Top Approaches to Simplify Your Path to HCI

Discover how to drive flexibility, agility, and security to modernize for cloud.

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IT Drives the Apps That Drive the Business

IT has long since evolved from being seen strictly as a technology provider, and it's still evolving today, delivering technology services that make a direct impact on business outcomes. Apps are accelerating this shift, as they help businesses capture new customers and support employees in doing their best work.

But different apps have different needs, and IT organizations need the ability to deploy and manage them in different environments— in the private cloud, public cloud, or at the edge.

Traditional infrastructure does not enable the flexibility needed to accomplish this, and simply refactoring apps for a specific environment is a costly, time-consuming process. IT should make infrastructure choices that allow it to fulfill app needs today, and account for as-yet-unknown changes that will arise in the near future. That flexibility requires a platform that enables efficiency, scalability, and ease of management.

HCI offers a modern approach to IT infrastructure

To achieve greater flexibility and stay prepared for the future, many IT organizations are adopting full-stack hyperconverged infrastructure (HCI), which brings compute, storage, networking, and management together onto the same platform to eliminate silos and achieve consistency from end to end.

Migrating to HCI has significant benefits

With a hyperconverged infrastructure, you can:

- Reduce management complexity and costs.

- Improve infrastructure agility through a consistent cloud operating model.

- Enable a fast path to the hybrid cloud environment by supporting a dynamic landscape.

- Create a powerful, flexible, and lasting IT infrastructure.

But migration can be a tremendous challenge. From virtualizing the whole stack, to integrating each component, to ensuring flexibility for future needs, it's often a highly complex process that consumes significant time and IT resources. With the right approach, migration to HCI can be a much simpler process that produces benefits fast. This eBook explores approaches to HCI and presents a path to migration that is simple and straightforward.

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HCI Supports Diverse App Needs

Many IT organizations need to juggle a mix of traditional and modern apps, without adding a significant amount of new head count. Trying to support these disparate apps on traditional infrastructure is a complex, time-intensive process—which limits agility and doesn't allow teams to meet business needs quickly and efficiently. That's why a hyperconverged infrastructure solution is so critical.
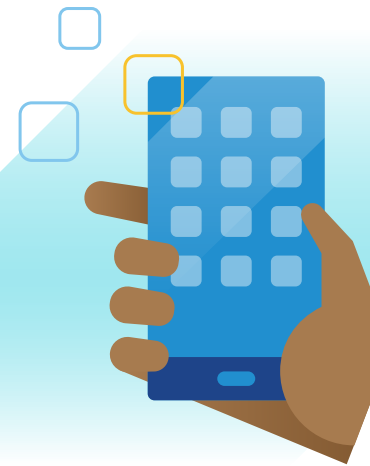
In addition, different apps have different requirements. For example:

- **Traditional apps** are typically OS-dependent and monolithic. They are built in client/server architectures that are deliberately siloed.

- **Cloud native apps** are agile and OS-independent. They are built in a collaborative, automated fashion using technologies such as containers.

- **Apps that generate revenue,** such as next-gen storefronts or app-driven services, require frequent updates or intermittent scaling, which places new demands on IT.

All apps benefit from consistent infrastructure

To minimize complexity and reduce the need for numerous specialized skills, it's important to standardize on infrastructure elements that deliver consistency regardless of load, scale, or where the app lives, whether in a private cloud, a public cloud, or at the edge.

Hyperconverged infrastructure provides a consistent operational platform that can support all kinds of apps, and keep pace with changing requirements. Understanding your options for HCI can help you choose a path that is simple and streamlined.

Three Common Approaches to HCI

Your specific business and technology needs will impact the path you take to hyperconverged infrastructure. There are three common approaches to HCI.

Core HCI
Compute + Storage

This approach converges compute and storage on-premises to deliver significant CapEx and OpEx benefits. Manage compute and storage as one to enable greater operational agility, while future-proofing your infrastructure.

Full-Stack HCI
Compute + Storage + Networking, with Unified Management

This approach provides a robust HCI platform that consolidates compute, storage, and networking into one stack, and includes unified management and automation to immediately streamline operations. It often makes migration simpler, so that the full benefits of HCI can be realized more quickly.

Full-Stack HCI delivers a fully automated private cloud, allowing you to maximize data center efficiency and security for maximum on-prem ROI and a cloud-ready infrastructure. Ultimately this approach enables you to deliver a more robust, secure, and seamless experience to your users.

Hybrid Cloud HCI
Full stack + Public Cloud Extensions

This approach is for organizations that are ready to accelerate their journey to the public cloud and desire the highest levels of agility and cost optimization.

It allows you to leverage a consistent operating model both on- and off-premises and provides a flexible, programmable network fabric design to run traditional and modern (cloud native) applications wherever you choose, with data mobility. You can deploy as software or as a service, delivered by enterprise IT or delivered by a partner.

With HCI, you can optimize costs by application and deploy each app where it makes financial sense to do so. This allows you to eliminate costly investments in rearchitecting apps and accelerate app development by leveraging the public cloud's services.

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A Simpler Path to HCI

VMware Cloud Foundation™ on Dell EMC VxRail is a full-stack, turnkey HCI solution. Delivered on fully integrated hardware, it makes the transition to HCI faster and easier.
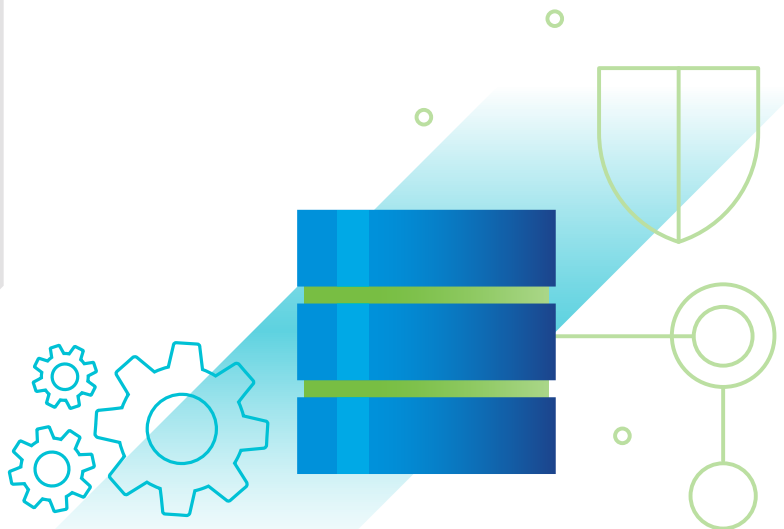
Jointly engineered by VMware and Dell EMC, it delivers both the HCI infrastructure layer and full-stack software that provides automation and integrated lifecycle management. Because it's delivered as one complete solution, VMware Cloud Foundation on VxRail delivers consistent infrastructure and a consistent cloud operating model with the performance and scale to modernize any enterprise application.

5 reasons to choose VMware Cloud Foundation on VxRail

As you look to modernize your data center and support the apps that drive the business, VMware Cloud Foundation on VxRail provides key advantages you won't find in any other infrastructure solution.

This integrated solution includes end-to-end security built into every level, from micro-segmentation at the networking layer to encryption at the storage layer, and security features embedded in the hardware. VMware Cloud Foundation on VxRail acts as one complete, automated system, which greatly reduces risk and increases IT operational efficiency.

VMware Cloud Foundation on VxRail gives you an edge in five distinct ways.

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1

Simplifies data center operations

VMware Cloud Foundation on VxRail, the Dell Technologies Cloud Platform, makes operating the data center fundamentally simpler. As a digital foundation for your infrastructure, it empowers your IT organization to unlock innovation, foster operational freedom, and evolve predictably.

With VMware Cloud Foundation on VxRail, you can:

- Bring the ease and automation of the public cloud in-house with a standardized cloud deployment complete with a validated network architecture.

- Deliver a consistent user experience with a unified platform that provides a familiar set of tools, allowing your organization to accomplish more, with less risk of manual error.

- Respond faster to changing needs and demands with built-in management automation that extends across the entire hardware and software stack, both private and public.

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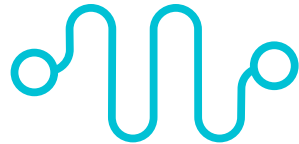
Provides flexibility and choice

VMware Cloud Foundation on VxRail works well with other solutions, so that you can leverage prior investments in platforms and tools. As app requirements continue to change, it gives you the ability to stay ahead of the market.

VMware Cloud Foundation on VxRail allows you to:

- Develop, deploy, and host both traditional and cloud native apps on the same platform through an agile infrastructure with a flexible topology and networking.

- Deploy applications across multiple clouds. That could mean a private cloud that is fully under your control, or your your choice of clouds, where applications would reside in the optimal location— based on cost, proximity to data, and personnel.

- Choose from flexible delivery options.

- Support your developers with automated Kubernetes workload infrastructure and resource allocation.

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3

APP

Speeds app readiness

VMware Cloud Foundation on VxRail is ideal for app-centric organizations that need a fully integrated solution that improves agility amid changing business demands. It gives you the ability to support new technologies as they emerge, so that your business can move into the future with ease.

VMware Cloud Foundation on VxRail enables you to:

- Deploy, host and manage native Kubernetes workloads in a private cloud alongside traditional VMs.

- Meet business needs faster with rapid deployment and turnkey simplicity, supported by automated full-stack lifecycle management and ease of scalability.

- Provision infrastructure on Day 1 to support your applications, with automated full-stack lifecycle management and ease of scalability.

- Meet end-user computing (EUC) needs with deep integration with VMware Horizon,® which delivers a scalable, robust, feature-rich platform for enterprise-grade virtual desktop infrastructure (VDI). VMware Cloud Foundation on VxRail makes deployment, configuration, and management of large-scale Horizon VDI deployments very simple and powerful.

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4

Provides a faster path to hybrid cloud

If and when your organization is ready to move workloads to public cloud, VMware Cloud Foundation on VxRail provides a simple path from virtualization to full-stack hyperconverged infrastructure and the hybrid cloud. This agile, software-defined infrastructure serves as your data center foundation to future-proof investments and accelerate innovation.

VMware Cloud Foundation and VxRail are deployed as an integrated hybrid cloud platform that leverages native hardware and software integrations that work together to deliver velocity with full-stack integrity.

With VMware Cloud Foundation on VxRail, you'll be able to:

- Achieve consistent infrastructure and consistent operations between private cloud, public cloud and edge environments.

- Automate deployment and lifecycle management across the full hardware and software stack, which includes compute, storage, and networking with integrated management.

- Realize the benefits of HCI today, while enabling VMware cloud adoption to meet most any HCI use case—including high-demand workloads and applications.

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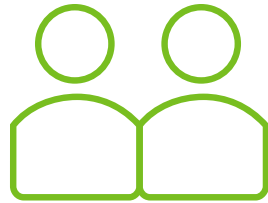
Brought to you by two industry leaders

VMware Cloud Foundation on VxRail, the foundation for Dell Technologies Cloud Platform, is the only HCI system jointly engineered with VMware with full-stack integration and automated lifecycle management. Both the HCI infrastructure layer and the VMware cloud software stack are managed through VMware Cloud Foundation, greatly reducing risk and increasing IT operational efficiency. You get all the benefits of the latest technology in data center modernization delivered in one comprehensive solution.

VxRail goes further to deliver even more highly differentiated features and benefits based on the VxRail HCI System Software, which is proprietary to VxRail and automates deployment, delivers comprehensive lifecycle management, and facilitates key upstream and downstream integration points that create a better together experience with VxRail.

With the integration of VMware Tanzu™ Kubernetes Grid™, organizations can now develop, test and run cloud native containerized applications alongside virtualized traditional applications. This approach preserves investments in existing enterprise architectures while solving for the cloud native skill gap by enabling VMware administrators to become Kubernetes administrators.

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VMware Cloud Foundation on VxRail Eliminates Obstacles to Digital Transformation

Whether you want to transform IT, adopt a cloud operating model, or leverage automation to deliver services faster, VMware Cloud Foundation on VxRail, the foundation for the Dell Technologies Cloud Platform, can help you get there faster. With the backing of VMware and Dell EMC, this turnkey HCI solution allows you to see immediate operational benefits and support the apps that propel your business forward.

Take the Next Step

READ THE SOLUTION OVERVIEW

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