

# SANsymphony™

## Ultimate Flexibility, Always-On Business Continuity, and Maximum Performance for Block-Based Storage Virtualization

### KEY BENEFITS

- NO VENDOR LOCK-IN
- 10X FASTER STORAGE<sup>1</sup>
- 100% AVAILABILITY<sup>2</sup>
- 75% LOWER TCO<sup>3</sup>

### USE CASES

- STORAGE VIRTUALIZATION
- CONVERGED (SAN)
- HYPERCONVERGED
- HYBRID-CONVERGED

### PRODUCT OVERVIEW

DataCore™ SANsymphony™ software-defined storage (SDS) provides organizations the flexibility, performance, and simplicity they need to efficiently aggregate isolated disparate storage resources into one highly available storage services pool. DataCore SANsymphony enables any mix of hyperconverged, converged (SAN), and storage virtualization deployment models to mitigate the business risks, IT complexities, and costs associated with different architectures, data migration initiatives, and protocols while increasing your organizations' agility and competitive edge. DataCore's hardware agnostic approach frees organizations from vendor lock-in and provides ultimate flexibility in how they manage, build, and modernize their storage infrastructures.

### END-USER BENEFITS

#### ULTIMATE FLEXIBILITY

Pool and aggregate your collective storage resources under one common set of enterprise-class services that can be delivered across your entire organization for uniform, centralized management despite differences and incompatibilities among hardware manufacturers, models, and generations of equipment in use. Leverage your existing environment and extend the life and value of your infrastructure. With a broad choice between deployment methods, hyperconverged or open architectures, and a universally compatible format, you can painlessly migrate from one to the other during business operations while meeting stringent SLAs.

#### MAXIMUM PERFORMANCE

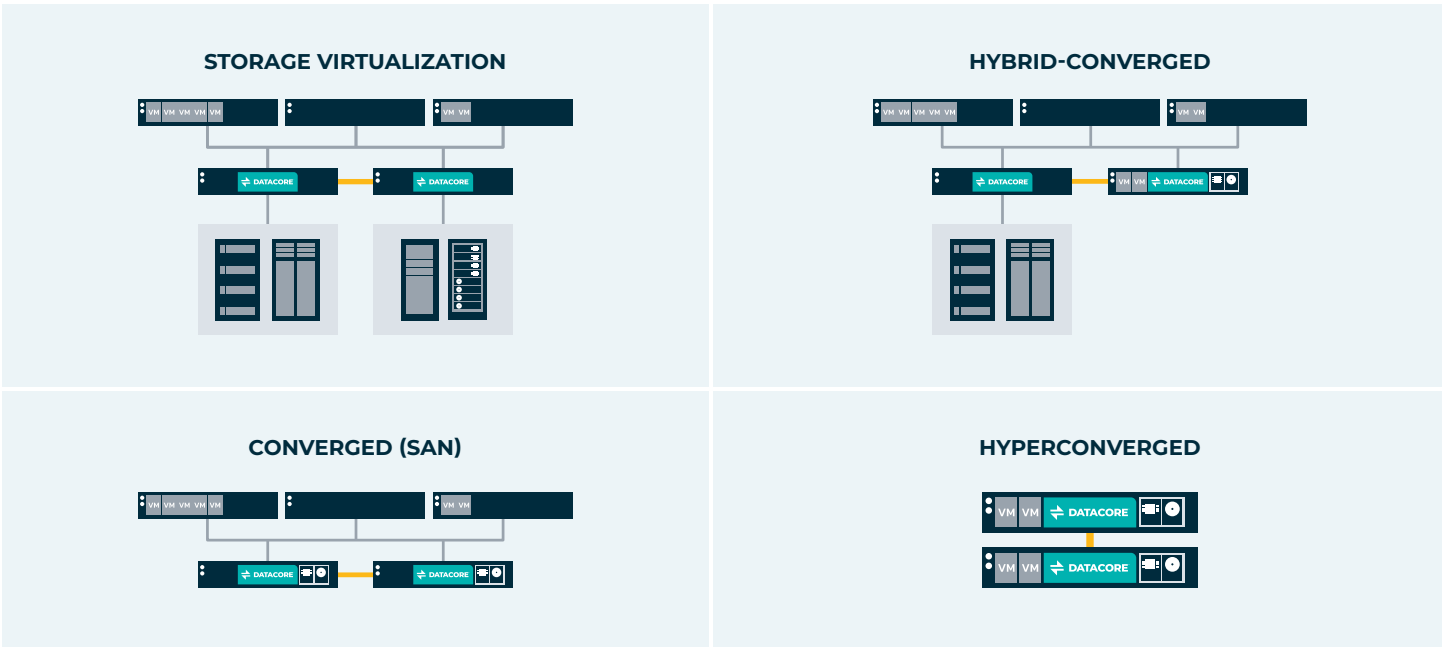
DataCore customers across verticals and use cases report up to a 10X increase in storage performance—in some cases seeing results immediately after deployment. With data services like high speed caching, Parallel I/O, intelligent auto-tiering, random-write acceleration and more, DataCore dramatically increases IOPS, decreases latency, and delivers faster response times for your applications. You don't need to rip and replace your entire system to improve performance, DataCore lets you scale up or scale out your applications while efficiently using all your resources.

#### ALWAYS-ON BUSINESS CONTINUITY

With multi-layered protection for continuous operations, high availability, and disaster recovery, DataCore ensures your data is permanently available. Even when a component or an entire site fails due to equipment, environmental, or human factors, synchronous mirroring and transparent failover ensure automated, real-time continuous data access for always-available business operations. Additional capabilities like asynchronous replication and advanced site recovery protect your business in case of any disaster, while continuous data protection (CDP) provides an integrated undo button allowing you to revoke any unwanted data change.

#### SIGNIFICANT COST SAVINGS

DataCore improves resource utilization and delivers single-pane-of-glass management across all storage devices, reducing administrative time and support calls to significantly reduce CAPEX and OPEX. Additionally, DataCore's hardware-independent storage services give you the freedom to choose your preferred hardware and seamlessly integrate new technologies non-disruptively, so you can leverage your existing storage environment and modernize it with cost-efficient alternatives.



### USE CASES

**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 deployment models under a unified management plane with advanced data migration that spans across your entire storage infrastructure.

**Hyperconverged:** Aggregates local spinning disks and local flash storage of application servers into a fast and highly available virtual storage pool for data sharing across server clusters without an external SAN.

### ONE STORAGE SERVICES PLATFORM ACROSS YOUR ENTIRE INFRASTRUCTURE

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

## CONSUMERS

### Physical Servers

HP-UX, IBM AIX, Sun Solaris, RedHat Linux SUSE Linux, Ubuntu Linux, Novell Netware, Microsoft Windows Server, Microsoft Windows, among others

### Virtual Machines

VMware ESXi (vSphere), Microsoft Hyper-V, Citrix XenServer, Linux KVM, and more

### Containers

All containers leveraging either Kubernetes Container Storage Interface (CSI) or the Docker Volume Plugin

## ACCESS METHODS

Storage will either be served as block storage via Fibre Channel, iSCSI or FC over Ethernet (FCoE). In parallel, the storage can also be served as File Services via Windows NFS, SMB or any other separately licensed NFS service.

## DATA SERVICES



**Parallel I/O** – Processes I/O in parallel vs. serially for increased application performance



**Caching** – Accelerates application performance by using CPU cache/RAM as read and write cache



**Random Write Accelerator** – Eliminates random write performance penalty



**Auto-Tiering** – Automatically sets tier assignments based on data usage patterns, with support for up to 15 storage tiers



**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



**Storage Pooling** – Splits tiers based on price/performance/capacity and eliminates stranded disk space



**Deduplication/Compression** – Reduces the required storage space



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



**Replication & Site Recovery** – Bi-directional asynchronous replication with automatic failover, resynchronization and fallback in case of a disaster



**Continuous Data Protection** – Behaves as an undo button for any unwanted change



**Encryption** – XTS-AES 256-bit encryption for data at rest, which is storage device-independent



**Synchronous Mirroring** – Eliminates storage as a single point of failure, offers fully transparent and automatic failover, resynchronization, and fallback



**Snapshots** – Allows simple and fast generation of independent point-in-time copies

## OPERATION AND INSIGHTS

DataCore™ Insight Services (DIS) is a cloud-based, predictive analytics platform that delivers actionable insights to avoid problems before they occur. Additionally, DIS provides guidance for proactive optimizations from an easy to use, single pane of glass. The SaaS offering continuously analyzes telemetry from your SANsymphony™ environment to detect early warning signs of potential issues, and uses artificial intelligence (AI) and machine learning (ML) to assess their relative severity and then prescribes steps to prevent them or mitigate their impact. DIS is available through term licensing only.

## DATAcore SANSYMPHONY SOFTWARE LICENSING OPTIONS

SANSymphony is available in three software editions, EN, ST and LS, with different prices per terabyte (price/TB).

For a detailed explanation and the features/capabilities covered with each edition/licensing, please visit:

<https://www.datacore.com/products/licensing/>

**EN** Enterprise-class licenses offer the highest performance, richest feature set and most flexibility

**ST** Standard licenses are ideal for midrange requirements

**LS** Large-Scale secondary storage licenses are tailored for cheap and deep storage where performance is not a factor

### MINIMUM HW/SW REQUIREMENTS\*

<b>PROCESSORS</b>	1 dual core CPU with 2.0 GHz, x64 processors only
<b>MEMORY</b>	8 GB RAM
<b>DISK SPACE</b>	20 GB available local HDD/SSD space
<b>NETWORK</b>	1 Gb/s (or faster) Ethernet port PLUS 2 Ethernet network cards (iSCSI, up to 100Gbit/s) or 2 Fibre Channel HBAs (up to 64 Gbit/s)**
<b>OPERATING SYSTEM</b>	Microsoft Windows Server 2019, 2016, 2012 or 2012 R2, Standard or Datacenter (full editions only). .NET Framework Redistributable Package. Minimum version: 4.7.2 Microsoft Visual C++ 2015 Redistributable Package Update 3 or greater

\* Actual hardware requirements vary based on system configuration and workload. Detailed information can be found in the appropriate user manual.

\*\* Depending on the chosen license, manufacturer, and driver.

<sup>1</sup> Many DataCore customers realize up to a 10X performance improvement. View Case Studies.

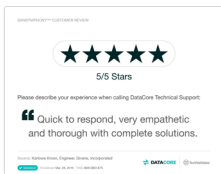
<sup>2</sup> A survey of over 500 customers showed DataCore significantly reduces storage-related spending, in some cases by 75% or more.

<sup>3</sup> Approximately 175 surveyed customers reported eliminating storage-related downtime.



## THE AUTHORITY ON SOFTWARE-DEFINED STORAGE

As a pioneer of SDS and storage virtualization, **DataCore holds 22 patents and is trusted by over 10,000 customers worldwide.** With deep industry expertise, continuous innovation and a proven history of modernizing SDS for the software-defined datacenter, DataCore is the Authority on Software-Defined Storage™.



## AWARD-WINNING GLOBAL SUPPORT TEAM

Distributed across three major service hubs strategically located in Europe, North America and Asia, the award-winning DataCore Support Centers are staffed 100% with Level 3 Service Engineers. When you contact DataCore Technical Support, the first responder is an experienced professional who owns your issue from inception to resolution regardless of the vendor. DataCore cares about its customers not which vendor's problem it is. We believe world-class support is the backbone of our customer relationships.

**ALWAYS ON SUPPORT**  
24/7 – 365 DAYS



**AWARD-WINNING  
TECHNICAL SUPPORT**



**CUSTOMER FOCUSED**

**DATACORE cSat 99.6%**  
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### Discover the Ultimate Flexibility of DataCore Software

DataCore software-defined & hyperconverged storage solutions reduce costs, eliminate vendor lock-in, and deliver ultimate flexibility in how organizations manage, build and modernize their storage infrastructures.

See why over 10,000 customers recognize DataCore Software as the most flexible software-defined storage platform by visiting [www.datacore.com](http://www.datacore.com).

