

# Build a Simple, Optimized Hybrid Cloud with VMware Cloud Foundation



VMware's virtualization and cloud technology have been game-changers for many organizations. And they've been a major focus for many years at Pure Storage®.

With the recent release of [vSphere 7](#) and [VMware Cloud Foundation version 4](#), we're doubling down on our investments in VMware vSphere environments.

At Pure, we're focused on how we can help you optimize data center resources and deploy VMware Cloud Foundation (VCF) on the fabric of your choice. We're also focused on simplifying data storage management as well as automating and protecting private and hybrid cloud infrastructure.

VMware Cloud Foundation (VCF) powered by Pure Storage provides the most effective way to build a hybrid cloud with consistent operations on-premises and in the cloud. It is built on VMware Validated Designs, automates deployment and lifecycle management of VMs and containers, and provides a single pane of

glass for consolidated operations management.

## Optimize Data Center Resources

VCF with [FlashStack™](#) enables you to optimize data center resources, especially the cost and performance of mixed application workloads. (For more details, please read the [VMware Cloud Foundation on Pure](#) solution brief.)

Unlike hyperconverged infrastructures that force hardware silos and create inefficient resource utilization, VCF with FlashStack offers a converged infrastructure with disaggregated best-of-breed storage, server, and network components. This architecture enables shared resources for efficient workload consolidation, optimized performance, and availability, plus dynamic, resizable software-defined storage pools.

VCF supports both vSAN and external shared storage. With FlashStack, you get storage and compute that can scale up or down on demand. You also get automated full-stack deployment, instant VM provisioning, container orchestration, and automatic encryption of data at rest. Plus, VMware SDDC manages FlashArray™ storage for optimized workload domains that are elastic, flexible, and cost-efficient as well as vSAN as the VCF management domain.



### Pure delivers an optimized disaggregated infrastructure

Storage & compute can be added or removed on demand.

No more silos – the FlashArray is optimized for availability, performance, and cost.

VCF on Pure Storage is fully managed by VMware SDDC Manager.

#### Elastic

Storage hardware is shared and datastores resized on demand & data movement

#### Flexible

ESXi servers can dynamically move from one domain to another on demand & without data movement

#### Affordable

No trapped, unused compute and storage capacity. Global, cross-domain data reduction

### Pure Optimized VCF On-Prem

VCF supports both vSAN and external shared storage. With FlashStack, you get storage and compute that can scale up or down on demand. You also get automated full-stack deployment.

When deploying a hybrid cloud, workload domains can be replicated between Pure Storage FlashArray and vSAN in VMware Cloud in the public cloud. VMs can be migrated or replicated via VMware HCX, vSphere replication, or third party tools.

# Fabric Flexibility and Options for VCF

Pure supports VCF on both Fibre Channel and iSCSI with non-disruptive migration between fabrics. This future-proof solution helps you protect your investments and maximize the benefits you value.

## Fibre Channel



**FCP** is supported as principal storage for workload domains

vVols is supported as supplemental storage for workload domains

## Ethernet



**vSAN** is required for management domains and supported as principal storage for workload domains

**NFS** is supported as principal storage for workload domains

**iSCSI** is supported as supplemental storage for workload domains



## Deploy VCF on Fibre Channel fabrics

- Provision and manage within SDDC Mgr
- Leverage your existing fabric investments
- FC reduces ESXi CPU utilization

## Deploy VCF on iSCSI fabrics

- Import into and manage within SDDC Mgr

## Swap fabrics when it meets your needs

## Supports future storage options in VCF

- Pure is committed to support the addition of storage protocols like NVMe-oF and adding support for vVols as principal storage in future releases of VCF

## More VMware Cloud Foundation Resources

To increase the return on your VMware investment, Pure's engineering and solutions architecture teams have built a collection of architectural guidance, best practices, and demos.

Get started with this [VMware Cloud Foundation with Pure Storage Technical White Paper](#).

Kyle Grossmiller, Pure's resident VCF solution architect, has posted a handful of introductory blog posts and videos to help you learn even more.

## Blog Posts

- [Using VMware Cloud Foundation with Pure Storage FlashArray](#)
- [Extending vVols to VMware Cloud Foundation](#) (by Cody Hosterman)
- [FlashArray Fibre Channel with VMware Cloud Foundation](#)
- [Seamlessly Use VMware Cloud Foundation with ActiveCluster](#)

## Demo Videos

- [Setting up vVols with VMware Cloud Foundation](#)
- [Using vVols with VMware Cloud Foundation](#)
- [Using iSCSI with VMware Cloud Foundation and Pure Storage](#)

- [Using Fibre Channel with VMware Cloud Foundation and Pure Storage](#)

To learn more about Pure Storage and VMware, check out our [VMware Solutions page](#) and the [VMware Platform Guide](#) for more technical resources.