

# Top 5 Reasons to Deploy Hybrid Cloud Infrastructure: An Executive Guide

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**vmware**<sup>®</sup>  
by **Broadcom**



## Executive summary

Application and cloud strategies are inextricably linked due to the prioritization that organizations apply to modernizing application portfolios to meet digital business needs.

CIOs are also rethinking IT infrastructure to support the spectrum of application types and requirements across on-premise and cloud boundaries.

IT leaders have choices about how to effectively and efficiently modernize both applications and underlying infrastructure without impacting operations. The key objective is to implement a cloud operating model that delivers consistent IT services wherever workloads are deployed.

In order to run all applications across multiple cloud boundaries organizations need a platform that provides consistent infrastructure and operations across clouds.

This is accomplished by adopting a single cloud operating model for all infrastructure services, you and your organization can enjoy the fastest and least disruptive path to hybrid cloud:

- Accelerate IT to support application transformation and digital business goals
- Reduce complexity with consistent IT infrastructure and consistent IT operations
- Lower operational cost and business risk using proven solutions



VMware delivers these capabilities and much more. Keep reading to discover how your organization can benefit from a future ready hybrid cloud platform.

# Is your IT service delivery future ready?

## Industries accelerate digital transformation

As organizations work to respond to waves of digital transformation necessary to remain competitive, it becomes clear that legacy data center infrastructure is hard to scale, requires manual intervention, lacks resiliency and is vulnerable to threats. IT infrastructure teams quickly understand that this leads to new silos, which creates complexity, throttles performance, leading to cost increases and lost revenue due to time to market delays.

Recognizing improvement is needed and possible with modern approaches, businesses across industries are adopting new digital capabilities to not only survive but thrive. They are accelerating IT initiatives, despite economic challenges, while being much more proactive, accelerating innovation.

## Investment in modern apps and infrastructure boosts agility

IT organizations looking to improve speed and resilience are laser focused on modernizing apps and their underlying IT infrastructure to support containerized workloads.

Containers allow developers to deploy their applications with portable, lightweight packaging. Cloud enables programmatic control of infrastructure virtually and remotely. The combination of containers, cloud infrastructure, and continuous integration/continuous delivery (CI/CD) tools allows developers to rapidly ship incremental changes to their applications to meet digital business needs.

# 80%

According to IDC, over 80% of IT decision makers believe that digital infrastructure is mission critical to achieve their stated business goals.<sup>1</sup>

1. IDC. "Future of Digital Infrastructure 2022 Global Sentiment Survey." June 2022.

## App modernizations is a spectrum

Often mischaracterized as an all-or-nothing investment, application modernization is truly a spectrum of choices. To add new digital capabilities for a specific business need, organizations have three application modernization options with varying degrees of difficulty:

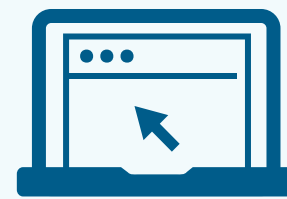
- **Rehost** — “As is” workload migration to the cloud without changing architecture or code
- **Replatform** — Containerize traditional workloads to increase agility and standardize automated development and deployment tool chains
- **Refactor** — Utilize cloud-native and microservices architectures by rewriting new application code

In most cases, it is much more cost-effective to rehost applications from on-prem data centers to cloud, but that requires consistent infrastructure layers between on-premises private cloud and whatever target cloud destination. Without a consistent infrastructure stack between these cloud environments, application architecture must be refactored or replatformed in order to provide consistent operations.

## Modern infrastructure flexibility

As they are modernizing apps, future ready IT organizations are also adopting a cloud operating model that delivers developer-ready infrastructure services for all application types. And one that enables consistent service delivery, breaking down traditional infrastructure-specific silos while offering the greatest flexibility to change.

In short, organizations are boosting agility with the key to digital transformation success: A single hybrid cloud platform that operates consistently across any cloud, any app, any device.



### Key questions

1. What are your company’s strategic goals and how does your infrastructure team support them?
2. How are your developers modernizing your application portfolio to meet those goals?
3. How is your current infrastructure architected for cloud mobility and application changes?

Learn more about

[VMware Cloud Foundation](#)  
[VMware Cloud® on AWS](#)

## VMware's approach to hybrid cloud

Many enterprises have had a tactical cloud-first strategy and set workload migration targets that have not been met due to inconsistent cloud architecture deployments. This is one of the reasons that application modernization requirements are often the strategic drivers of infrastructure modernization and cloud strategies.

Consider this: Although **70%** of IT organizations recently surveyed are actively engaged in migrating existing applications to public cloud, they are also planning to deploy **47%** of new cloud-native workloads to private cloud.<sup>2</sup>

And despite there not being one cloud strategy for all, the majority of organizations are committed to hybrid cloud as a long-term strategy.

VMware has a unique and powerful hybrid cloud solution—VMware Cloud Foundation— that provides a virtualized and programmatic-consistent infrastructure as well as consistent operations and automation tools that work everywhere you deploy and manage both traditional and cloud-native workloads.

VMware Cloud Foundation is the future-proof hybrid cloud platform for modernizing data centers and deploying modern apps. It is full-stack hyperconverged infrastructure (HCI) with fully integrated compute, storage, networking, and management—with automation for reduced complexity and lower TCO.

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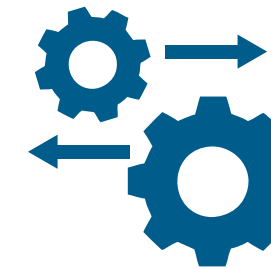
2. Management Insight Technologies. "VMware Research Snapshot: The State of Application Modernization and Hybrid Cloud Computing," January 2020.

## 5 reasons to choose VMware

Here's why the VMware offers a future ready, full-stack hybrid and multi-cloud solution is ideal for all your workloads:

1. VMware offers integrated, software-defined solutions with built-in automated lifecycle management that combines virtualized services for compute, storage, networking, security, and cloud management. It delivers consistent infrastructure for private, hybrid, and multi-cloud demands.
2. Kubernetes is integrated within VMware Cloud Foundation, delivering full-stack, developer-ready infrastructure with VMware Tanzu Kubernetes Grid embedded runtime and Tanzu Mission Control management that uses a standard Kubernetes API for programmatic consumption of compute, network, storage, and security services.
3. IT operations teams, who have different priorities, skill sets, and preferences than developers, can offer developer-ready infrastructure while gaining observability and troubleshooting for Kubernetes workloads.
4. VMware solutions are optimized for Kubernetes, creating a developer ready platform that accelerates innovation and enables faster time to value. As a result, IT can configure an enterprise-grade Kubernetes infrastructure with integrated networking and storage within an hour.
5. With built-in Kubernetes, any environment based on VMware Cloud Foundation now natively supports both VM and container workloads as first-class citizens.

Whether deployed as a on-premises private cloud or as part of a broader multi-cloud deployment, VMware Cloud Foundation delivers enterprise agility, reliability, and efficiency for organizations like yours seeking a private, hybrid, or multi-cloud solution.



### Learn more about

VMware Cloud Foundation with  
VMware Tanzu™

[This full-stack solution is the best way to run Kubernetes workloads at scale.](#)

- For application developers—  
It is Kubernetes.
- For infrastructure administrators—  
It is vSphere.
- For the digital business—  
It is a single hybrid cloud platform that supports the spectrum of application modernization options.

## VMware private cloud

Deployed as on-premises software-defined infrastructure, VMware Cloud Foundation serves as a basis for multi-cloud deployments by delivering full-stack private cloud platform that establishes a robust, extensible cloud operating model. Once deployed, customers now have a standardized methodology for modernizing cloud infrastructure to simplify operations through automation in order to streamline the consumption of modern infrastructure services for faster, more predictable business outcomes.

VMware Cloud Foundation is adaptable to organizations at all stages of their multi-cloud journey by establishing a cloud operating model that enables application mobility across geographically dispersed cloud boundaries. By deploying software-defined infrastructure as part of an on-premises private cloud, infrastructure architects can seamlessly extend to hybrid and multi-cloud infrastructure using a consistent cloud operating model. VMware Cloud Foundation creates a future-ready infrastructure for any application to operate across multiple clouds.

Application modernization is a huge growth opportunity by utilizing cloud native technologies and methodologies to accelerate adoption of Kubernetes as a container orchestration platform. [VMware Tanzu](#) is key to this strategy as it integrates a upstream compliant Kubernetes distribution along with standard API's, libraries and observability tools delivered as a private cloud service within VMware Cloud Foundation.

Artificial intelligence and Machine learning (AI/ML) programs are driven by strategic businesses initiatives and modernization projects as part of an advanced analytic and AI initiatives across many industry verticals. These workloads require GPU support to accelerate workloads which result in additional complexity that can slow these programs. VMware Cloud Foundation integrates the latest virtual GPU (vGPU) technologies as part of integration with the [NVIDIA AI Enterprise Suite](#).



### Additional resources

Download the [Modern Apps on VMware Cloud Foundation Solution Brief](#) to better understand how to deploy Kubernetes in a VMware Cloud Foundation environment with VMware Tanzu.

## VMware Hybrid Cloud

As part of a hybrid cloud deployment, VMware Cloud Foundation delivers a on-premises deployment that utilizes core infrastructure building blocks of compute, storage, networking and cloud management between on-premises private and VMware-based public cloud environments. This capability extends these infrastructure components consistently across multiple cloud boundaries delivering a consistent operations model and application mobility between on-premises and public cloud environments.

By running both modern and traditional applications on a single VMware platform in a private cloud, hosted provider cloud, and public cloud, your IT organization can realize the fastest, least-disruptive way to support the spectrum of application modernization.

Cost optimization and operational efficiency benefits resulting from VMware Cloud Foundation deployment are driven by reduced complexity—when IT adopts a single cloud operating model wherever workloads are deployed. Additional agility and service consumption benefits are often business specific and can have a significant boost for strategic IT service delivery.

### Additional resources

Forrester Total Economic Impact™ of VMware Cloud Foundation  
[Analysis of customer TCO benefits for private cloud deployments](#)






Benefit	Timeframe
<b>Fastest and least disruptive path to cloud</b> — Extend VMware solutions to the cloud to migrate workloads or add capacity—all with familiar tooling, skills, and core processes.	Immediate
<b>Faster time to market</b> — Automate and standardize cloud services to reduce application deployment times so apps and features get to users sooner.	After integrating the application release process
<b>Reduced risk</b> — Link policies to workloads for consistent and streamlined compliance across environments, reducing hybrid cloud and modern application complexity.	Immediate
<b>Reduced data center footprint</b> — Tap cloud resources on demand for either temporary or long-term use to reduce resources needed to manage infrastructure.	After cloud migration
<b>Lower software license costs</b> — Retire older hosts and increase workload density, cutting unnecessary expenses.	With consolidation
<b>Faster and cheaper workload migration</b> — Move applications without refactoring or replatforming using familiar VMware tools, migrating workloads more efficiently and cost effectively.	Immediate
<b>Support new cloud-native apps with existing teams and tools</b> — Manage container-based and VM-based applications side by side with the same team, tools, and processes—wherever they are deployed.	Upon deployment of VMware Cloud Foundation
<b>Avoid lock-in</b> — Deploy workloads to best-fit environments based on technical or business requirements, then migrate or redeploy without vendor lock-in should conditions change.	Ongoing when needed across multiple clouds
<b>Speed mergers and acquisitions</b> — Spin up cloud resources in region, seamlessly migrate workloads without refactoring, and end-of-life legacy infrastructure faster—in weeks not months.	As needed

## VMware Unique Value

If your organization is modernizing applications and wants to simplify the management of private or hybrid cloud infrastructure, your workloads should be deployed on a VMware digital foundation

- VMware transformed the IT industry with virtualization and hybrid cloud technology.
- VMware now leads the hybrid cloud market having forged key partnerships with leading public cloud providers. Now the same infrastructure stack you run in your private cloud is also available from major global hyper-scalers as well as more than 200 Cloud Certified VMware Partners.
- VMware has made significant investments in containerized application solutions through the development of VMware Tanzu with its app modernization and Kubernetes capabilities.  
By running traditional and modern applications on the VMware architecture (any application, any cloud), your organization can take the fastest and least-disruptive path to app modernization and hybrid cloud:

-  Accelerating IT processes to support digital business initiatives
-  Reducing complexity with familiar and trusted VMware solutions
-  Lowering operational costs and business risk with a proven partner



### Additional resources

Download the [VMware Cloud Foundation Business Case](#) to see estimated OpEx and CapEx savings across key industries and segments.

## Key hybrid cloud considerations and actions

Leading a shift to hybrid cloud service delivery requires intentional action to ensure success. And VMware is the ideal partner to get you there.

Consideration	Action
Consumption expectations — Public cloud is setting the gold standard for instantly accessible and highly standardized service consumption, raising user expectations for IT.	Ask IT operations to meet with your key IT consumer groups (e.g., lines of business, developers, etc.) and understand service requirements to meet or exceed their expectations.
Inertia and status quo — IT organizations often have a vested interest in the old way of delivering services, and may actively resist change to a cloud operating model.	Identify an IT executive sponsor willing to be the change agent to lead your IT organization through a purposeful infrastructure and apps modernization transition plan. Identify both transition and end-state metrics to incent desired behavior. Architects – Find solutions that can manage both VM and container-based workloads as first-class citizens.
Skills gap — Modern container-based workloads often require different management tools and processes than existing VM-based workloads.	Choose a solution that can manage both VM and container-based workloads and leverage existing investment in intellectual property found in process and run-books.
Risk mitigation — For organizations of all sizes, new application technologies and cloud environments can increase complexity and potentially impact security, compliance, and service-quality risk profiles.	Team with your CISO to understand key risk considerations. Architects – Look for solutions that deliver intrinsic security at the infrastructure layer, and apply policies at the application layer that are deployed consistently across environments.
Cloud economics — A cloud operating model is service oriented, and it may change a cost structure that was previously infrastructure oriented.	Meet with your CFO to understand his or her preferred mix of CapEx and OpEx. Architects – Evaluate the hidden costs of cloud migration and workload refactoring that may impact cost analysis.
Pilot-based launch — The transition to a cloud operating model is best approached intentionally.	Plan a staged rollout as part of your change transition plan. Architects – Identify key workload types or influencer groups, and gain and promote their buy-in to ensure momentum after early successes.

## Team with VMware

VMware has built some of the largest and most successful private and hybrid clouds in the world. Now, VMware is making multi-cloud a reality by introducing VMware Cloud on all major cloud provider platforms.

VMware Cloud solutions are based on VMware Cloud Foundation—the proven hybrid cloud platform combining trusted products that work with both new and existing applications, on premises and in the public cloud.

VMware can help with the following steps to ensure private or hybrid cloud adoption and success:

- Develop a cloud strategy that supports the spectrum of application modernization
- Assess your application portfolio and identify expected changes
- Assess and plan IT operational readiness for a single cloud operating model
- Plan for a pilot-based launch and scale over time

VMware experts thoroughly understand the opportunities and challenges cloud adoption and operations present. And VMware delivers a complete solution that includes a full suite of the software products and services you need to gain the maximum benefit from whatever cloud model you choose.

Let us bring our experience, insight, and expertise to your teams and environments, helping you achieve cloud's benefits.



### Get Started

Realize the value of VMware Cloud Foundation today Calculate your estimated cost savings and get a free [Total Cost of Ownership](#) comparison report for your organization in minutes.

Get Started Today

# Get expert training on network virtualization

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