Data Sheet

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CentricStor Virtual Tape Appliance

Intelligent Data Protection

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Pages 4

CentricStor is the first virtual tape solution that provides intelligent data protection by storing all enterprise backup data autonomously on disk or on tape. This unique *Dual Target* storage solution exploits the best of disk and tape in a seamless manner thus making tape fit for Information Lifecycle Management (ILM).

Virtual tape for the Dynamic Data Center

CentricStor is the first virtual tape solution that provides intelligent data protection by storing all enterprise backup data autonomously on disk or on tape. This unique *Dual Target* storage solution exploits the best of disk and tape in a seamless manner. CentricStor shortens backup windows with the performance of disk to a minimum and fulfils all recovery time objectives for each business critical environment. Thus making tape fit for Information Lifecycle Management (ILM), enterprises data protection can be flexible aligned at different Service Level Agreements (SLA).

CentricStor offers superior connectivity with *True Tape Virtualization* (TTV) which supports the widest range of mainframes, open systems, NAS devices and industry-leading backup applications in the industry. CentricStor is also ideal for Service Providers as *True Tape Virtualization* (TTV) is the basis for *Thin Provisioning*. CentricStor hides the complexity of backup storage devices from all servers and offers virtual tapes and virtual tape drives to applications without allocating physical tapes or drives in an inflexible way. Even the space in the disk cache is not assigned in a fixed way, allowing the most efficient provisioning of resources. *Thin Provisioning* allows space to be easily allocated to servers, on a just-enough and just-in-time basis.

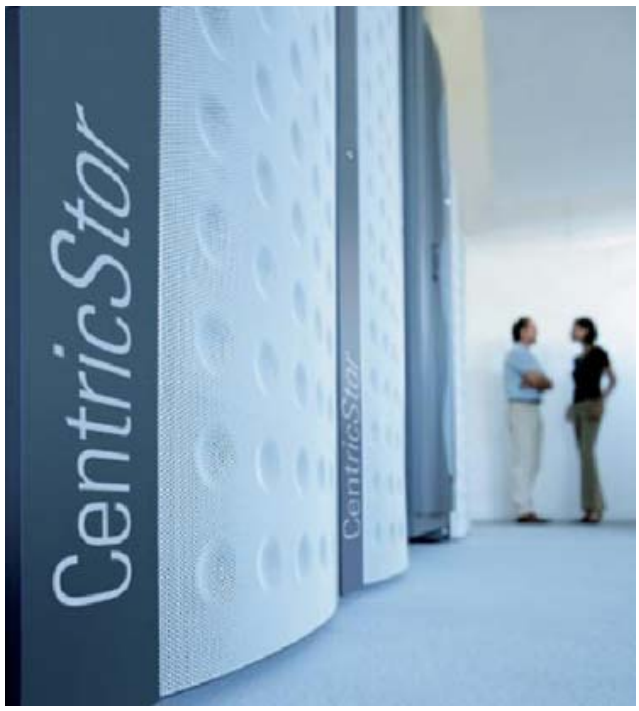
Key Features	Benefits
■ CentricStor makes tape fit for ILM (Information Lifecycle Management)	■ *Dual Target* unifies disk and tape storage ■ Backup windows are minimized ■ *Data Compression* and *Deduplication**) ■ Alignment at different Service Level Agreements (SLA)
■ True Tape Virtualization (TTV)	■ Superior connectivity ■ *Thin Provisioning* of storage resources ■ Consolidation of physical backup storage devices ■ Outstanding TCO reductions
■ CentricStor Grid Architecture (CGA)	■ Unmatched scalability ■ Unmatched disaster resilience ■ Non-disruptive upgrades ■ *Live Monitoring* and *Health Check*

*) The new CentricStor Version 4 is the base for future deduplication

Efficient *Data Compression* and *Deduplication*[*)] technology does further improve the economic allocation of capacity requirements. Such consolidated data centers simplifies companies' administration efforts and lowers the total cost of storage also enabling efficient use of the most cost effective technologies and increasing energy efficiency.

The powerful *CentricStor Grid Architecture* (CGA) features unmatched scalability and leverages unmatched disaster resilience for protection against site outages. Its high level of redundancy is also the basis for non-disruptive upgrades and provides data availability anytime to ensure business continuity for each class of data center. Potential risks in operation are identified through *Live Monitoring* and *Health Check*. So on top of standard maintenance services, activities can be started even before actual errors occur.

At this time, more than 500 installed CentricStor systems protect a data volume larger than 260 PB in data centers of financial services, communications, government and other industries worldwide. Superior intelligent data protection with the unified virtual tape solution for disk and tape backup is reality.

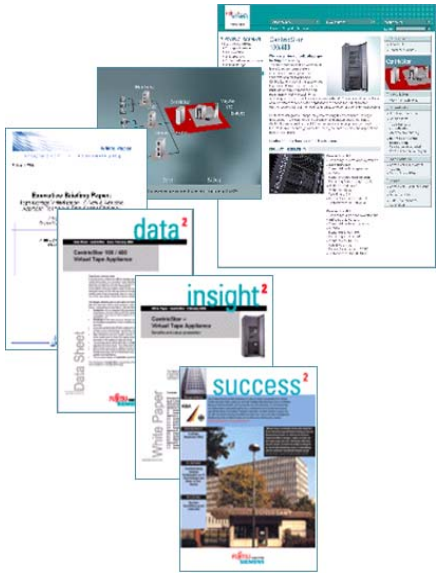


Resource Library

Following related documents are available in the Internet at http://www.centricstor.com and under the link <Resource Library> resp.

http://www.fujitsu-siemens.com/products/storage/centricstor/popup_downloads.html

- Brochure
- Data Sheets
- Interoperability Guide
- Analyst Reports
- Case Studies
- Solution Facts
- Technical White Papers
- Manuals
- Flash demo
- CentricStor User Group



Technical Data

CentricStor Virtual Tape Appliance Components

	VTA-500 / VTA-1000	VTA-1500 / VTA-2000	VTA-3000	VTA-4000	VTA-5000	Maximum [8]
Number of **IUP** [1] per system	2	-	-	-	-	-
Number of **ICP** [2] per system	-	2	3	4	6	8
Number of **IDP** [3] per system	-	2	3	4	6	8
Number of **VLP** [4] per system	-	2	2	2	2	2

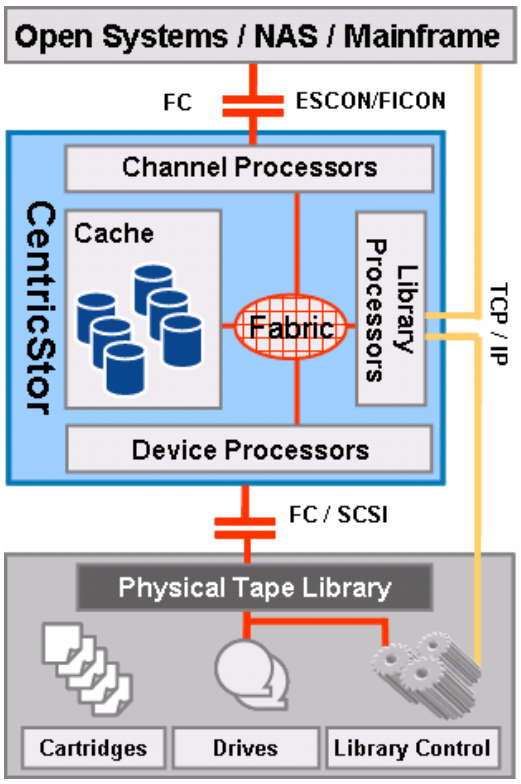
System

Physical host channels [1)2)]		4	4	6	8	12	32
Virtual tape drives / with **VDR** [5]		32 / 64	64 / 128	96 / 192	128 / 256	192 / 384	/ 512
Physical tape drive channels [3]		4	4	6	8	12	14
Capacity of **TVC** [6] – native (TB)	Basic	3.6	3.6				
			7.2	14.4	14.4	28.8	
* in preparation	Maximum	29 / 87.6*	230 / 700*	230 / 700*	230 / 700*	230 / 700*	230 / 1,000*
Maximum of logical volumes		300,000	300,000				
			500,000	500,000	1,500,000	1,500,000	1,500,000
Performance [7] (MB/s)		700	1,100				
			1,100	1,600	2,100	3,000	4,000

Physical and electrical

Height (mm)	1,825					
Width (mm)	700	1,400	2,100	2,800	2,800	
Depth (mm)	1,000					
Total weight (kg)	351	697	1,149	1,392	1,824	
		797				
Apparent power (VA)	2,188	3,913	7,151	7,951	12,451	
		5,051				
Heat (BTU/h)	6,580	11,630	21,607	23,996	37,890	
		15,010				

Comments



[1)]	IUP	**I**ntegrated **U**niversal **P**rocessor: Acts as universal ICP/IDP/VLP for the CentricStor VTA-500 / VTA-1000
[2)]	ICP	**I**ntegrated **C**hannel **P**rocessor: Performs the data link to the connected host systems. Channels (mixed possible): • ESCON / Type S • Fibre Channel • FICON (not for VTA-500 / VTA-1000) ESCON: ***E**nterprise **S**ystems **CON**nection* is the fibre optic connection for IBM mainframes Type S: Fujitsu Siemens Computers mainframe fibre optic connection FICON: ***Fiber Con**nection*, IBM's fiber optic channel technology that extends the capabilities of its ESCON standard.
[3)]	IDP	**I**ntegrated **D**evice **P**rocessor: Performs the data transfer to the physical tape drives. Typical 1 / maximal 8 physical tape drives per channel: • SCSI (direct / daisy chain) • Fibre Channel (direct / via Switch)
[4)]	VLP	**V**irtual **L**ibrary **P**rocessor: Performs the central management processes
[5)]	VDR	**V**irtual **D**rive **R**eplication
[6)]	TVC	**T**ape **V**olume **C**ache
[7)]	Performance	Average data throughput from/to the host during read and write access
[8)]	Maximum	It is not possible to configure all components with their maximum in one system.

Supported Operating Systems

Mainframes	BS2000/OSD GCOS 8 z/OS (OS/390) i5/OS (OS/400) MSP z/VM – z/VSE VME (ICL) XSP
Open Systems	AIX HP-UX Reliant UNIX Solaris LINUX (SUSE, Red Hat) Windows NT, 2000, 2003
NAS – NDMP Backup	NetApp Filer EMC Celerra

Supported Backup Software with Open Systems

Atempo	TimeNavigator
CommVault	Galaxy Backup & Recovery
Computer Associates	BrightStor ARCserve
Fujitsu Siemens Computers	NetWorker
EMC	NetWorker DiskXtender UNIX/Linux
HP OpenView	OmniBack / Data Protector
IBM	Tivoli Storage Manager
Syncsort	Backup Express
Symantec/Veritas	Backup Exec NetBackup

Supported Tape Libraries

Quantum / ADIC	Scalar 100 Scalar i500 Scalar 1000 Scalar i2000 Scalar 10K AML/J, /E, /2
Fujitsu	LT130, LT160, LT270
Fujitsu Siemens Computers	Scalar 100 SL500 9084-221 3560
IBM	3494, 3584 TS3500 on request
Spectra Logic	T50, T120, T950
Sun StorageTek	L180, L700, L700E L1400 L5500 SL500 SL8500 Powderhorn 9310 TimberWolf 9740

System reliability

	Power supply redundancy	Component redundancy
IUP, ICP, IDP, VLP	yes	yes
TVC	yes	RAID 5
Internal SAN	yes	yes

Electrical per rack

Rated voltage	230 V
Max. power draw (kVA)	3.6
Fuse protection (A)	16
Connection type	CEE connector

Environmental

Product class	B
Room supply air double bottom supply air	yes no
Temperature (°C)	15 to 35
Rel. humidity (%)	20 to 80

Standards compliance

Safety	EN 60950 / IEC 950 VDE 0805 UL 1950 CSA 22.2 No. 950
Radiation, RFI suppression	CE mark, FCC Class A * (EN 55022B, EN 50082-1)
Operating noise (dB(A))	< 51
Safety	EN 60950 / IEC 950 VDE 0805 UL 1950 CSA 22.2 No. 950

* This product, together with the Fujitsu Siemens released accessory components / -material, is in compliance with the objectives of emission class A. In certain cases measures have to be taken to reduce the electro magnetic influence to other equipment

CentricStor solution platforms

Following CentricStor systems are available with different model configurations:

- CentricStor VTA (Virtual Tape Appliance)
- CentricStor VTC (Virtual Tape Controller)
- CentricStor SBU (Smart Backup Unit)

For special configurations ask your local Fujitsu Siemens Computers representative.

Additional information is available at
http://www.centricstor.com

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