



BUILD A SECURE, SCALABLE, CONSISTENT HYBRID CLOUD

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HPE Synergy and VMware Cloud Foundation

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> HPE and VMware®—Working together to deliver game-changing results to our joint customers

> • 20-year alliance—HPE and VMware have revolutionized the data center together.

• #1—VMware is the most prevalent virtualization platform for HPE products.

• #1—HPE has the largest virtualized server share (units) on VMware across all server vendors.1

• #1—60% VMware Virtual Volumes (VVols) partner market share; more customers run VVols on HPE than the competition combined.

• #1—HPE is the largest VMware Authorized Training Center™, with 90+ training centers.

• #1—HPE and VMware share one of the largest joint channel partner communities (>65%).

• 200,000+ joint customers—HPE and VMware have the largest virtualized compute market share.

• First—HPE was the first global server OEM vendor to launch VMware NSX®.

95% of customers have both public and private cloud environments installed

Companies are embracing hybrid cloud. But to build a successful hybrid cloud strategy, you must balance the needs of the business with the needs of IT. Hybrid cloud helps today's companies achieve the proper balance and meet their top priorities:

 Innovate faster, leveraging greater automation and intelligence.

- Control costs and increase
- efficiency.
- Ensure security and compliance.

• Respond quickly to new customer demands.

HYBRID CLOUD—NOW A NECESSITY

The world has become hyper-connected. Everyone—and ncreasingly everything—is generating and sharing data, creating new value, and driving a new speed of business. To keep pace, every business is on a transformation journey.

For many organizations, cloud computing has been a proven catalyst for supporting transformation. As most enterprises now operate multiple clouds to support their business applications/operations, simple cloud deployments have morphed into complex hybrid environments that include private, public, and edge clouds.

The challenges found in many of today's data centers primarily include using outdated systems and processes with siloed infrastructure layers to meet the needs of the business and IT. These environments typically include expensive purpose-built hardware that has been deployed over many years during organic growth, mergers, and/or acquisitions.

Mired in complexity, these environments are difficult to manage and hinder flexibility and agility, ultimately slowing the delivery of IT services and applications. In today's dynamic marketplace, speed is absolutely necessary to meet the changing demands of the business and enable IT to support both traditional and cloud-native applications.

To support transformation and growth, savvy CIOs realize they must empower their innovators with performance, efficiency, and agility across all clouds. Doing so enables IT to build applications once and deploy them anywhere—in any cloud, at the edge, or in the on-premises data center—with everything delivered as a service. If the transformation to hybrid cloud sounds daunting, HPE and VMware can help

HYBRID CLOUD—NOW A NECESSITY

To deliver a simplified hybrid cloud experience built for today's software-defined data center (SDDC), HPE and VMware combined HPE Synergy powered by Intel® Xeon® processors with VMware Cloud Foundation[™]. The result: a consistent, universal, enterprise-ready hybrid cloud solution that is:

Automated, enabling faster time to market

Simplified by consolidating virtual machines (VMs) and containers in one environment, enabling you to speed application development, deployment, and ongoing IT operations

Uniquely integrated to simplify management across VMware Cloud Foundation and HPE Synergy; integrates formerly siloed infrastructure and operations

Easy to deploy, delivering composability as a service through HPE GreenLake, or accelerating deployment with the "first-time-right" experience through HPE Pointnext Services

Software-defined, able to manage both private and public clouds including Microsoft Azure and Amazon Web Services (AWS)

With VMware Cloud Foundation running on HPE Synergy, you receive the added benefits of using a modern composable infrastructure that can reallocate resources instantly to meet the variable needs of any workload.



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What's new in VMware Cloud Foundation?

• Delivering a complete platform for modern applications, providing agile infrastructure and a complete Tanzu runtime environment with infrastructure to bridge the gap between application development teams and IT infrastructure teams to accelerate DevOps ecosystems.

- VMware Cloud Foundation with Tanzu includes an embedded Kubernetes runtime (Tanzu Kubernetes Grid) within vSphere—giving developers an automated, full-stack infrastructure with developer-ready APIs. Because VMware Cloud Foundation with Tanzu also provides a single platform for VMs and containers, users no longer have to switch between two different platforms.

• Built from the latest VMware innovations, including vSphere® 7, vSAN™ 7, vRealize® 8, and the latest NSX-T networking enhancements.

 Providing deeper lifecycle management through vLCM, with integration into qualified vSAN ReadyNode.

• Standardizing the architecture of NSX-T running in both the workload and management domains, bringing together all of the latest networking and security enhancements.

CREATING A COMPLETE, AGILE PLATFORM FOR MODERN APPS

Modern applications require adaptive infrastructures designed to support all of their components, not a restrictive subset. Without an adaptive infrastructure, IT operators often struggle to provide the services that developers and applications require. For example:

• IT operators must ensure the right infrastructure is correctly deployed and configured.

• Provisioning resources is difficult due to infrastructure silos managed by different teams, such as servers, storage, and networking.

• Data security is a constant worry; isolating modern apps from sensitive databases is difficult.

• Inconsistent operations and cross-functional workflows add complexity to the environment.

VMware Cloud Foundation is designed to relieve these obstacles by creating a universal hybrid cloud platform for both modern and traditional applications. VMware Cloud Foundation is characterized by:

- Developer-ready infrastructure—Automated, full-stack infrastructure and developer-ready APIs
- Universal platform—A single platform for VMs and containers
- Embedded Kubernetes (Tanzu) runtime environment—For container orchestration to simplify and speed application development, deployment, and ongoing operations
- Application-focused management—Simplified management using Namespaces to manage application resources
- Foundation for hybrid cloud—Extending the same software stack in the public cloud

Together, HPE Synergy and VMware Cloud Foundation create the perfect platform for a consistent hybrid cloud experience. With an integrated, software-defined platform running on HPE Synergy composable infrastructure, you receive an enterprise-ready hybrid cloud solution that is:

- Flexible—To future-proof your infrastructure
- Agile—Simple to deploy, which reduces complexity and cost
- Efficient—Software-driven to support automated operations

Today, only HPE and VMware can deliver a software-defined solution running on modular infrastructure across compute, storage, network, security, and cloud management. This next-generation solution can run all your enterprise apps—both traditional and containerized—in cloud environments.

PUTTING HPE SYNERGY AND VMWARE CLOUD FOUNDATION TO WORK

While HPE Synergy and VMware Cloud Foundation can be used in a variety of ways, the top four use cases are:

• Data center modernization—Easily and safely implement a fully virtualized private cloud, based on modern composable infrastructure.

• Infrastructure as a service—Enable IT organizations to automate the delivery of composable infrastructure, applications, and custom services to end users via self-service catalogs and HPE GreenLake consumption-based service.

• Hybrid cloud—Run the solution on-premises creates a common, standardized software platform that can also be consumed as a service through HPE's ecosystem of public cloud service providers, enabling you to easily build a hybrid cloud environment leveraging your existing skill sets and processes.

• Platform consolidation—Consolidate traditional data center applications and private clouds on a shared and automated infrastructure.



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HPE and VMware Revolutionizing the data center together

From traditional IT to a virtualized data center, our vision now includes helping our customers move quickly toward SDDC and hybrid cloud with composable infrastructure and VMware Cloud Foundation. We share the same vision for the future: providing a simple hybrid cloud experience to our customers so they can create

and deliver new value instantly and continuously through:

• Faster innovation—Speeding time to market

Consistent operations—Enabling greater simplicity

• Reduced cost—With a consistent hybrid cloud environment

SIMPLIFYING LIFECYCLE MANAGEMENT

Introducing VMware vSphere® Lifecycle Manager

To streamline lifecycle management across the hypervisor and the complete stack of drivers and firmware for the servers in your data center, VMware developed the VMware vSphere Lifecycle Manager (vLCM). This innovative solution consolidates the tools required for hardware and software updates, eliminating the need for update tools from individual server vendors. vLCM automatically validates that firmware is included on the hardware compatibility list—giving administrators the confidence that their updates will be successful. HPE simplifies lifecycle management even further by delivering the HPE OneView Hardware Support Manager plug-in for vLCM. Integrated with HPE OneView for VMware vCenter®, the HPE OneView Hardware Support Manager plug-in provides many valuable benefits:

• Simplified one-click lifecycle management for the VMware ESXi[™] hypervisor and the full stack of drivers and firmware, directly from the VMware vSphere user interface (UI)

• Consistent and repeatable method for keeping ESXi clusters compliant and up to date

- Support for any HPE Gen10 server certified for ESXi 7.0
- Support for one-to-many vCenter-to-OneView instances
- Support for using an external repository for the HPE Support Pack for ProLiant

Industry-first certified composability for VMware Cloud Foundation (VCF)



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"First-time-right" deployment with HPE Pointnext Services

With HPE Pointnext Services, you receive an HPE-designed and -validated HPE Synergy and VMware Cloud Foundation solution stack that offers:

• Faster time to delivery

Follows the proven first-time-right approach

 Uses consistent HPE-validated configurations that are easy to manage and support

 Optimizes performance, based on HPE best practices

 Reduces design, development, and deployment risks

Automation, for faster deployment
5X faster installation and

deployment time5

Increased confidence

Repeatable, scalable process for

reducing user errors

 Pre- and post-solution deployment validation for saving time and detecting errors earlier

• Integration between HPE and VMware

Uses HPE OneView Redfish
Connector for tighter integration
between HPE infrastructure and the
VMware Cloud Foundation SDDC
Compose/decomposes HPE
Synergy and HPE 3PAR resources
directly through the SDDC

BRINGING HYBRID CLOUD AS A SERVICE TO VMWARE CUSTOMERS

HPE GreenLake delivers VMware Cloud Foundation running on HPE Synergy as a service. Through the integration of HPE GreenLake consumption-based services and HPE Synergy with VMware Cloud Foundation, customers can keep all their applications, tools, and data in place while achieving the benefits of cloud and composable infrastructure.

Through HPE GreenLake, customers can benefit from a fully managed hybrid cloud environment where they only pay for what they consume—lowering total cost of ownership (TCO) by 40% and accelerating new IT project deployment by 65%.3 The solution is compatible across on- and off-premises data centers, it is simple to operate, and it supports VMs and containers. This consumption-based approach dramatically improves the value enterprise customers experience from a hybrid cloud environment by enabling greater agility, speed of composability, and the ability to shift resources from managing infrastructure to innovation.

With hybrid cloud as a service from HPE GreenLake, today's enterprises benefit from:

• Cloud economics—Management of VMware Cloud Foundation through HPE GreenLake enables enterprise IT to shift resources to meet changing business demands. Customers pay for what they use and can effectively plan capacity ahead of use to avoid overprovisioning and save on TCO.

• Speed and agility—The integration of HPE GreenLake and HPE Synergy with VMware Cloud Foundation enables companies to accelerate time to value. HPE Synergy allows customers to compose resources on the fly to meet the needs of VMware Cloud Foundation workloads and scale when needed—enabling IT and developers to spin up new resources for faster application provisioning. With HPE GreenLake, the required resources are proactively made available and ready to deploy in minutes, not months, shortening the time to deploy global IT projects by 75%.4

• Control, security, and workload optimization—Customers can use the HPE Right Mix Advisor to identify which workloads and applications are ideal to move to public clouds or keep in private clouds, and show how to migrate those workloads to achieve the optimal mix of hybrid cloud. HPE Right Mix Advisor delivers data-driven guidance that allows customers to remain in control of IT operations, policies, and procedures, achieve increased performance, and manage costs for each workload.

CONTACT YOUR HPE REPRESENTATIVE TODAY

Find out how your organization can benefit from deploying a hybrid cloud environment running on HPE Synergy powered by Intel Xeon processors and VMware Cloud Foundation, managed by HPE OneView and the new vLCM. With this composable, software-defined solution, you will benefit from:

Automating everyday operations

Deploying at cloud-like speed and scale

Using one infrastructure for any application—modern or traditional, VM or container-based

Developing applications faster and smarter





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