

Software-Defined Storage for SAN and Hyperconverged (HCI) Environments

Maximizing the Collective Value of Your Storage Infrastructure

Key Benefits

- **Ensure continuous operations** by avoiding downtime and overcoming disruptions
- **Repurpose existing storage to save costs** and defer new hardware purchases
- **Expand and modernize** without constraints on hardware models or manufacturers
- **Optimize performance and capacity** with AI/ML-driven smart data placement
- **Achieve seamless data migrations** across diverse storage systems
- **Minimize data loss** and ensure fast recovery through point-in-time rollbacks
- **Promote sustainability** by recycling and upcycling existing storage resources

Product Overview

DataCore SANsymphony revolutionizes data storage by providing a seamless and efficient way to manage and optimize resources. It enhances the performance and reliability of storage systems, offering organizations the agility needed to meet the demands of modern data environments. Central to its intelligent design is a software-defined storage architecture, which allows for a flexible, scalable approach to managing diverse block storage infrastructures such as SAN, DAS, HCI, and JBODs. This helps streamline storage management, ensuring that data services are centralized and uniform across various storage systems.

By abstracting data services from the underlying hardware dependencies, SANsymphony delivers unmatched flexibility circumventing the complexities and constraints typically associated with traditional storage systems. It consolidates storage capacity from diverse equipment, maximizing resource utilization to the fullest. IT teams can easily add new devices, retire and exchange aging hardware, and migrate data between unlike models—all during business operations, without any disruption to applications and end users.

SANsymphony ensures robust data protection through a comprehensive multi-pronged strategy. It employs local redundancy with multi-way mirroring and automated failover for uninterrupted operations, and enables cross-site replication and recovery mechanisms to safeguard against disasters and site-level outages. Additionally, it minimizes data loss with point-in-time restore capabilities, enabling swift recovery. This holistic approach ensures organizations remain resilient, with data protected and accessible during unexpected disruptions.

Optimizing resource use and streamlining management, SANsymphony significantly reduces CAPEX and OPEX spend. Its hardware-agnostic design allows smooth integration of preferred equipment and storage technologies, improving flexibility of choice and negotiation leverage with suppliers during procurement. Overall, SANsymphony safeguards current IT investments and future-proofs your storage infrastructure to meet evolving business needs.

What Users Can Expect



High Data
Availability



Low Storage
TCO



Hardware
Independence



Uniform Data
Services



Greater IT
Efficiency

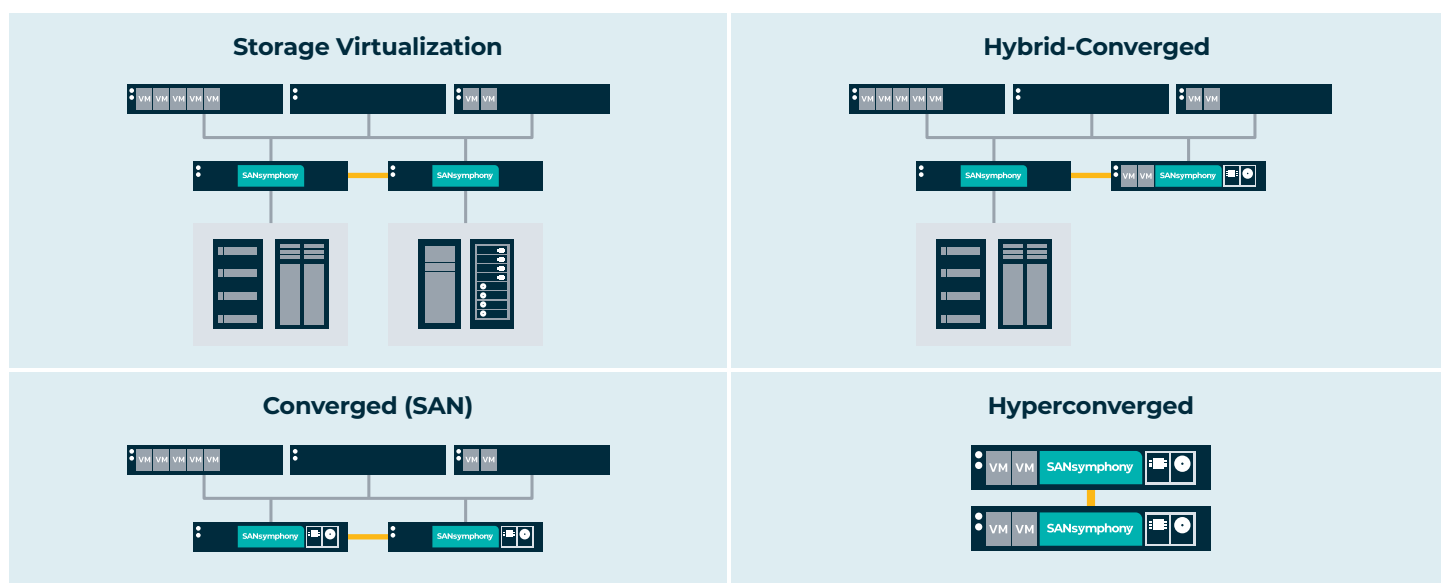
Deployment Options

Storage Virtualization: Abstracts traditional SAN architectures and provides uniform, high-end storage capabilities to applications while extending the life and value of existing SAN devices.

Converged (SAN): Pools built-in server and direct-attached storage resources to create highly dense and economical shared storage.

Hybrid-Converged: Enables any mix of HCI, converged (SAN) and storage virtualization deployments under unified management with seamless data migration across your entire storage infrastructure.

Hyperconverged: Aggregates local HDDs and SSDs of application servers into a fast, highly available virtual storage pool for data sharing across server clusters.



SANsymphony: Key Features

CONSUMERS				
PHYSICAL SERVERS		VIRTUAL MACHINES		CONTAINERS
ACCESS METHODS*				
FC		ISCSI		
OPERATION & INSIGHTS	DATA SERVICES			COMMAND & CONTROL
PROVISIONING	 AUTO-TIERING & ADAPTIVE DATA PLACEMENT		 CACHING	REST API
DATA MIGRATION	 CONTINUOUS DATA PROTECTION		 DEDUPLICATION/COMPRESSION	
HISTORICAL / REAL-TIME CHARTS	 ENCRYPTION		 LOAD BALANCING	POWERSHELL CMDLETS
HEALTH & PERFORMANCE GRAPHS	 PARALLEL I/O		 QUALITY OF SERVICE (QOS)	
PROACTIVE ALERTS	 RANDOM WRITE ACCELERATOR		 ASYNCHRONOUS REPLICATION & SITE RECOVERY	PLUG-INS
PREDICTIVE ANALYTICS	 SNAPSHOTS		 STORAGE POOLING	
ORCHESTRATION	 SYNCHRONOUS MIRRORING & TRANSPARENT FAILOVER		 THIN PROVISIONING	CONSOLE USER INTERFACE
STORAGE PROTOCOLS				
NVME	FC	ISCSI	SAS/SATA	CLOUD**

*NFS AND SMB ACCESS IS SUPPORTED THROUGH WINDOWS FILE SERVER | **VIA CLOUD STORAGE GATEWAYS

CONSUMERS

Physical Servers: HP-UX, IBM AIX, Sun Solaris, Red Hat Linux, SUSE Linux, Ubuntu Linux, Microsoft Windows Server, Microsoft Windows, among others.

Virtual Machines: VMware ESXi (vSphere), Microsoft Hyper-V, Citrix Hypervisor, Linux KVM, Proxmox VE, and more.

Containers: All containers leveraging Kubernetes Container Storage Interface (CSI).

ACCESS METHODS

Storage is provided as block storage via Fibre Channel, iSCSI, or FCoE. Additionally, storage can be served as file services via Windows NFS, SMB, or other licensed NFS services.

OPERATION & INSIGHTS

DataCore Insight Services (DIS) is a cloud-based predictive analytics platform focused on providing actionable insights to prevent issues and guide proactive optimizations for SANsymphony environments. (Note: DIS requires telemetry to be enabled and is only available with SANsymphony term license).

DATA SERVICES

Auto-Tiering: Dynamically reassigns data based on their actual usage patterns across diverse storage equipment, with support for up to 15 storage classes.

Continuous Data Protection: Behaves as an undo button for any unwanted change allowing rollback of data to last-known good state.

Encryption: XTS-AES 256-bit encryption for data at rest.

Parallel I/O: Processes I/O in parallel (vs. serially) for increased application performance.

Random Write Accelerator: Eliminates random write performance penalty.

Snapshots: Allows speedy generation of independent point-in-time copies.

Synchronous Mirroring & Transparent Failover: Eliminates storage as a single point of failure, offers fully transparent and automatic failover, resynchronization, and failback.

Caching: Accelerates application performance by using CPU cache/RAM as read-and-write cache.

Deduplication/Compression: Reduces the data footprint and required storage space.

Load Balancing: Auto-balances I/Os across devices and bypasses failed/offline channels.

Quality of Service (QOS): Limits I/O traffic from lower priority workloads and enables critical apps to run faster.

Asynchronous Replication & Site Recovery: Cross-site replication with failover, resynchronization, and failback in case of a disaster.

Storage Pooling: Avoids storage silos by aggregating disk space from disparate storage systems.

Thin Provisioning: Only consume what is needed; no wasting of storage space by pre-allocating it.

Adaptive Data Placement: This industry-unique technology combines auto-tiering and inline deduplication and compression, powered by advanced AI/ML algorithms. SANsymphony continuously monitors data access patterns, dynamically assigning data to the most suitable storage tier. For infrequently accessed data, SANsymphony uses inline compression and deduplication to reduce the data footprint and tier it to the slowest device maximizing capacity efficiency. This helps ensure optimal performance for frequently accessed datasets on faster storage, while minimizing storage costs for seldom-accessed data. As data access patterns evolve, storage tier assignments are automatically and transparently adjusted in real time, without manual intervention.

Licensing

SANsymphony is available in four software editions, **EN**, **ST**, **BZ**, and **BR**, with different pricing per terabyte (TB). For a detailed explanation and an overview of features and capabilities for each license edition, please visit:

www.datacore.com/products/sansymphony/licensing

EN

Enterprise licenses offer the highest performance, richest feature set and most flexibility.

ST

Standard licenses are ideal for mid-range requirements.

BZ

Business edition is the cost-efficient entry level of SANsymphony suited for smaller but demanding HA installations.

BR

Backup Repository edition is fully featured and optimized to be used as backup and remote replication target.

Minimum System Requirements*

Processor	1 dual core CPU with 2.0 GHz, x64 processors only	Storage Interface	2 Ethernet network cards (iSCSI, up to 100Gbit/s) or 2 Fibre Channel HBAs (up to 64 Gbit/s)**
Memory	8 GB RAM	Operating System	Microsoft Windows Server 2016 through 2022 operating system, Standard, Datacenter, or Essentials Microsoft .NET Framework Redistributable Package. Minimum version: 4.7.2 Microsoft Visual C++ 2015 Redistributable Package Update 3 or greater
Disk	20 GB available local HDD/SSD space		
Network	1 Gb/s (or faster) Ethernet port		

*Hardware requirements vary by system configuration and workload. See user manual for details.

**Depends on the chosen license, manufacturer, and driver.

Always-on Support



Customer Excellence



**AWARDED
10+ TIMES**

Customer Focused

DATAcore CSAT

99.68%

Experience round-the-clock global support from our Stevie Award-winning customer service team. Reach us via phone, email, or our online portal anytime you need assistance.

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DataCore Software delivers the industry's most flexible, intelligent, and powerful software-defined storage solutions for the core, edge, and cloud. With a comprehensive product suite, intellectual property portfolio, and unrivaled experience in storage virtualization and advanced data services, DataCore has helped over 10,000 customers worldwide modernize how they store, protect, and access data. www.datacore.com