



# Retaining Hardware During a VMware Exit

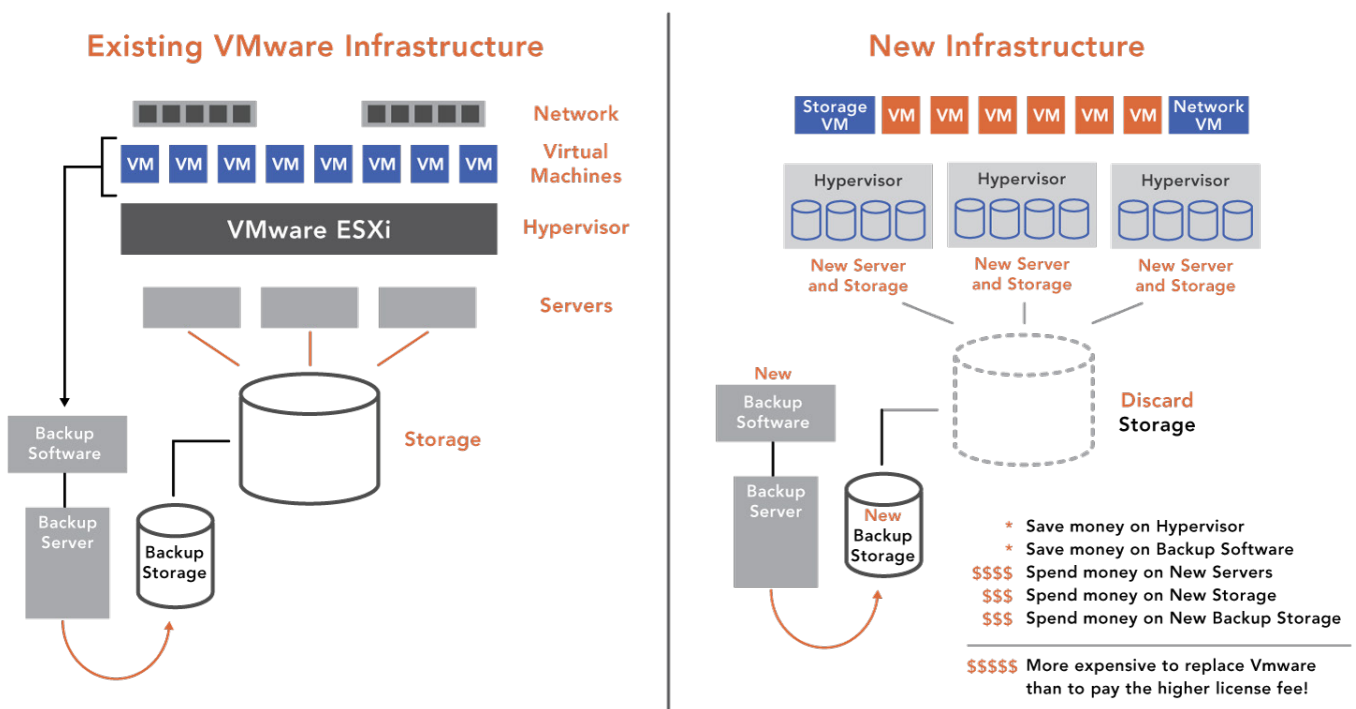
Infrastructure has four components: computing (virtualization), networking, storage, and data protection. Each of these typically has its own hardware in the form of dedicated appliances (servers), which come with proprietary software that drives them.

Various attempts have been made to break this pattern and create a software-defined data center (SDDC). Still, all have ultimately fallen short, either because the software couldn't provide complete coverage of the entire infrastructure's needs or because the software's performance and scalability were subpar compared to those of the dedicated infrastructure components.

As a result, most organizations have the four-tier architecture mentioned above. When organizations created these designs, the thought of Broadcom acquiring VMware and then doubling or tripling prices was not part of the equation. However, in November 2023, that happened, and it sent many organizations searching for VMware alternatives. Many organizations signed a one-year renewal with VMware to give them time to research other options.

In 2025, companies recognize the necessity for significant changes to their infrastructure software, but many have hardware only halfway through its life expectancy, making a complete hardware refresh undesirable. The issue is that many VMware alternatives, such as Nutanix and Scale Computing, are hyperconverged infrastructure (HCI) solutions that require a combined hardware and software purchase or adhere to a stringent hardware compatibility list (HCL), which forces an earlier-than-necessary server and storage refresh.

Switching to VergelO turned out to be a remarkably smooth process. The migration was simple, requiring minimal third-party software, and virtual machines migrated seamlessly with little post-migration work. NETdepot appreciated VergelO's speed and ease of migration, especially compared to their experience with VMware.



Open-source solutions like Proxmox and XCP-ng may seem more flexible in utilizing existing hardware but are often considered too complex to manage. There are also ongoing concerns about technical support. IT teams require VMware alternatives that can support as much of the current hardware as possible while offering a pathway that allows for the selection of commodity off-the-shelf hardware as the hardware is upgraded, helping to reduce costs.

VergelO provides an ultraconverged infrastructure (UCI) solution that, in a single infrastructure platform, VergeOS, provides enterprise-class services for virtualization, networking, and storage with unparalleled 24x7 support. It is a no-compromise alternative to VMware and to legacy three/four-tier infrastructures. Most importantly, VergeOS provides hardware flexibility to enable organizations to leverage their existing hardware investments as they evolve to a converged single-tier design.

While VergelO provides industry-leading data protection and resiliency, backup best practices involve driving that part of the infrastructure with a separate software and hardware solution. Storware Backup and Recovery is a backup software solution that integrates into VergeOS, leveraging its snapshots and changed block tracking (CBT) capabilities. It is unique because it can be a proxy for backup hardware solutions like Rubrik, Cohesity, EMC Data Domain, and PowerProtect appliances.



## **INTEGRATING UCI INTO THREE-TIER ARCHITECTURES**

One hallmark of UCI architecture is hardware flexibility. VergeOS can run on nearly any server hardware purchased in the last five years, and it can support mixed nodes using server hardware from various vendors and even different processor types.

Additionally, nodes do not need to be configured in the traditional HCI manner, where each node provides both compute and storage. With UCI, nodes can be combined similarly to HCI, or they can be dedicated, with some focusing mainly on compute power while others primarily providing storage performance and/or capacity.

The foundation of VergeOS's flexibility is its support for nearly any server hardware and mixed nodes. Organizations with three-to four-year-old storage systems nearing a refresh will typically add flash storage to some of their existing compute servers. VergeOS's integrated storage services often provide better performance and more robust features than their

current dedicated all-flash array (AFA) at a significantly reduced cost. For example, 100TB of capacity costs less than \$10,000 and eliminates the need to power and cool dedicated storage appliances.

## **Blade Servers**

Some organizations have designed their data centers using blade servers, which place a server on a card with only minimal direct-attached storage (DAS). VergeOS can support these servers in several ways. First, due to VergeOS's ability to allow different servers within the same instance to have distinct attributes, these blade servers can be compute-only. The customer can use the blade's DAS storage to boot VergeOS and direct it toward the VergeOS file system, VergeFS.

Alternatively, VergeOS supports PXE booting, so an internal drive is unnecessary. Finally, it's important to note that some blade server designs include two or four internal flash storage bays, which may also contribute storage to the instance.

## **Dedicated Fibre Channel and iSCSI Storage**

Despite HCI's potential for a 10X reduction in storage infrastructure cost, most organizations continue to invest in dedicated storage arrays because of concerns over HCI's shortcomings. This makes exiting VMware more difficult since many VMware Alternatives are HCI solutions. As a result, customers are often faced with replacing VMware and their storage infrastructure. VergeOS is different in that it can incorporate dedicated external storage into its infrastructure.

Customers will create LUNs and assign a LUN to each server or node contributing storage. VergeFS then treats these LUNs as internal drives; all its data services are now available. This approach has several advantages. First, customers can consolidate several external arrays from the same vendor or different vendors, centralizing and creating a commonality for providing storage services. The result is simplified storage management and training new employees on storage best practices. Second, as the need for more performance or capacity presents itself, these customers can now expand their dedicated storage or take advantage of the vSAN technology offered by VergeOS.

## **No Compromise Storage Services**

Because legacy HCI solutions are limited, most organizations have a dedicated storage tier despite the potential 10X price increase compared to using an HCI solution. They chose dedicated storage arrays for their more consistent performance, improved scalability, and enterprise-class storage services made available through the vendor's software. VergeOS addresses these shortcomings by offering superior performance and scalability than dedicated storage arrays and a robust feature set suitable for most enterprises. Its advantage is the tight integration of VergeFS directly into the hypervisor, VergeHV. This integration means that storage services are not second-class citizens to the hypervisor and are not dependent on the hypervisor to maintain availability or consistency.

VergeFS also leverages VergeOS' software-defined networking capability for internode communication. This custom protocol provides high performance at scale and integrates active-active port utilization directly into the core protocol. As a result, VergeOS can linearly scale capacity and performance to meet the demands of the enterprise.

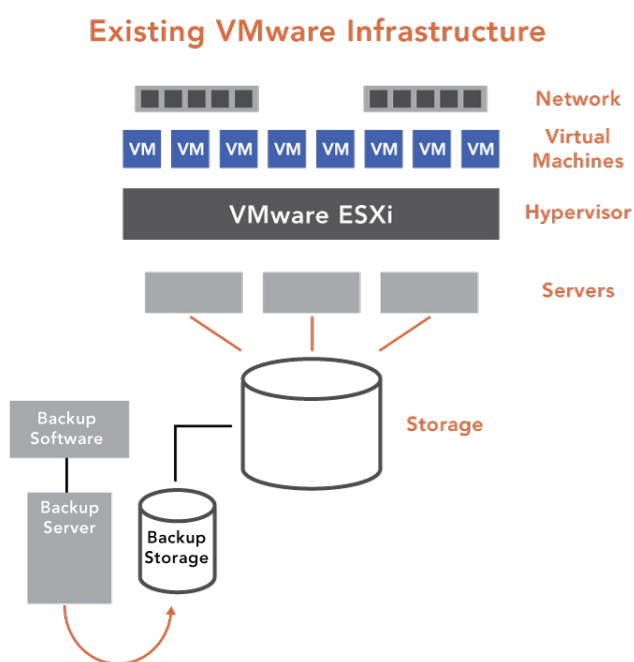
## USING STORWARE TO LEVERAGE EXISTING BACKUP HARDWARE

While VergeOS excels in data protection and resilience, most of its features safeguard against hardware failure. They are designed to restore the environment to the last known good version of the instance. An external backup infrastructure is meant to protect against "data failure" and to recover from a more robust data archive. Furthermore, many customers consider it a best practice to ensure that the backup infrastructure consists of vendors which are different from the production infrastructure.

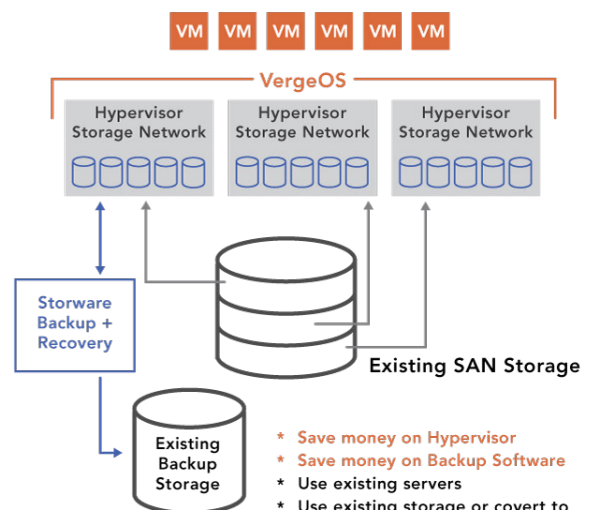
However, as in production storage, most data centers have an existing investment in backup software and hardware. The software is typically purchased on subscription, but the hardware was a one-time upfront cost, making it essential to maximize its lifespan. Storware stands out because it supports a range of backup storage hardware solutions, including Rubrik, EMC Data Domain, Exagrid, and object storage solutions.

Storware supports VergeIO with direct integration. It can back up VergeOS snapshots for off-production backups and support changed-block tracking (CBT) to update those backups efficiently.

## TRANSITIONING FROM THREE-TIER TO UCI



### New Infrastructure with VergeOS/Storware



- \* Save money on Hypervisor
- \* Save money on Backup Software
- \* Use existing servers
- \* Use existing storage or convert to converged and save IOX
- \* Use existing Backup storage
- \* Reduce infrastructure costs by 70% or more
- \* Extend life of existing servers

## **What to Do with the Existing SAN**

The most significant decision when transitioning from a three-tier architecture to UCI is what to do with the storage infrastructure. The good news is that with VergeOS, you can continue using your existing storage infrastructure while gradually transitioning to a virtual SAN created by VergeFS. This eliminates the need for future storage refreshes and maximizes your existing storage investments.

## **What to Do About Backups**

Storware Backup and Recovery seamlessly integrates with VergeOS, enabling advanced backup capabilities and ensuring cost-effective data protection.

## **What to Do About VMware**

Using VergeOS's ioMigrate, VMware VMs can be migrated seamlessly and quickly, reducing downtime and complexity.

## **CONCLUSION**

VergeIO and Storware provide a cost-effective, flexible, and robust solution for exiting VMware while retaining existing hardware and simplifying IT operations.