



# STEELDOME

# StratiSTOR

Massively scalable software-defined storage cluster



## SD Storage Cluster

StratiSTOR is a massively scalable software-defined storage cluster that delivers enterprise-class storage services for the most demanding environments without limits.

Legacy storage architectures are ill-equipped to meet the demands of today's rapidly evolving IT landscapes. As enterprises continue to grow, the volume of data they generate reaches unprecedented levels, surpassing the capabilities of outdated systems.

## StratiSTOR

- Rapid Provisioning, Deployment and Expansion
- Hardware Agnostic
- Support for VMs and Containers
- Eliminate Rip-and-Replace
- Eliminate Migration Cycles
- Eliminate Future Capacity Concerns
- Eliminate Future Performance Concerns

## Software-Defined

Software allows for maximum flexibility. Typically deployed on bare-metal physical hardware given its nature as a production tier-1 storage platform, it also can be deployed on any public or private cloud platform. Customers who choose to deploy in a public cloud platform are usually seeking a SAN-like experience in the cloud where performance is typically poor or unpredictable.

## Scalability

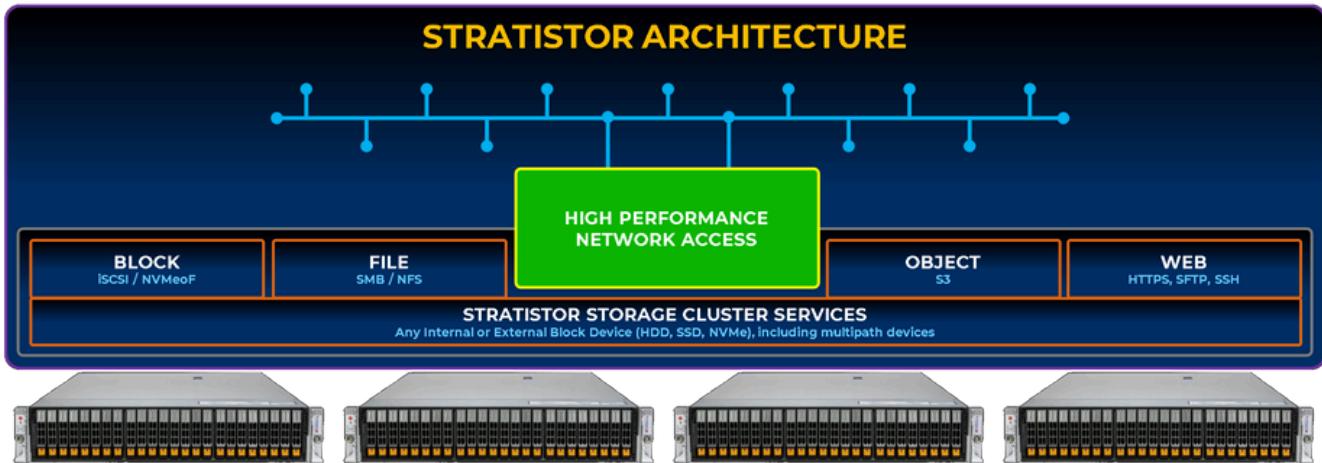
No defined limitations on storage capacity, node count or performance. Start with three nodes and scale to 300, start with 10 terabytes of capacity and scale to 10 exabytes, need 100k IOPS or 30 million. The software will take you wherever you need to go.

## Storage Cluster

Compared to traditional storage systems which have a finite amount of capacity, performance and redundancy, storage clusters are not subject to these limits. Clusters are made up of server nodes (or controllers) which collectively operate as a single entity and can scale vertically (aka. capacity) or horizontally (aka. controller or node count) as necessary.

## Enterprise-class

Enterprise-class refers to a platform's reliability. With a storage cluster, multiple **simultaneous** failures can occur such as drive failures, network failures, entire node failures, even an entire site failure which will not result in an outage.



STRATISTOR architecture diagram illustrating a high-performance, software-defined storage cluster delivering unified block (iSCSI/NVMeoF), file (SMB/NFS), object (S3), and web (HTTPS/SFTP/SSH) services. Built for scalability and performance, STRATISTOR supports internal and external block devices including multipath configurations, with seamless network access across enterprise environments.

## Traditional Storage Systems



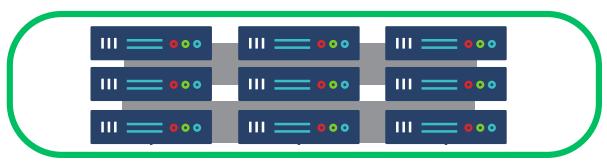
## Legacy Architecture

Isolated storage form islands which cannot interoperate or share data and contribute their capacity and performance independently.

- Limited Hardware Choice
- Limited Scale
- Limited Performance
- Limited Availability
- Forms Islands
- Heavy Initial Cost
- EOL Migration

VS

## StratiSTOR Storage Cluster



## StratiSTOR Architecture

StratiSTOR forms a **unified storage system** which operates as a single system and scales capacity and performance linearly.

- Use Any Hardware
- Unlimited Scale
- Unlimited Performance
- Unlimited Availability
- Unified System
- Grow-As-You-Go
- No Migration... Ever



## Deployments

### Single-Node

Ideal for test/dev, branch offices, or small environments. Provides block, file, and object access in a compact, resilient form. Offers fast deployment and centralized management for edge or remote workloads.

### Large-Scale Clusters

Built for enterprise-scale operations that demand extreme scalability and throughput. Ideal for use in data centers, AI training infrastructure, video archives, or scientific computing where petabyte-scale storage is the norm.

### Multi-Node Cluster

For mid-size production environments that require high availability and performance. Supports virtualization platforms, backup targets, file sharing, and content repositories — all with automatic failover and load balancing.

### Federated Multi-Site Clusters

Used to provide SAN-like experience in the cloud where storage performance is largely unpredictable due to the shared and often overcommitted nature of public cloud resources.



# STEELDOME

# StratiSERV *Platform*

## Enterprise-grade Hypervisor and Management

### THE ENTERPRISE HYPERVISOR AND MANAGEMENT PLATFORM

StratiSERV is a cutting-edge, enterprise-grade hypervisor designed to support hundreds of physical servers and thousands of workloads. It is hardware-agnostic, offers a single price per host, and ensures high availability with support for both virtual machines (VMs) and containers.

#### Simplicity

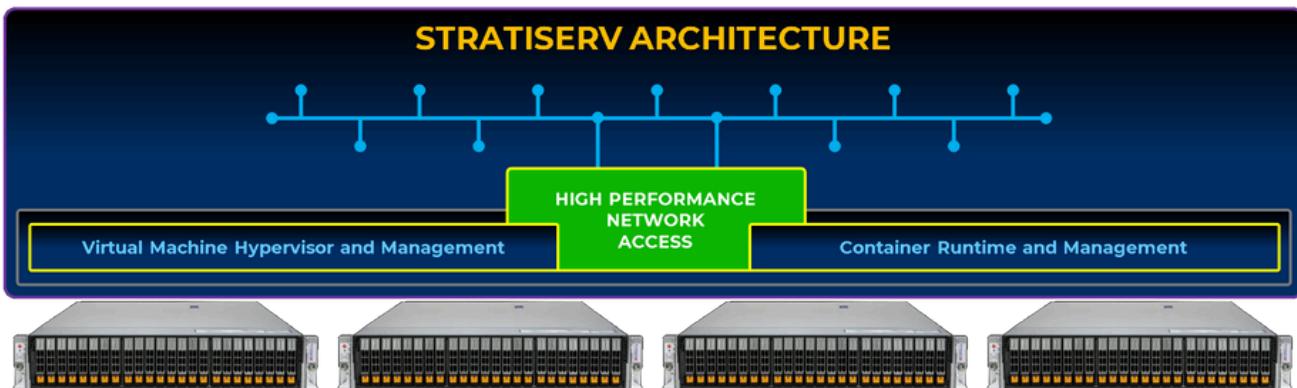
Virtualization solutions often come with confusing licensing models and rising costs year after year. StratiSERV eliminates this complexity by decoupling software from hardware—letting you use any hardware you already have and any storage you prefer. We've streamlined pricing to a single cost per host, per year, regardless of configuration. That's it.

#### Scalability

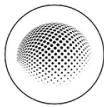
One of the most challenging tasks for IT is adding capacity to existing infrastructure. With StratiSERV and StratiSTOR (SteelDome's SD storage cluster), the simplicity of design and ease of use enable seamless scaling. New appliances can be integrated into a running cluster within minutes, without any disruption to ongoing workloads.

#### Flexibility

StratiSERV supports container workloads with ease. Simply flip a switch, and you'll have a fully featured container cluster management platform ready for production workloads. With built-in redundancy and backup capabilities, StratiSERV stands out as a versatile and highly available platform.



STRATISERV architecture diagram showcasing a high-performance virtualization and container orchestration platform. Designed for efficient virtual machine hypervisor management and container runtime operations, STRATISERV delivers scalable compute resources with fast network access across enterprise-grade infrastructure.



# Use Cases

## Seeking Alternative HCI/DHCI Architecture

StratiSERV offers an open-standards-based virtualization technology that delivers a robust hyperconverged solution, providing a flexible and cost-effective alternative to traditional HCI/DHCI architectures.

## VMware and Nutanix Replacement

Avoid the extreme costs and potential hardware lock-in associated with VMware and Nutanix, while still maintaining comparable enterprise features and capabilities with StratiSERV.

## Seeking Maximum Flexibility and Value

StratiSERV's software provides the freedom of choice, allowing customers to maximize value by choosing the hardware and storage that best meets their needs, without compromising on performance or functionality.

The screenshot shows the StratiSERV Management Interface. On the left, the navigation menu includes: Search, System, Overview, Logs, Storage, Networking, Virtual machines, VM Cluster, Accounts, Services, Navigator, Tools, Diagnostic reports, Software updates, and Terminal. The 'Virtual machines' section is currently selected. It displays a list of virtual machines, with 'Rocky01' selected. The 'Overview' tab shows details like Connection (System), State (Running), and Memory (4.0 GiB). The 'Usage' tab shows Memory (2.1 / 4 GiB) and CPU (0% of 1 vCPU). The 'Disks' tab shows a single disk (cdrom) with 0 GiB used, 1.7 GiB capacity, and a read-only access type. On the right, a VNC console window for 'Rocky01' is open, showing the 'Rocky Linux' installation screen with options for Localization, Software, and System configuration.

The screenshot shows the StratiSERV Management Interface. The 'VM Cluster' section is selected in the navigation menu. The 'CLUSTER HOSTS' table lists three hosts: stratiser-1, stratiser-2, and stratiser-3, all in an 'ONLINE' state. The 'CLUSTER VIRTUAL MACHINES' table lists three VMs: Rocky01, Rocky02, and Rocky03, also in an 'ONLINE' state. At the bottom, a 'COMMAND OUTPUT' section shows the command 'Create HA for Rocky03' with a 'SUCCESS' status and a timestamp of '7/23/2024, 3:04:01 PM'.

The screenshot shows the StratiSERV Management Interface. The 'CLUSTER SHARED DISKS' section is selected in the navigation menu. The table lists four shared disks: scsi-360014056405w03f001e004a1791055e1b5, scsi-3600140516d9964c04ee791ce8d008, scsi-36001409b5613b6491c48ca200f1533, and scsi-360014056405h4c0ba94815ac063878, all in an 'Running' state. The 'COMMAND OUTPUT' section at the bottom is empty.

StratiSERV Management Interface



# STEELDOME

# HyperSERV

## The Future of Data Infrastructure

### StratiSTOR and StratiSERV unite to form HyperSERV

HyperSERV provides a comprehensive data platform which seamlessly integrates all the essential storage, network, and compute capabilities needed to run workloads at any scale. What sets it apart is its unmatched flexibility and total control over any hardware asset from any vendor, regardless of the deployment model chosen.

### Hardware-Agnostic Flexibility

HyperSERV is compatible with any server or storage hardware, empowering customers to leverage existing investments and integrate new technologies without costly overhauls. As a hardware-agnostic HCI solution, it enables complete control over both performance and costs.

### High-Performance

By integrating compute, storage, and networking into a unified system, HyperSERV ensures that applications can directly access the data they need without unnecessary latency or delays. This results in faster processing and improved overall performance, especially for demanding workloads such as AI, databases, and high-transaction environments.

### AI-Ready

HyperSERV supports all the latest NVIDIA hardware for AI, allowing you to scale across any combination of hardware with a software-defined, hardware-agnostic solution. We will always support the latest and greatest hardware available today. Our platform includes all the necessary frameworks to deploy AI and get it up and running quickly.

### Simplified Management and Reduced Costs

Control both the virtualization layer and our storage cluster through one interface, with support for both virtual machines and containers. HyperSERV automates key tasks like data protection, scaling, and self-healing, which reduces the complexity of managing storage at scale. This automation cuts operational costs.

### HYPERSERV HCI ARCHITECTURE

#### STRATISERV HYPERVISOR CLUSTER SERVICES

Secure Application Delivery Services

#### Virtual Machine Hypervisor and Management

BLOCK  
iSCSI / NVMeoF

FILE  
SMB / NFS

HIGH  
PERFORMANCE  
DIRECT I/O

#### Container Runtime and Management

OBJECT  
S3

WEB  
HTTPS, SFTP, SSH

#### STRATISTOR STORAGE CLUSTER SERVICES

Any Internal or External Block Device (HDD, SSD, NVMe), including multipath devices



HYPERSERV HCI architecture integrating STRATISERV hypervisor cluster services with STRATISTOR storage cluster services. Combines high-performance virtual machine and container management, secure application delivery, and direct I/O with unified access to block (iSCSI/NVMeoF), file (SMB/NFS), object (S3), and web protocols (HTTPS, SFTP, SSH). Optimized for scalable, high-throughput enterprise environments.



## Distributed, Scale-Out Architecture



HyperSERV eliminates single points of failure with a fault-tolerant design that scales from a few to hundreds of nodes—supporting both vertical and horizontal growth



## Next-Gen I/O Acceleration

SDCache transforms any disk into a high-performance device, reducing latency and boosting throughput. HyperSERV's parallel design enables concurrent access for demanding workloads like virtualization, analytics, and ML.



## Multi-Protocol & High-Speed Networking

Supports iSCSI, NVMeoF, SMB, NFS, and S3, with seamless integration into RoCE, InfiniBand, and NVIDIA BlueField environments—ideal for GPU-accelerated and AI workloads.



## Metadata/Data Separation

Decouples metadata from data paths to maintain predictable, low-latency performance at scale—critical for real-time and high-throughput applications.



## Advanced Data Protection

Flexible erasure coding and replication ensure resilience and high availability, with built-in integrity checks for fault tolerance.



## Self-Healing & Automated Recovery

Continuously monitors and repairs faults without manual intervention—ensuring maximum uptime in mission-critical environments.



# Deployments

## Single-Node

Ideal for organizations needing resilient, high-density block, file, or object storage—without node-level high availability. Perfect for development environments, ROBO, or edge computing, this model enables rapid deployment and easy management with minimal infrastructure, making it a cost-effective choice for new projects.

## Large-Scale Clusters

Built for large-scale enterprise operations that demand ultra-high performance and scalability. Ideal for cloud providers, research institutions, and data-intensive industries like media, finance, and healthcare. This configuration supports complex workloads across extensive storage and compute networks with consistent performance and reliability.

## Multi-Node Cluster

Best suited for mid-sized businesses or departmental data centers needing high performance and availability. This model distributes data across multiple nodes for load balancing and failover, supporting diverse workloads like virtualization, large-scale file sharing, and data-intensive applications. It scales seamlessly as demand grows.

## Regional Federated Super Clusters

Ideal for large enterprises unifying IT infrastructure across multiple sites. A federated HyperSERV super-cluster spans data centers, regions, or continents—creating a single, manageable storage ecosystem. It enables data replication, cross-site redundancy, and resource sharing, future-proofing your infrastructure for global operations and next-gen workloads.



# STEELDOME

# InfiniVault Platform

## Data Protection and Backup Appliance



### Virtual Data Protection Appliance

InfiniVault is a highly-secure, software-based data protection appliance. It leverages any public cloud provider or local storage resource to distribute and store data under its protection. As data is written to the vault, it goes through a series of processes which ensure data survivability, integrity, security and true immutability. All of these processes are crucial, but immutability through a mechanism called Data Cloaking, is the most significant in preventing the impact of ransomware.

### InfiniVault

The InfiniVault works as a software-defined storage technology which advertises as a common storage device (i.e. SAN/NAS) to the network using standard network protocols.

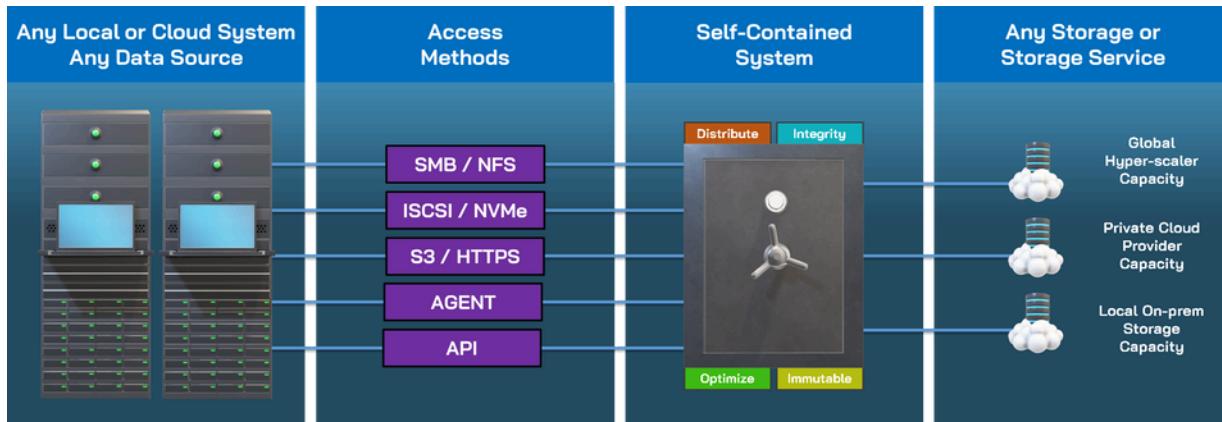
### Comprehensive Protection

InfiniVault isn't limited. Protect data from private systems to public cloud platforms. It guards your information using immutable snapshots and data cloaking techniques, ensuring only authorized eyes have access.

### Deployment Made Easy

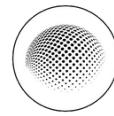
Embrace flexibility with InfiniVault, deployable anywhere a virtual machine runs. From public clouds like Amazon AWS, Microsoft Azure, and Google Cloud Platform to private setups with VMware or Microsoft Hyper-V, InfiniVault adapts to your needs without demanding local storage.

### Architecture



## Features at a Glance

- Supports popular services like OneDrive, Google Drive, O365 Mail, Gmail, and more.
- Live workload support ensures business continuity.
- Non-disruptive scaling and zero-trust framework for uncompromised security.
- Innovative zero-day defense and live person multi-factor authentication.
- Offers geographical provider diversity for global reliability.



# Use Cases

## Backup Augmentation

Enhancing existing platforms such as Datto, Veeam, Commvault, or any other.

## Consume Cloud-Backed Resources

Turn cloud-backed storage services such as Amazon S3, Wasabi, etc. into local storage capacity over standard protocols

## Backup Replacement

Replace any legacy backup solution.

## New Deployment

New deployment either on-prem or in any public cloud.

The screenshot shows the InfiniVault Management Performance dashboard. At the top, there are navigation links for 'Dashboard Home', 'Dashboard', 'InfiniVault', and 'Logout'. Below the navigation is a search bar and a 'Last 10 minutes' button. The main area is titled 'PERFORMANCE' and contains several monitoring sections:

- Quick CPU / Mem / Net / Disk:** Shows CPU usage (0.2%), Disk I/O (3.8%), System Load (55m avg, 3.5%), and Network (15.3%).
- System Load:** Shows CPU Load (0.0%) and RAM Load (25.0%).
- Memory Basic:** Shows memory usage (512 MB free).
- Network Traffic Basic:** Shows network traffic (0.000 MB/s).
- Disk Space Used Basic:** Shows disk space usage (0.000 MB).

At the bottom, there are tabs for 'Main ID', 'Run start time', 'TAM DETAILS', and 'TAM END TIME'. The 'TAM DETAILS' tab is active, showing a message 'No data'.

## User Friendly Operation

Easy-to-use, drag-and-drop web-based interface designed from the ground up for simplicity and effectiveness. It's built to secure data and combat the severe impacts of ransomware, ensuring your infrastructure is both user-friendly and highly resilient.