

SOLUTION BRIEF

Maximize Your VMware Environment with Pure Storage

Five ways Pure Storage helps you get more from your storage

Your storage matters, because your data matters. The difference between storage that’s “good enough” and storage that propels organizations to the next level is dictated by two factors: data security and accessibility. For virtualized workloads like VMWare vSphere, storage is a key resource—if your storage isn’t performing or is having issues, processing, memory, and networking concerns are moot.

Demand More from Your Storage

For VMware workloads, picking “good enough” storage is no longer good enough. Your storage needs to seamlessly integrate with VMware, simplify your day-to-day operational tasks, keep your precious intellectual property safe and secure, and be easy to procure and consume on your terms. Only with a fully integrated solution will your storage be able to keep up with the speed of business and enable you to drive innovation and deliver on your company’s goals.

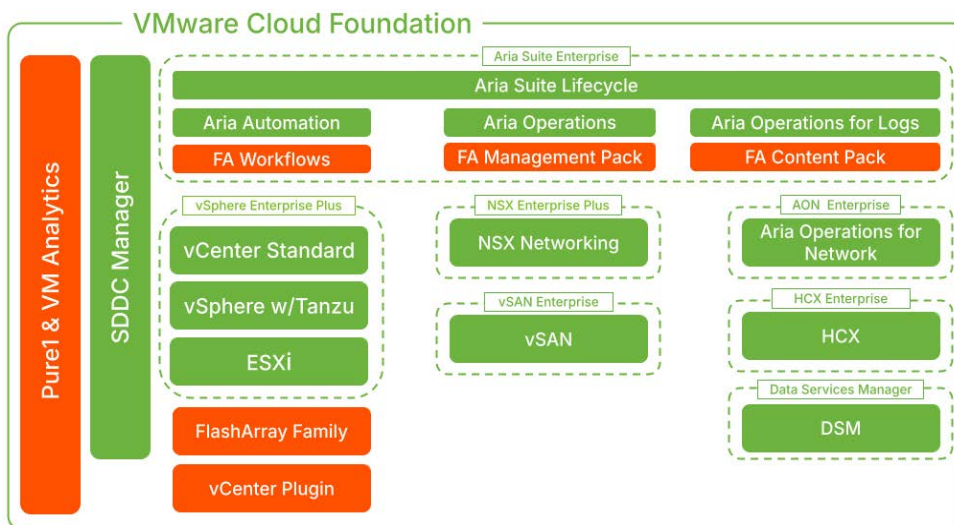


FIGURE 1 Pure Storage integrations with VMware Cloud Foundation



Data Security

Ensure the integrity of your workloads with always on data at rest encryption and immutable and indelible snapshots with SafeMode™



Enhance VMware Cloud Foundation

Get more from VMware Cloud Foundation with deep integrations from Pure Storage to optimize and simplify administration.



Flexible Purchasing Options

The Pure Storage Evergreen® portfolio gives ultimate procurement flexibility.

Pure Storage FlashArray™ delivers for VMware VSphere workloads in five key ways by helping you:

1 Secure and Protect Your Data with Security Tailored to VMware Environments

Data center disasters can be local or regional and can be self-inflicted, weather-related, or caused by outside actors. Whether meeting strict recovery point objectives (RPO) and recovery time objectives (RTO) for your mission critical applications, ensuring the integrity and the security of your data, or simplifying your backup and recovery operations, FlashArray easily and seamlessly integrates with your VMware Cloud Foundation or VMware vSphere Foundation environment. Our safety and security features are all included, with no additional software or licensing purchases needed.

- **D@RE and snapshots:** Get AES-256 compliant encryption with no impact to storage performance, and storage snapshots that are near instantaneous, no performance, and always immutable are the starting point for protecting and securing your data.
- **SafeMode™:** Building from the immutability of FlashArray snapshots, SafeMode helps you stop ransomware attacks. It strengthens your data security by making snapshots indelible, meaning they can't be deleted.
- **ActiveCluster™:** When you need the ultimate in application availability and uptime, synchronous replication with ActiveCluster delivers zero RPO. Combine ActiveCluster with support for vSphere Metro Storage Clustering and you have an automated "hands free" failover.
- **ActiveDR™:** If you need disaster recovery over a longer distance, ActiveDR provides near-zero RPOs over any distance with continuous replication. Support for VMware Live Site Recovery (formerly Site Recovery Manager) simplifies the orchestration of both failover and failback if and when a disaster strikes.

“We know we can retrieve data quickly and safely if we need to, with minimal disruption to services.”

KIMBERLY LAGRUE, CHIEF INFORMATION OFFICER, [CITY OF NEW ORLEANS](#).



2 Optimize, Simplify, and Efficiently Manage VMware Cloud Foundation and VMware vSphere Foundation

VMware Cloud Foundation (VCF) and VMware vSphere Foundation (VVF) might be the new way you consume and license VMware solutions, but whatever name(s) or models VMware has used in the past, present, or future, you can count on Pure Storage to have deep, feature-rich integrations. Supporting VMware’s vision for the software defined datacenter (SDDC), Pure Storage has developed integrations across the VCF stack to optimize, simplify, and more efficiently manage your VCF deployments:

- **Aria Automation and Orchestrator:** Implement workflows that can be executed directly on arrays and seamlessly integrated with common vSphere tasks. Combining those workflows with Orchestrator blueprints lets you easily deliver a SaaS catalog of items in Aria Automation.
- **Aria Operations:** With over 130 metrics, collect and view performance, health, and availability data from your Pure Storage FlashArray system(s) while providing predictive analytics and real-time monitoring information. All within the VMware Aria Operations user interface.
- **Aria Operations for logs:** The Pure Storage content pack for FlashArray allows customers using FlashArray to quickly integrate and interpret array syslog messages. Deployment of the content pack helps administrators, by way of the provided, predefined objects, in monitoring, troubleshooting and analyzing their FlashArray environment.
- **vSphere Client plugin:** Manage and provision datastores; vVols, NFS, vVols, directly from the vSphere client. You’ll gain real-time granular observability to storage performance and capacity at the VMDK, VM, Datastore, and volume level. Creating, deleting, and replicating snapshots takes just a few mouse clicks and you can create and manage host and host group objects on the array directly from the vSphere GUI.

Beyond integrations with the solutions included with VCF and VVF, Pure Storage FlashArray is supported as Principal and Supplemental storage in VCF deployments for the Management Domain (Supplemental) and Workload Domains (Principal and Supplemental). This is coupled with support for any storage protocol you might want to use: FC, iSCSI, NFS, NVMe-oF, and vVols. FlashArray delivers flexibility while giving you the power of choice.

3 Gain Simplified Storage Management with VMware Virtual Volumes (vVols)

Using VMware Virtual Volumes—or vVols—radically simplifies storage management and tasks for virtual infrastructure administrators, storage administrators, and application and database owners. vVols addresses the challenge of storage abstraction that Virtual Machine File System (VMFS) datastores bring. vVols unlock the ability to directly interact with the rich platform features of a Pure Storage FlashArray system, which supports vVols features and technologies.

Pure Storage is a VMware advanced design partner , and we are deeply involved with VMware teams to improve and advance the technology. This joint effort is why FlashArray is the most deployed platform for vVols. With increased performance for application and database owners, ease of management and troubleshooting for storage and VI administrators, and simplified data management, protection, and security for all, you should be running your VMware environment on FlashArray with vVols.



FIGURE 2 How virtual volumes accelerate Oracle workloads. VMware Blog, “Oracle Workloads on VMware Virtual Volumes”, August 2022



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Enhance Visibility to Take Action with Pure1 and AI Drive Operations

Get unparalleled visibility into your workloads with [Pure1](#)® cloud-based VM analytics and assessment tools. Identify in seconds what resources a VM is consuming to map storage concerns. Put AI driven recommendations to use via the expanding number of assessment tools built into Pure1:

- **VM assessment:** Learn how to optimize virtual environments and reduce VMware licensing costs. This assessment leverages VM Analytics data to deliver a comprehensive view from vCenters, to clusters, to virtual machines, providing information to maximize VMware infrastructure.
- **Security assessment:** This tool scans Pure Storage infrastructure for vulnerabilities that could put data at risk, such as using default passwords or publicly accessible storage buckets. Additionally, it includes behavioral analysis that looks for signs of irregular activity like unexpected changes in permissions, a sudden reduction in volume and snapshot counts, or an increase in alert notifications.
- **Data protection assessment:** Provides a visual assessment of Pure Storage arrays, volumes, and file systems shows how well they stack up to data protection best practices from Pure Storage, and offers actionable insights to improve resiliency.
- **Sustainability assessment:** This assessment provides details on the overall energy and carbon usage across a Pure Storage footprint, at the data center location, and at the per array level.

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Predict Your Budget with the Evergreen Portfolio

The Pure Storage [Evergreen](#)® portfolio gives you the power of choice on how you procure your storage. Evergreen//Forever™ and Evergreen//Flex™ continue with a CAPEX purchasing model for the hardware, but Evergreen//Flex lets you pay only for storage usage via a subscription. If you want to move to a full OPEX scenario, Evergreen//One™ offers a full storage-as-a-service offering so you can focus on business outcomes with guaranteed SLAs. The Evergreen portfolio includes:

- **Evergreen//One:** A guaranteed SLA-driven storage service that improves how data is stored, mobilized, and protected. Utilizing our Evergreen extensible architecture, Evergreen//One ensures all SLAs and commitments are continuously met. Performance, uptime, zero data loss, capacity, zero planned downtime, no data migration, energy efficiency, cyber recovery, site rebalance, and optimization and resilience SLAs are all guaranteed.
- **Evergreen//Flex:** Combine the benefits of both a traditional purchasing model and usage-based subscription that covers support, maintenance, and provides access to software and hardware updates throughout the term, as well as a number of other commercial options that help to optimize investment as well as operations. Like a traditional storage purchase, you buy and own the storage hardware, but at a discounted price compared to a typical traditional model. With Evergreen//Flex, you pay for the subscription based on the amount of storage utilized. The subscription includes regular hardware and software updates to keep your storage modern. This model allows for lower upfront costs for organizations that elect to maintain ownership of IT infrastructure.
- **Evergreen//Forever:** Evergreen//Forever is storage that is deployed once and non-disruptively upgraded when you need it, for a decade or more, without the need to rebuy the hardware you already own. Forget downtime, performance impact, or data migrations: we've engineered compatibility for future technologies directly into the products themselves.

“Evergreen//One gives us the flexibility to pivot as needed, while being reliable, secure, and easy to manage.”

KRIS O'BRIEN, VICE PRESIDENT AND IT OPERATIONS MANAGER, [CITY NATIONAL BANK](#).



Bringing It All Together

We have only begun to scratch the surface of these benefits and many many more, that using Pure Storage with your VMware environment delivers like no other storage vendor. We've shown you how Pure Storage Platform is purpose built from the ground up with native features, rather than hastily bolted-on integrations. To learn more, or dive deeper into any of the topics above, visit the Pure Storage [Private Cloud webpage](#) for additional information and resources. If you want to see Pure Storage in action with VMware vSphere, check out the [FlashArray with vSphere Test Drive](#).

Additional Resources

- Discover the [top reasons](#) to use Pure Storage FlashArray with vSphere Virtual Volumes.
- Explore the [five reasons](#) to use VMware Virtual Volumes with Oracle databases.
- Learn why Pure Storage is [the most deployed platform](#) for VMware virtual volumes.