



# Virtualstor™ Converger

Cross-platform unified converged storage



## Features List

- Scale-out hyper-converged storage that supports VMware, Hyper-V, and KVM
- The only Multi-Tenant Hyper-Converged Storage that can support SAN / NAS / Object protocols
- Scales up with JBOD and scale out with storage nodes
- High-performance backend storage engine – BigteraStore
- Seamless data migration
- Real-time data replication and asynchronous remote replication
- Volume Snapshots and Snapshot Clone
- N+M Erasure coding for data protection
- VAAI support
- Decentralized management console and open management API
- 7.0 Reduce SSD write wear-out
- 7.0 Capacity and performance prediction
- 7.0 SSD life prediction
- 7.0 Multiple file systems

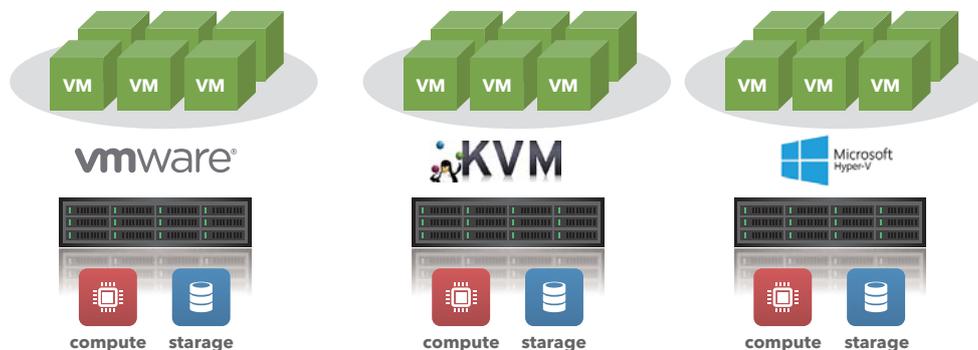
Every 7-10 years technology evolves and changes the method in which IT departments deliver their services. Over the past decade server virtualization and cloud computing have rapidly changed IT in terms of technology and service models. Software-defined storage have become the focus for the next generation of IT solutions, with the ultimate goal of having a completely software-defined data center.

Because of this shift, more and more vendors are entering the software-defined arena looking to create a software-defined infrastructure with flexibility to meet the dynamically changing needs of business. Meeting this challenge is not as easy as they would like.



### Hypervisor Agnostic Platform with Scale-Out Storage

- Virtualize all storage regardless of the hypervisor
- Supports VMware/KVM/Hyper-V



## Current state of infrastructures

Traditional data center infrastructures have been built on top of a centralized storage model, using SAN as the foundation in most cases. Applications have been built around this centralized SAN storage model, however this inherently creates a performance bottleneck between the storage network and SAN storage. The only way to remove this bottleneck is to add more SAN storage nodes, which can be expensive. This solution however in turn creates storage islands and causes grossly inefficient resource utilization. This also introduces increased complexity when it comes to storage management and provisioning. This complexity is the primary reason that IT struggles to catch up with business demands and requirements. Even if this style of infrastructure were immediately transformed into a software-defined infrastructure of 3 layers (compute, network, storage), the IT issues outlined above would still not be solved. IT is looking for a more effective and simpler way to implement, manage, and expand their infrastructure.

## Simplifies your software-defined infrastructure

VirtualStor™ Converger is a hyper-converged storage solution that simplifies infrastructures by providing ease of scale, ease of management, flexibility, and a lower TCO to solve the pain points of building a modern infrastructure.

VirtualStor™ Converger runs on top of major virtualization platforms (VMware, Hyper-V, KVM) and consolidates the internal HDD of the hypervisor into a single storage pool where it provides shared storage for the hypervisor. This architecture not only simplifies the complexity of traditional infrastructures but also eliminates performance bottlenecks and makes the entire infrastructure easier to expand.

## Simplified and flexible expansion

VirtualStor™ Converger consolidates the internal HDD of the hypervisor, so when a new node is added to the cluster, not only is storage capacity increased, compute resources and storage performance (IOPS and throughput) also increases. This gives administrators a predictable way to expand their infrastructure.

Administrators might not always want to expand compute and storage resources. There may be times when only storage needs to be increased. When that is the case Converger can be scaled up using JBOD or scaled out with storage only nodes (VirtualStor™ Scaler). This gives administrators a great deal of flexibility when the time comes to expand their infrastructure.

## Simplified application usage model

Most applications still use traditional SAN or NAS storage. When applications exist in a virtualized environment, they still have to connect to traditional SAN or NAS storage. This issue is not fully addressed by most of hyper converged vendors. With their solutions, IT administrators still need to rely on traditional SAN or NAS storage for applications to run properly.

VirtualStor™ Converger takes software-defined storage to the next level by allowing administrators to provision "Virtual Storage" on top of hyper-converged storage. (Virtual Storage) acts just like standard SAN or NAS storage while applications access the data. The data is distributed to the local HDD of the hypervisor nodes around the cluster. This makes the infrastructure even simpler and reduces the effort required to manage legacy storage.

## Simplified data protection

Data protection is always a major concern for the person who has ownership of an infrastructure. In order to deliver on SLA requirements from customers, many data protection services are usually applied. However, this complicates the entire management process.

VirtualStor™ Converger provides built-in data protection services, giving IT administrators several choices for different levels of data protection.

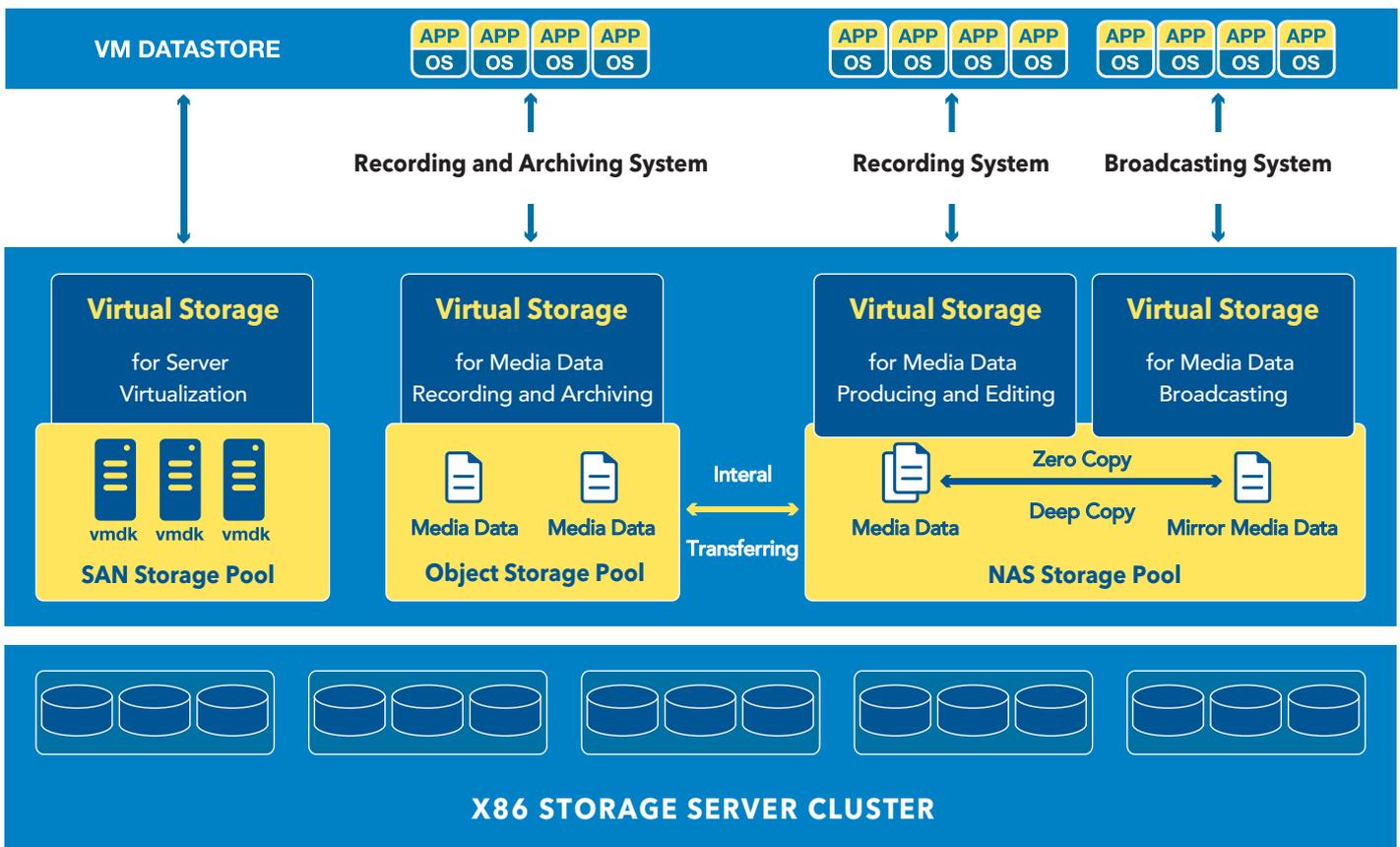
VirtualStor™ Converger comes with real-time data replication (up to 10 copies) across storage nodes. This protects the infrastructure should any node encounter issues. Because capacity is always a concern, and because data replication might not be required for cold data, also provides administrators the choice of using capacity efficient erasure coding data protection across storage nodes. As a Multi-Tenant Hyper Converged Storage, gives administrators the power to define different policies on different "Virtual Storage", for data availability depending on how important the data is.

VirtualStor™ Converger also provides a built-in capability to replicate data to a remote site. This feature pushes data availability to the next level, giving administrators the capability to provide a highly secure and resilient infrastructure.

## Lower TCO

VirtualStor™ Converger simplifies your infrastructure by flattening the old 3 layer infrastructure design, saving the network bandwidth and management cost. The consolidation of local HDDs eliminates the cost required to implement and manage external share storage nodes. Flexible and robust data protection removes the cost and management effort required for storage HA and data protection.

The latest version of VirtualStor™ Converger 7.0, optimizes the SSD usage to significantly reduce SSD write wear. It can increase your SSD lifespan endurance and decrease your CAPEX. It also can notify administrator when SSD life is running out, and predict the storage capacity and performance. These features help administrator to plan ahead and release the pressure, in order to decrease administrator's efforts.



Model	BH-H2400	BT-H4400	BT-H2120	BT-H4240
Picture				
Form Factor	2U,4 Nodes	4U,4 Nodes	2U,Single Nodes	4U,Single Nodes
Data Disks	4 x 4 x 2.5" HDD	4 x 6 x 2.5" HDD	12 x 3.5" HDD	24 x 3.5" HDD
Cache Disks	4 x 2 x 2.5" SATA SSD	4 x 2 x 2.5" SATA SSD	2 x 2.5" SATA SSD	4 x 2.5" SATA SSD
Network Connections	Dual 10 Gb or Quad 10 Gb 2x1Gb RJ45			
Storage Protocols	NFS / CIFS / iSCSI / FC / Amazon S3 / OpenStack Swift			
Minimum Number of Appliances	1	1	3	3
Usage Scenario	Small to scale of desktop virtualization	Server virtualization HCI platform	Small to scale of desktop / Server virtualization High performance HCI platform	Large scale of desktop / Server virtualization High capacity HCI platform