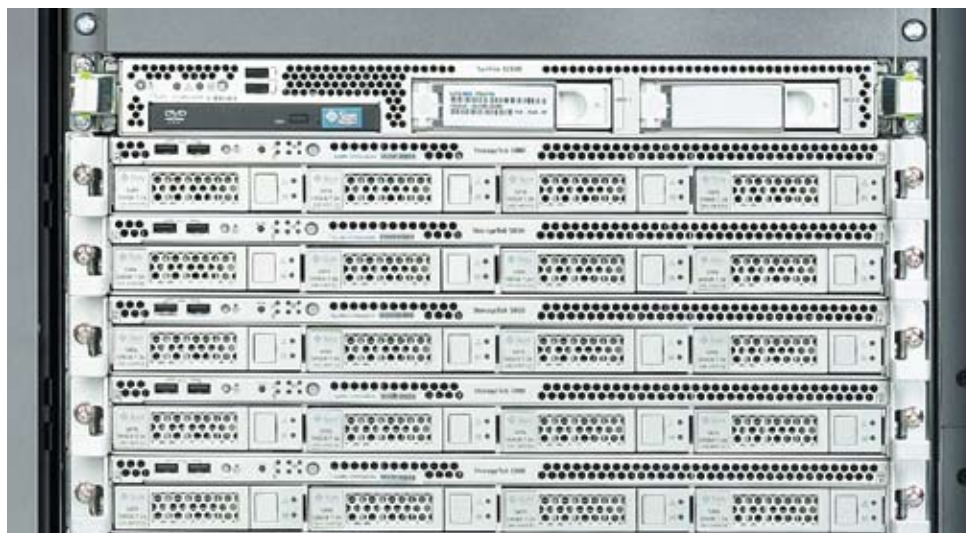


Sun StorageTek™ 5800 System

Next Generation Fixed Content Storage



Highlights

- Extreme data protection designed for long-term preservation and protection of data assets
- Vastly reduced cost and complexity: simpler system management and a radically improved TCO
- Improved manageability and scalability of data assets with the built-in intelligence to simplify the organizing, finding, and presenting of the data
- Sun's next generation fixed content storage allows the enterprises to create petascale computing solutions such as the Sun™ Constellation System



When it comes to fixed-content data archives, if your existing archive solution consists of many discrete building blocks such as a metadata database, a custom storage application, and a third-party search engine that all rely on a file structure scheme, it's tough to sustain mission critical performance. With traditional solutions, you have probably been confronted with a collection of issues — skyrocketing administrative costs, license fees, reliability issues, technology migration nightmares, and user complaints. The Sun StorageTek™ 5800 system helps you bring these issues under control so you can focus on your business rather than your archiving infrastructure.

The Sun StorageTek 5800 system is an object-based storage system representing a totally new category of storage designed to help address these issues. The StorageTek 5800 system leverages a symmetric clustered design with both processing and storage functions within a system cell — bringing data processing closer to the data itself. With its customer-definable metadata schema, the system offers the ability to program the entire indexing schema used to tag and search data onto the system. This level of customization enables the application vendor to completely offload the indexing and search functionality onto the StorageTek 5800. It is designed for data archive, repository, and distribution applications used by institutions to store large amounts of digital information,

such as medical information, e-Research, rich media, and digitized historical records. This solution combines a fully native design with world class systems expertise to create a storage system that runs the Solaris™ Operating System and leverages Java™ development tools to drive a closer integration between compute and store assets in your data center. Utilizing this breakthrough architecture, this tightly integrated system provides online access to data, robust indexing, and native search capabilities with extensive, arbitrary customer-defined metadata (meaningful data about the data). Plus, it delivers the seamless scalability, data integrity, and business continuity features you need to take your storage capabilities to the next level.



Reduce TCO — manage more with less

The self-healing, highly reliable StorageTek 5800 system can help you lower your total cost of ownership. Coupling an affordable acquisition price with the ability to alleviate database workloads and reduce license fees allows the customer to spend less to do more. The 5800 system's self-healing and self-configuring capabilities minimize downtime costs. Taking it one step further, the 5800's object-oriented design significantly reduces traditional storage management functions and increases the efficiency of storage administrator to manage petabyte-scale storage deployments with ease, in part because many traditional manual processes can be automated — or even eliminated.

Improve the reliability and availability of your assets

Traditional archive solutions can be vulnerable, especially in areas of bit-rot and data integrity. The StorageTek 5800 system provides superior data protection and integrity via Reed-Solomon double parity RAID 6 protection, advanced data placement algorithms, and self-healing capabilities.

Search and retrieve using built-in intelligence

Query an expandable, intuitive, clustered database using unique object IDs or SQL-like queries against your defined metadata to retrieve and store your data in your terms. You can associate meaningful semantics with each object you store, and take greater control over your data assets.

Scale seamlessly

The StorageTek 5800 system's modular and scalable design allows capacity expansion with ease. With unique multicell architecture, the 5800 can scale horizontally by adding cell-based compute and storage building blocks on demand. And because the 5800 system is designed to support multiple generations of technology, system expansion can be accomplished without expensive forklift upgrades. The 5800's open system infrastructure reduces cost and risk associated with proprietary storage systems, minimizes growing pains, and enables long-term access and protection of archived data.

Storage Component of the Sun™ Constellation System

Sun StorageTek 5800 is an integral part of the Sun Constellation System, the world's first open petascale computing environment which combines ultra-dense high performance computing, networking, storage, and software into an integrated system that delivers massive scalability, dramatically reduced complexity, and breakthrough economics. The Sun

Constellation System brings key innovations to market and is designed for radical simplicity that puts a new level of high-performance computing within reach for many customers, from departmental use to the largest HPC deployments.

Optimize your solution with services

Sun StorageTek service professionals help you address storage challenges by delivering integrated services and solutions that optimize and manage storage performance over the life of your data. Sun's recognized world-class service and customer care give you confidence that your technology investment is protected and that your business will be responsive to change. Sun can help pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets.



Simplify and expand warranty coverage

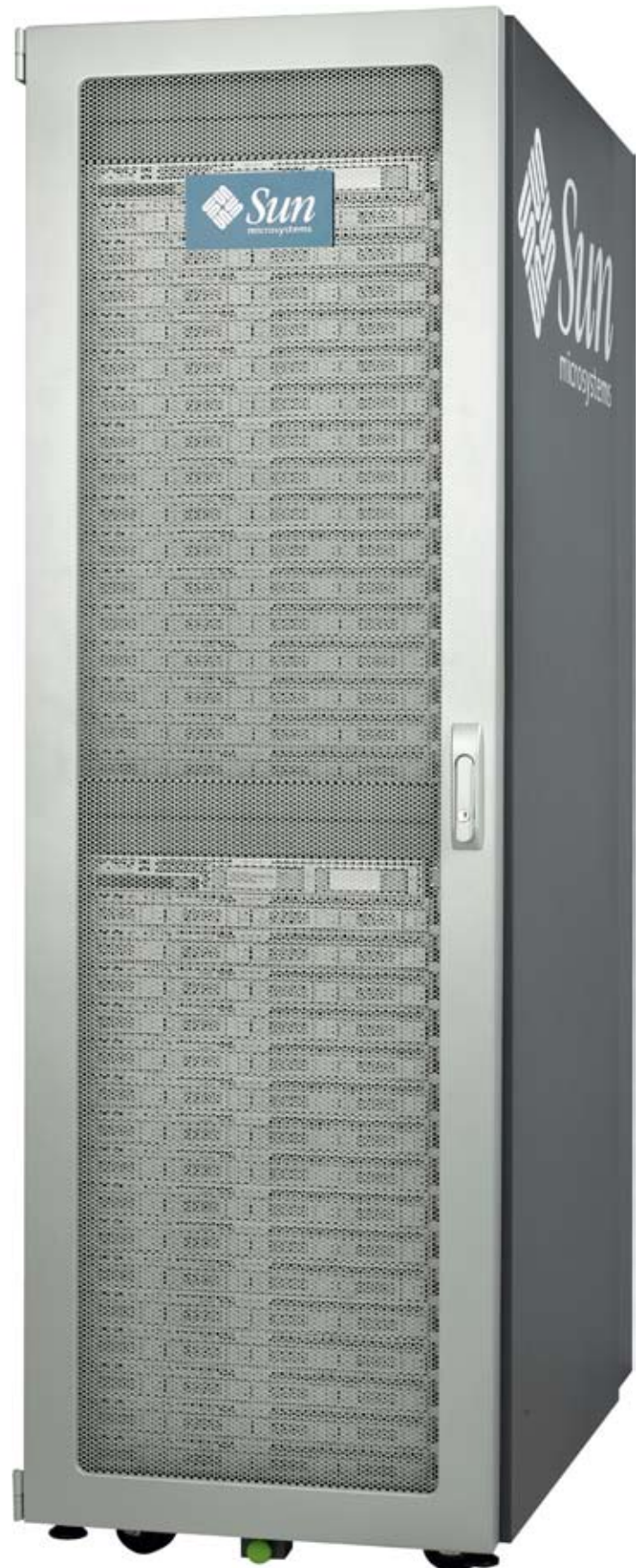
The StorageTek 5800 system is available as a Sun Systems Pack, which combines the product with services in one optimized offering. Sun System Packs for storage go beyond the traditional warranty and include 24-hour technical support by phone, extended onsite coverage hours, cross-vendor/ platform interoperability problem management through Sun Vendor Integration Program (SunVIPSM) services, and access to online learning resources. All of these benefits help you accelerate performance from day one. You receive the flexible storage you want and the services you need at a price that's less than purchasing the hardware and services separately — and in some cases less than the storage product warranty.

Installation and Implementation services

Our Installation and Implementation services will accelerate your Return On Investment (ROI) by deploying and configuring your new storage assets quickly and seamlessly in your IT environment. Installation for the 5800 system is bundled as part of the offer and does not have an additional charge.

Increase productivity with Sun Learning Services

Sun's Learning Services will help your team maintain and acquire the skills necessary to keep your datacenter operations running efficiently. By eliminating skill shortages and providing refresher training for your teams, you can improve system availability, speed productivity and decrease red alerts — reducing costs. Sun's Learning Services can also help reduce the learning curve for your SunStorageTek 5800 and maximize the ROI for your investment. Sun has flexible training options including instructor-led or web-based training and certifications. Our training is delivered by experienced professionals and datacenter experts.



Sun StorageTek 5800 system specifications

Processors and memory

Storage node	<ul style="list-style-type: none"> - Sun Fire™ x2100 derivative design - 64-bit AMD Opteron™ Socket 939 2.2 GHz Processor - 3 GB RAM - Two Integrated 10/100/1000Base-T Ethernet ports - 4 x 500 GB SATA (FRUable) - 1 M3290 SMDC card
Service node	<ul style="list-style-type: none"> - Sun Fire X2100M2 server - One 1.8 GHz AMD Opteron dual core processor with 1MB cache - 2 GB DDR2/667 Unbuffered ECC DIMMs - 1 x SMDC card - Two Integrated 10/100/1000Base-T Ethernet ports - 1 x DVD-ROM
Overall storage capacity	<p>Half-cell system (16 TB raw capacity)</p> <ul style="list-style-type: none"> - 8 storage nodes - Two L2 load-balancing Gigabit Ethernet switches - One service node - One Sun Rack 1000-38 <p>Full-cell system (32 TB raw capacity)</p> <ul style="list-style-type: none"> - 16 storage nodes - Two L2 load-balancing Gigabit Ethernet switches - One service node - One Sun Rack 1000-38 <p>Dual-cell system</p> <ul style="list-style-type: none"> - 32 storage nodes - Four L2 load-balancing Gigabit Ethernet switches - Two service nodes - One Sun Rack 1000-38

Standard / Integrated Interfaces

Network	Two 1-gigabit Cat5 Ethernet ports per cell (located on patch panel in rear of cabinet)(One port strictly for service personnel)
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Software

Operating system	StorageTek 5800 fixed object storage-optimized integrated software stack based on Solaris™ 10 and Java™ technology
API interface	Java and C APIs
Supported clients	<ul style="list-style-type: none"> Client OS supported with "C" or Java: Red Hat Enterprise Linux (32-bit) - RHEL4-U4 Red Hat Enterprise Linux (64-bit) - RHEL4-U4 Solaris 9 SPARC® - Solaris 9 HW 9/05 Solaris 10 SPARC - Solaris 10 Update 3 Solaris 10 x64/x86 - Solaris 10 Update 3 Windows Server 2003 R2 32-bit Windows XP
Metadata query engine	Sun StorageTek 5800 system embedded query engine
Disaster recovery/	NDMP v4 with BakBone NetVault v7.4 software
Tape backup	
System administration	CLI and GUI administration interfaces
Mail services	SMTP

Feature	Specification: Full Cell	Specification: Half Cell
Physical Planning		
Dimensions	H: 74 in. (187.9 cm) W: 23.5 in. (59.69 cm) D: 35.4 in. (89.91 cm)	H: 74 in. (187.9 cm) W: 23.5 in. (59.69 cm) D: 35.4 in. (89.91 cm)
Maximum Weight	990 lb (449.1 kg) (Rack & PDS only = 420 lb; 17 nodes + 2 switches + cables = 570 lb)	705 lb (319.78 kg) (Rack & PDS only = 420 lb; 9 nodes + 2 switches + cables = 285 lb)
	Dual-cell rack: 1560 lb (707.6 kg)	

Environmental (Operating)

Temperature	5°C to 35°C (41°F to 95°F)	5°C to 35°C (41°F to 95°F)
Relative Humidity	7% RH and 93% RH	7% RH and 93% RH
Altitude	3200 m at 40°C	3200 M at 40°C
Shock	10 shocks in all 6 axes; 3.5 g 11 ms	10 shocks in all 6 axes; 3.5 g 11 ms
Vibration	Swept sine 5-500 Hz, 1 octave/minute, 10 sweeps X,Y= .112 g Z=.17 g	Swept sine 5-500 Hz, 1 octave/minute, 10 sweeps X,Y= .112 g Z=.17 g
Heat Output (max)	14080 W (48070 BTU/hr) (Rack PDS = 3520 W per input x 4 inputs)	14080 Watts (48070 BTU/hr) (Rack PDS = 3520W per input x 4 inputs)
Heat Output (typical)	2118.6 Watts (7235 BTU/hr)	3978.8 Watts (13590 BTU/hr)
	Dual-cell rack: 7957.6 W (27170 BTU/hr)	

Environmental (Nonoperating)

Temperature (Storage)	-43°C to 68°C (-45°F to 154°F)	-10°C to 55°C (-14°F to 131°F)
Temperature (Transit)	NA	NA
Humidity (Storage)	93% RH noncondensing at 40°C for 5 days	93% RH and 7% RH
Humidity (Transit)	NA	NA
Altitude	12200 m at 0°C for 4 hours	12200 m at 0°C for 4 hours
Shock	Threshold and Roll off shock	Threshold and Roll off shock
Vibration	Swept sine 5-500 Hz, 1 octave/minute, 10 sweeps, .18 g	Swept sine 5-500Hz, 1 octave/minute, 10 sweeps, .18 g

Power Requirements

AC Power (CU)	200 to 240 VAC at 50 to 60 Hz single phase	200 to 240 VAC at 50 to 60 Hz single phase
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Standards Compliance

Safety and Emissions	EN60950-1:2001 1st Ed., IEC60950-1:2001 1st Ed. evaluated to all countries, UL and cUL/CSA60950-1:2001, CSAC22.2 No. 60950-00, EN55022, EN61000-3-2, EN61000-3-3	EN60950-1:2001 1st Ed., IEC 60950-1:2001, 1st Ed. evaluated to all countries, UL and cUL/CSA 60950-1:2001, CSA C22.2 No. 60950-00, EN 55022, EN61000-3-2, EN 61000-3-3
Immunity	EN55024	EN 55024
Enclosure	Up to two full-cell StorageTek 5800 systems can fit in a single Sun Rack 1000-38 rack	
AC Power	Two 220-Volt L6-20 power cords are required per cell	
	Dual-cell: Four 220-Volt L6-20 power cords	