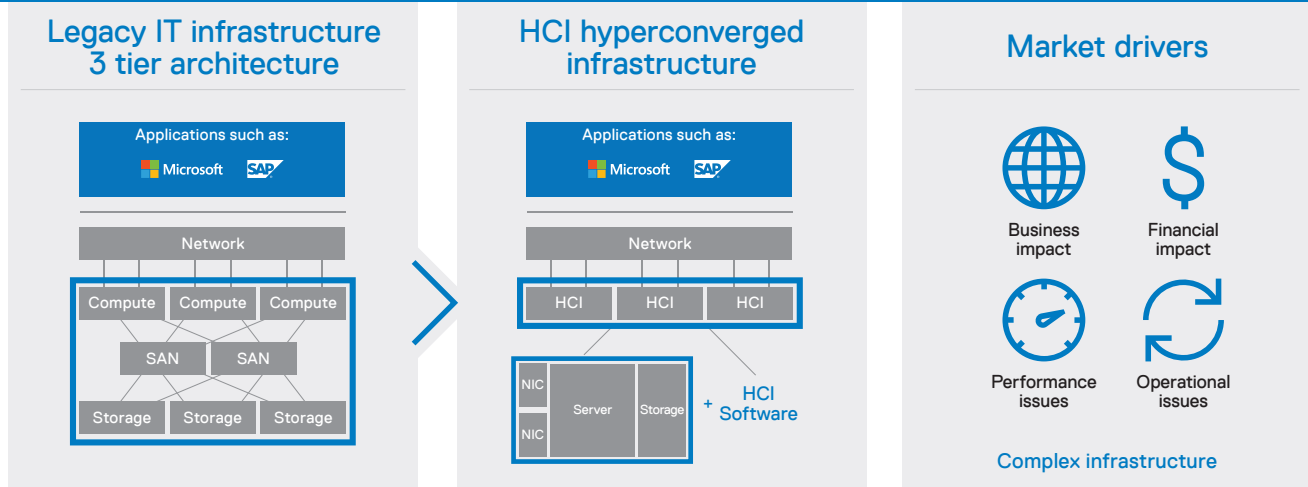
Driving lower TCO, ROI, and efficiencies

Whether you are accelerating data center modernization, deploying a hybrid cloud or creating a developer-ready Kubernetes platform, VxRail delivers a turnkey experience that drives operational efficiencies with full stack integration and automated end-to-end lifecycle management with VxRail HCI System Software. Smart lifecycle management automatically determines the firmware and software components that need to be upgraded and automatically upgrades clusters from one continuously validated state to the next, VxRail Manager is natively integrated into vSphere, reducing complexity by eliminating multiple management systems. SaaS active management for VxRail HCI System Software provides AI driven operations insights to provide detailed health checks, predictive analytics, and further simplifies the upgrade process by pre-staging all required components for individual cluster upgrades making management at scale easier than ever. SmartFabric Services for VxRail automates over 99% of network configuration steps across VxRail multi-rack fabrics.
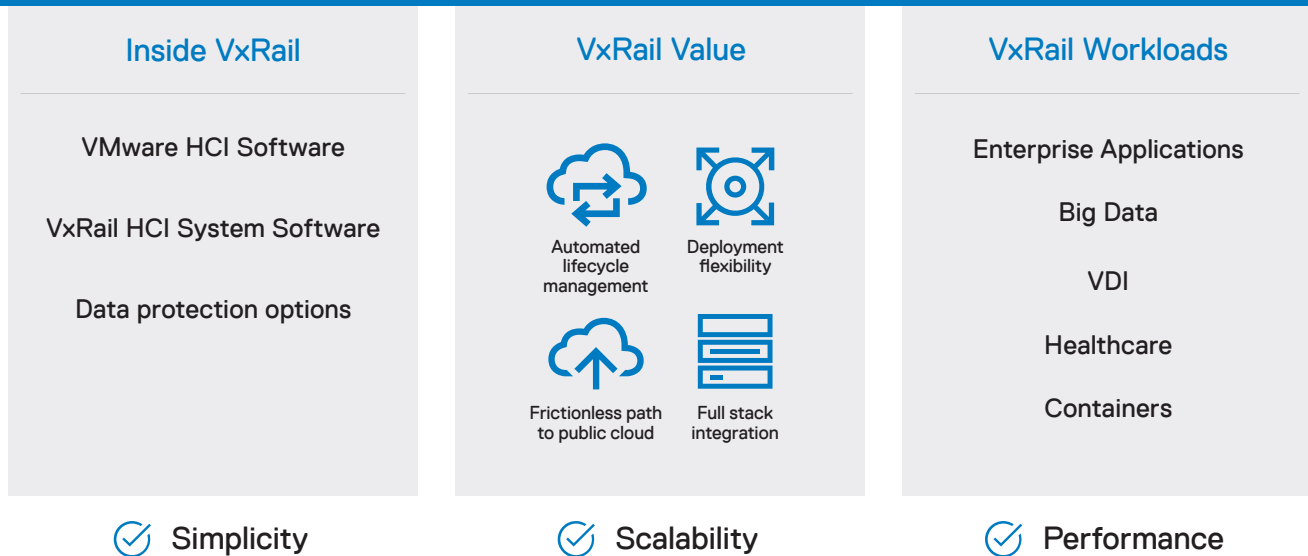
Unique differentiation features

VxRail is the only fully integrated, preconfigured, and tested HCI system powered by VMware vSAN™ and is the standard for transforming VMware infrastructures. VxRail provides a simple, cost effective hyperconverged solution that solves a wide range of your challenges and supports almost any use case, including tier-one applications and mixed workloads. Dell EMC VxRail enables faster, better, and simpler delivery of virtual desktops, business-critical applications, and remote office infrastructure. Dell Technologies is the single point of global 24x7 support for both the hardware and software. In addition, VMware Cloud Foundation on VxRail, the flagship Dell Technologies Cloud Platform offering, integrates the VxRail hyperconverged infrastructure layer with VMware SDDC software stack– lifecycle managing both as one complete, automated, turnkey, on-premises hybrid cloud experience. VMware Cloud Foundation on Dell EMC VxRail allows for management of all cloud operations through a familiar set of tools, offering a consistent experience, across all your cloud workloads.

HCI is replacing traditional 3 tier infrastructure

Legacy IT infrastructure 3 tier architecture

Applications such as:
Microsoft SAP

Network

| Compute | Compute | Compute |

SAN SAN

| Storage | Storage | Storage |

HCI hyperconverged infrastructure

Applications such as:
Microsoft SAP

Network

| HCI | HCI | HCI |

NIC
Server Storage
NIC

+ HCI Software

Market drivers

Business impact

Financial impact

Performance issues

Operational issues

Complex infrastructure

Accelerate IT transformation with VxRail

Inside VxRail

VMware HCI Software

VxRail HCI System Software

Data protection options

✓ Simplicity

VxRail Value

Automated lifecycle management

Deployment flexibility

Frictionless path to public cloud

Full stack integration

✓ Scalability

VxRail Workloads

Enterprise Applications

Big Data

VDI

Healthcare

Containers

✓ Performance

Unlock innovation and modernize the data center across edge, core, and cloud with VxRail

DELLEMC

| Edge | Core | Cloud |

VDI

Video Surveillance

SAP HANA

AI/ML

Kubernetes & DTCP