VxRail

Modernize your IT operations
with Dell VxRail

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Are you ready to transform your workplace?

In order to succeed in today's digital world, businesses like yours need to deploy and operate an IT environment that takes full advantage of the innovation taking place across the industry – without the complexity of piecing together and supporting a wide range of patchwork.

One of the ways to do this is to introduce hyperconverged infrastructure (HCI) into the environment. Continue reading to find out what Dell VxRail HCI systems can do for your business.

vmware®

intel®

What is HCI?

HCI continues to be a catalyst for data center modernization and transformed IT operations.

Hyperconverged Infrastructure (HCI) is on the rise and with good reason – not only does an HCI system improve efficiency, increase scalability, and lower costs, it also offers:

- Consistent operations using native integration

- Familiar management tools

- Integrated lifecycle management

- APIs for extensibility

How does it work?
HCI integrates compute, storage and networking into a single system coupled with data management and consolidation capabilities that can scale-out according to application needs, thereby eliminating the need for a traditional SAN or NAS.
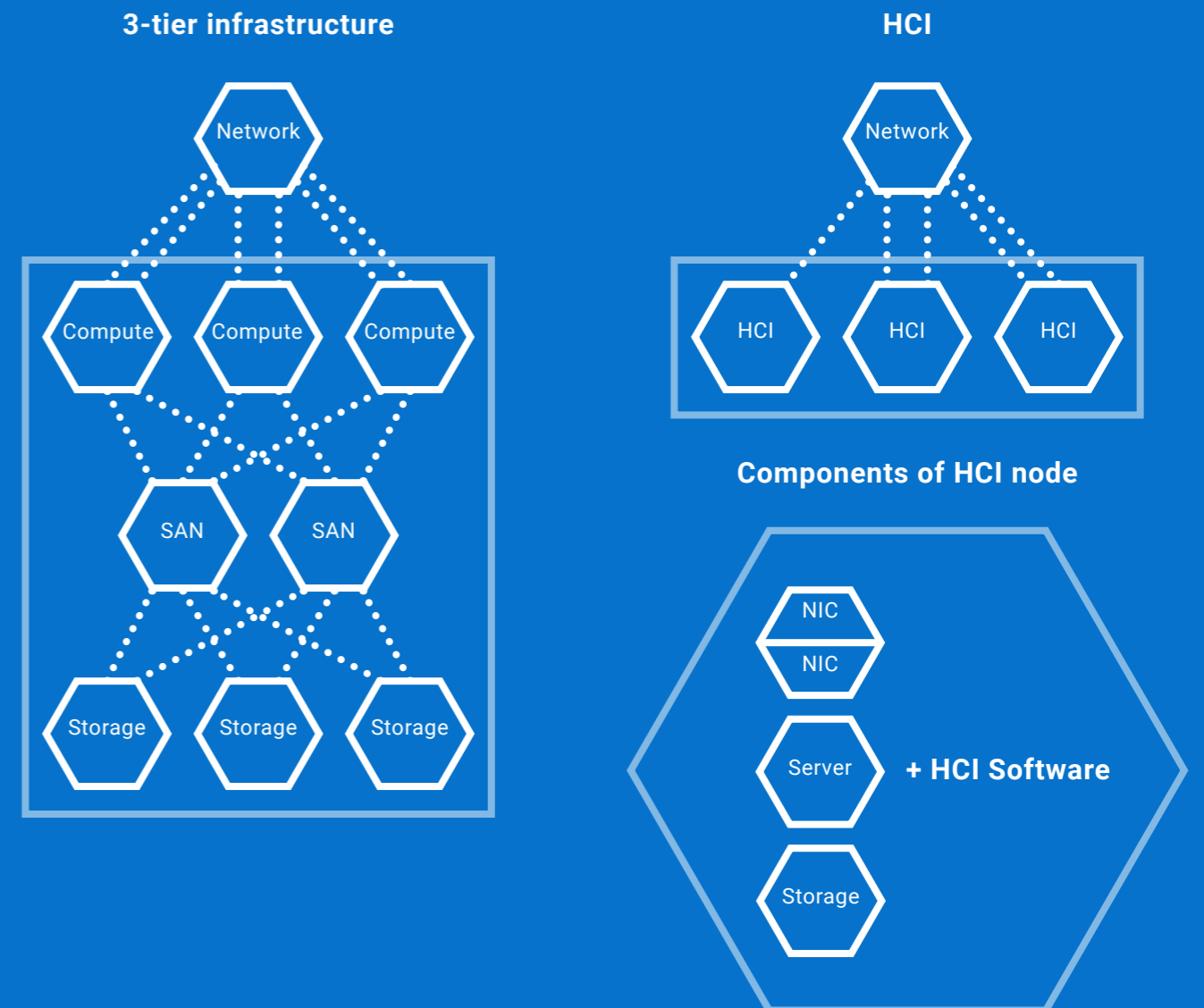
3- tier infrastructure vs. HCI
HCI offers ultimate simplicity, flexibility and agility, essentially collapsing the traditional three-tier server, network, and storage model so that the infrastructure itself is much easier to manage.

Pay-as-you-grow
HCI enables a pay-as-you-grow approach – start with what you need today and expand incrementally rather than purchasing large amounts of compute and storage up front. It also addresses the typical over-provisioning and over-purchasing that occurs when technology is intended to last for multiple year cycles.

3-tier infrastructure

Network

Compute Compute Compute

SAN SAN

Storage Storage Storage

HCI

Network

HCI HCI HCI

Components of HCI node

NIC
NIC
Server   **+ HCI Software**
Storage

What is VxRail?

The VxRail turnkey experience starts with full stack integration of software and hardware control and visibility from top to bottom for a consistent, deeply integrated VMware environment.

Dell VxRail delivers highly differentiated features and benefits based on proprietary VxRail HCI System Software. This unique combination automates deployment, provides full stack lifecycle management and facilitates critical upstream and downstream integration points that create a truly seamless experience across core, edge, and cloud.

Together, Dell Technologies and VMware build security into every layer of the VxRail system: hardware, software and lifecycle management and at every step of the development lifecycle, from the supply chain to software development, testing, maintenance and support. We provide the technology and tools to proactively protect your infrastructure and your business against unwanted threats, monitor for vulnerabilities and help you recover from threat events.

Dell VxRail is powered by PowerEdge server platforms and is the only jointly engineered HCI solution with VMware, optimized for VMware vSAN, and designed to enable deep integration across the VMware ecosystem. This leaves you with a powerful curated solution that enables you to:

Free up IT resources with automated end-to-end lifecycle management.

Start small and grow, scaling capacity and performance easily and non-disruptively.

Choose from multiple compute, memory, storage, network and graphics options to cover a wide variety of applications and workloads.

Accelerate data center modernization, deploy a hybrid cloud, or create a developer ready Kubernetes platform.

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Why VxRail?

Accomplishments, endorsements and distinctions that demonstrate the Dell Technologies commitment to helping you innovate, grow and develop your business.

Dell Technologies HCI is #1 in the market.
Dell Technologies has been #1 in HCI Systems for 23 consecutive quarters[1], proving that if you're looking to raise the bar for reliability, performance and operational simplicity in a cost-effective infrastructure solution, you need look no further than Dell VxRail.

Dell Technologies was named Customers' Choice in the 2022 and 2021 Gartner Peer Insights "Voice of the Customer" in HCI for the second straight year.[2]
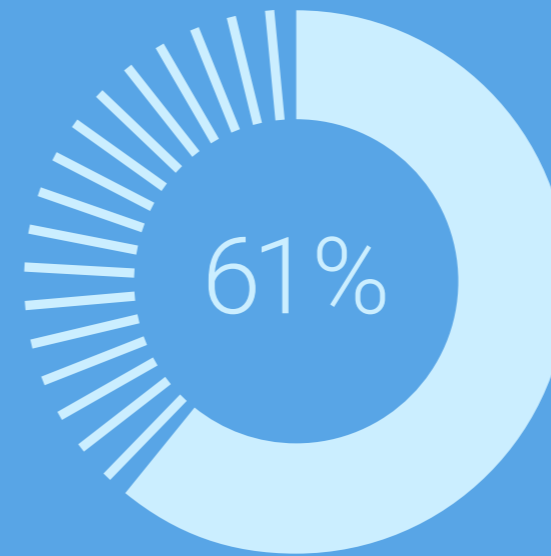Gartner Peer Insights is a free peer review and ratings platform designed for enterprise IT decision makers.
It recognizes the vendors that are the most highly rated by their customers through the Customers' Choice Distinction. Ratings are based on user interest and adoption as well as overall satisfaction.
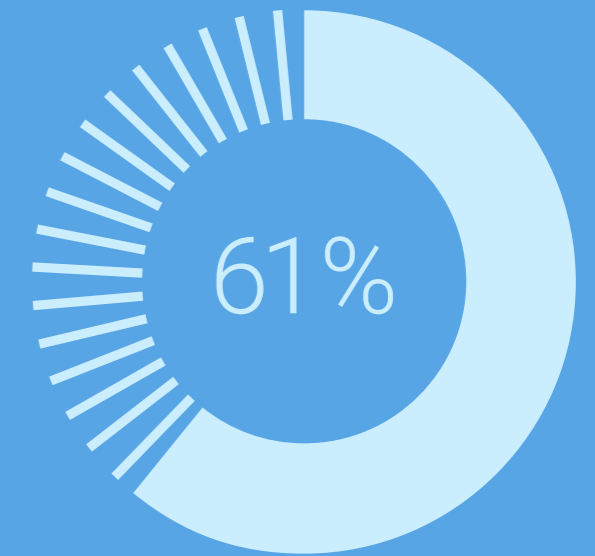
Dell VxRail is CRN's 2022 and 2021 Tech Innovator award winner.
CRN selected the VxRail satellite and dynamic nodes as the Tech Innovator award winner for hyperconverged infrastructure.
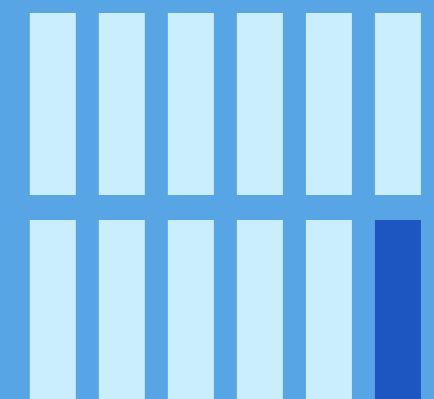
61%

lower five-year cost
of operations[3]

61%

more efficient
IT infrastructure teams[3]

463%

five-year ROI[3]

11 months

to payback[3]

VxRail users are realizing exceptional productivity and business advantages as highlighted in a recently completed IDC study: "The Business Value of Dell VxRail HCI."

Participants in an IDC study from March 2023 described achieving strong value with Dell VxRail by establishing a cost-effective, efficient, and agile IT infrastructure that enables automated operations capable of stretching from their data centers to cloud and edge environments. IDC calculated that the interviewed Dell Technologies customers will achieve benefits worth an annual average of $4.5 million per organization by:

Optimizing IT infrastructure costs by running business-critical workloads on a consolidated, high-performing platform that also delivers improved application reliability, functionality, and performance.

Delivering more value for IT teams, freeing up their time by reducing day-to-day operational work through functionalities such as automated patching and updates.

Minimizing costs and risks associated with unplanned outages and data loss by bringing down the frequency and duration of unplanned downtime events and improving their ability to back up, protect, and recover data and virtual machines (VMs).

Generating value for the business by ensuring that IT can support business expansion efforts, support more effective and productive development activity, and provide a better user experience.

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Who Uses VxRail?

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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. VxRail enables faster, better, and simpler delivery of virtual desktops, business-critical applications, and remote office infrastructure.

Explore common VxRail use cases and scenarios on the following pages.

Modernize the data center

Gain greater control of your workloads by deploying modern hyperconverged infrastructure across on-premises data centers, edge, and co-locations.

More business agility
52% faster deployment of new VMs.[3]

Faster business development
33% faster execution of business transactions.[3]

Higher performance
33% faster execution of business transactions.[3]

VxRail dynamic nodes and Dell PowerStore - Better together

- VxRail dynamic nodes allows for asymmetric scale compute independent of storage.

- Dynamic AppsON provides solution-level lifecycle management as part of the VxRail HCI System Software.

- End-to-end VMware integration.

The easiest and fastest way to drive business critical solutions

VxRail offers high performing solutions to drive business critical applications, such as:

- In-memory intensive database applications like SAP HANA.

- Graphic intensive VDI and high-end 2D/3D visualization, including SOLIDWORKS® and Adobe Creative Cloud®.

- Artificial intelligence and machine learning.

- Storage-dense applications like video, big data and analytics.

- Offload network and security services onto SmartDPU.

Full power for workloads at the edge

No matter where you are, you get the full power of automation and orchestration with VxRail HCI System Software and a 24x7 single point of support.

- Embedded vSAN witness creates a self-contained 2-node vSAN cluster in a small footprint.
- Rack, stack, or mount it on a wall for space constrained locations.
- The rugged form factor is built to withstand extreme conditions and harsh terrains, allowing for traditional and modern applications at the extreme edge.
- Temperature resilient, shock resistant, and fully mobile for tactical edge deployments where size, weight, and transportability are key.

VxRail VD-4000

VxRail satellite node

- Operations and LCM managed through a centralized VxRail management cluster for a consistent operating experience.
- Low-cost single node extension for VxRail environments.

Simplify, streamline and automate hybrid cloud operations

VMware Cloud Foundation on VxRail delivers a simple and direct path to modern apps, hybrid cloud, and multicloud. Deploy, host, and manage traditional and cloud-native workloads across core, edge, and cloud environments.

Enables flexible and simple modern cloud deployment with hybrid cloud.

Consistent infrastructure in one complete, automated platform.

Integrated with VMware Cloud Foundation SDDC Manager.

Automate Kubernetes infrastructure deployment with VMware Cloud Foundation and Tanzu.

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Summary of ideal scenarios for VxRail

- New data center 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

- Consistent operations at the edge

What do other VxRail users say?

Read through our customer stories to see how VxRail faces and solves real-life challenges.

LOWE'S
A customer-centric technology transformation
Lowe's knows that great customer experiences are the key competitive differentiator in retail today and aims to lead with outstanding customer experiences. Thus, Lowe's undertook a technology transformation to integrate online and in-store experiences across its 1800 stores.

VxRail helped Lowe's orchestrate a transformation of this size and scale by running more workloads, better OpEx performance and the ability to expand while the system is running. While providing sophisticated capabilities, the technology platform's simpler, modular, automated management enables Lowe's to run it at a very low cost. As a result of Lowe's edge strategy, the system availability is extremely high, performing at 6, 7, and 9s, a vital metric as stores cannot afford to be down.

VxRail also provided a flexible, resilient and secure infrastructure, generating immediate benefits while establishing the ability to scale for future needs. Lowe's new VxRail technology gave them the capacity to employ applications that help their associates assist customers with their Lowe's experience.

"VxRail has driven better OpEx performance for us. We can run existing applications and those being developed. The benefits are just endless."

John Dabek, Senior Director of Infrastructure at Lowe's

NEW BELGIUM BREWING
VxRail fuels world-class craft beer brewing.

New Belgium Brewing was looking to achieve superior system performance and greater business contribution from IT. They first implemented a four-node cluster of VxRail at their co-located data center in Denver, replacing a hybrid virtualized and physical infrastructure that was unreliable and presented clustering problems.

This upgrade quickly generated remarkable cost, space and energy savings. It also greatly improved the performance of critical applications like Microsoft SQL Server and Microsoft Dynamics ERP and CRM systems. Close to 200 SQL Server databases and 100 virtualized servers now run on a single VxRail system.

Adam Little, senior systems administrator at New Belgium Brewing, says, "Compared to our former three-tier architecture, the performance of Dell EMC VxRail is incredible. Business stakeholders asked for their applications to be moved to the Denver data center because of the great VxRail performance."

New Belgium Brewing continues to boost system performance and manageability by deploying VxRail at its other data center locations.

"We have an authentic relationship with Dell Technologies, they care about our values and what we stand for. They're a true partner in addressing our business needs."

Adam Little, Senior Systems Administrator at New Belgium Brewing

Find Your VxRail

The Dell VxRail family of systems offers a range of platforms. Explore them all here and find the one best suited to your needs.

E SERIES
Go Everywhere 1U/1Node with an all NVMe option and NVIDIA GPUs for a wide range of use cases including artificial intelligence and machine learning. Also available in a single socket server powered by 2nd Generation AMD EPYC™ processor with up to 64 cores.

P SERIES
Performance optimized for high-end use cases with business-critical, performance-intensive applications and/or in-memory databases. Also available in a single socket powered by 2nd Generation AMD EPYC™ processor with up to 64 cores.

V SERIES
Virtualization-extended, graphics-ready platform for specialized use cases such as high-end 2D/3D visualization.

D SERIES
Durable and ruggedized. Designed to withstand extreme conditions such as intense heat and cold, shock, vibration and dust. Available in NEBS and MIL-STD certified configurations.

S SERIES
Storage-dense configurations targeted at specialized use cases that require higher storage capacity at the server level such as Big Data, analytics, or collaboration applications.

Contact your Dell Technologies reseller today to start your IT modernization.

IDC WW Quarterly Converged Systems Tracker, Vendor Revenue (US$M) Q4 2022, March 2023

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IDC Business Value White Paper, sponsored by Dell Technologies, VMware and Intel, "The Business Value of Dell VxRail HCI," March 2023. Actual results will vary.

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