

Hardware and Software Engineered to Work Together

ORACLE'S FULL LINE OF INTEGRATED STORAGE SYSTEMS

HIGHLIGHTS

- Oracle offers a complete portfolio of products that combines storage, servers, software, and networking to deliver the most-innovative, performance-optimized solutions for the datacenter.
- Sun Storage enterprise-class Flash Arrays and PCIe cards increase business productivity by accelerating I/O intensive applications in less space while using less power
- ZFS Storage Appliances help enterprises realize up to a 75 percent cost savings over traditional storage solutions and can compress Oracle 11g read-oriented workloads up to 50x using Hybrid Columnar Compression.
- Pillar Axiom 600 and Sun Storage 2500-fibre channel array series minimize acquisition and operation costs and maximize the return on your storage investments with reliability, flexibility, and scalability.
- StorageTek tape libraries, tape virtualization, tape drives, tape media, and tape device software are world-class solutions that scale to over 500 petabytes.
- Ethernet, InfiniBand and Storage Networking products allow the integration of Sun's servers and storage into complete, high-performance infrastructure solutions.

See Beyond the Limits

Many enterprises manage demanding applications and access increasing amounts of data. You need computing power that matches your needs and budget, where and when it matters most. Oracle's products and solutions can support your business needs from end to end, throughout the lifecycle of your datacenter.

More than 40 years of storage expertise and innovative thinking have gone into creating the Sun Storage, Pillar Axiom and StorageTek product portfolios. These storage systems offer some of the most reliable, scalable, and energy-efficient systems in the industry. Core building blocks for mission-critical enterprise computing, enterprise application environments, virtualization and cloud deployments, these systems help datacenter managers reduce costs, conserve energy, and operate more efficiently.

The Right Solutions for Your Needs

The deployment of IT resources is vital to enterprises. You want to plan your IT projects carefully so that you can select the right servers, storage products, and infrastructure to make your network as efficient as possible. An open and scalable design approach lets you mix and match Oracle's compute, storage, and network components so that all resources in the datacenter work as a powerful and integrated system, driving better efficiency across the IT infrastructure and supporting your business needs from end to end.

Warranty Programs




Visit oracle.com/sun/warranty for information on Oracle's global warranty support for Sun products.




How to Use This Guide


This guide features all Oracle's storage systems, with each section listing the full line of products and their specifications.

Read **Oracle's Full Line of Integrated Server Systems** to see all Oracle's Sun servers.




Flash Solutions

SUN STORAGE F5100 FLASH ARRAY			
			
Name	20 Flash Modules	40 Flash Modules	80 Flash Modules
Capacity			
Capacity	480 GB	960 GB	1,920 GB
Domains	4	4	4
I/O performance			
Rand. read (4K)	397,000 IOPS	795,000 IOPS	1.6 million IOPS
Rand. write (4K)	304,000 IOPS	610,000 IOPS	1.2 million IOPS
Throughput			
Seq. l read (1M)	4.3 GB/sec	8.5 GB/sec	17.0 GB/sec
Seq. write (1M)	2.7 GB/sec	5.2 GB/sec	10.3 GB/sec
Latency			
Read latency	0.41 ms	0.41 ms	0.41 ms
Write latency	0.28 ms	0.28 ms	0.28 ms
Interfaces			
Ports	16 x 4-wide SAS-1 (64 channels)	16 x 4-wide SAS-1 (64 channels)	16 x 4-wide SAS-1 (64 channels)
Zoning	Yes	Yes	Yes
Power			
Input	100–120 V AC or 200–240 V AC	100–120 V AC or 200–240 V AC	100–120 V AC or 200–240 V AC
Active/Idle	228W/129 W	281W/157 W	386W/213 W
Power backup	4 energy storage modules (ESMs)	4 energy storage modules (ESMs)	4 energy storage modules (ESMs)
Reliability			
MTBF	3 M hours per Flash Module	3 M hours per Flash Module	3 M hours per Flash Module
Endurance (50% read/50% write)	Approximately 6 years	Approximately 6 years	Approximately 6 years
Redundant power and fans	Yes	Yes	Yes
Physical specifications			
Dimensions (H x W x D)	H: 1.746 in. (44 mm)—1U W: 28.125 in. (714 mm) D: 28.125 in. (714 mm)	H: 1.746 in. (44 mm)—1U W: 16.750 in. (425 mm) D: 28.125 in. (714 mm)	H: 1.746 in. (44 mm)—1U W: 16.750 in. (425 mm) D: 28.125 in. (714 mm)
Weight	35 lb. (15.9 kg)	35 lb. (15.9 kg)	35 lb. (15.9 kg)


SUN STORAGE F5100 FLASH ARRAY						
						
Name	20 Flash Modules		40 Flash Modules		80 Flash Modules	
Environmental	Operating	Non-operating	Operating	Non-operating	Operating	Non-operating
Temperature	5°C to 35°C	-40°C to 65°C	5°C to 35°C	-40°C to 65°C	5°C to 35°C	-40°C to 65°C
Relative humidity	0-90%, 27°C max.	10-93%, 35°C max.	0-90%, 27°C max.	10-93%, 35°C max.	0-90%, 27°C max.	10-93%, 35°C max.
Acoustic	55.4 Db		55.4 Db		55.4 Db	
Other						
Management	StorageTek Common Array Manager software		StorageTek Common Array Manager software		StorageTek Common Array Manager software	
Warranty/service	oracle.com/sun/warranty		oracle.com/sun/warranty		oracle.com/sun/warranty	
Support	Qualified Sun Servers and OS environments		Qualified Sun Servers and OS environments		Qualified Sun Servers and OS environments	

SUN FLASH ACCELERATOR F20	
	
Name	Sun Flash Accelerator F20
Storage type	PCIe Flash Card
Flash type (NAND)	Enterprise SLC NAND
Storage capacity	96 GB
Domains/controllers	4
Random I/O performance (4K)	101,000 IOPS read 88,000 IOPS write
Sequential Throughput performance (1M)	1.1 GB/sec read 567 MB/sec write
Dimensions	Low-profile PCIe (H: 2.6-in., L: 6.6-in.)
Power	• 16.5 W
Power backup	• Super capacitor based ESM
Warranty/service	• oracle.com/sun/warranty
Support	• Qualified Sun Servers and OS environments


NAS Storage Solutions

SUN ZFS STORAGE APPLIANCE			
			
Name	Sun ZFS Storage 7120	Sun ZFS Storage 7320	Sun ZFS Storage 7420
Processor	1x 4-core 2.4 GHz Intel® Xeon® Processor	2x 4-core 2.4GHz Intel® Xeon® Processor per controller	4x 8-core 2.0 GHz or 10-core 2.4 GHz Intel® Xeon® Processor per controller
Main Memory	48 GB	Up to 144 GB per node	Up to 1 TB per controller
Read Optimized Flash	N	Up to 2 TB per controller	Up to 2 TB per controller
Write Optimized Flash	73 GB	Up to 1.2 TB	Up to 7 TB
Mass storage			
Max. storage	177 TB	432TB	1.73 PB
Network			
Integrated network	Four 10/100/1000 Base-T Ethernet ports		
Optional network connectivity	Quad Gigabit Ethernet UTP; Dual 10 GigE, QDR Infiniband HCA, 8Gb FC HBA		
Optional tape backup HBA	Dual channel 8Gb FC HBA		
Power/cooling			
Power	1200 W (full controller)	760 W (full controller)	1485 W (full controller)
Altitude (operating) (Single, non-rack system)	Up to 3,048 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m	Up to 3,000 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m	Up to 3,048 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m
Nonoperating temperature/humidity (single, non-rack system)	40°C to 70°C (-40°F to 149°F), up to 93% relative humidity, non-condensing	40°C to 70°C (-40°F to 149°F), up to 93% relative humidity, non-condensing	40°C to 70°C (-40°F to 149°F), up to 93% relative humidity, non-condensing
Rack Units	2U for controller, 4U per disk shelf	1U per node, 4U per disk shelf	3U per node, 4U per disk shelf
Physical Specifications			
Height	87.6mm (3.45 in.)	43.43 mm (1.71 in.)	129.85 mm (5.1 in)
Width	436.5mm (17.19 in.)	425.45 mm (16.75 in.)	436.5 mm (17.2 in.)
Depth	762.0mm (30.0 in.)	685.8 mm (30.0 in.)	732 mm (28.8 in.)
Weight	29.54 kg (65 lbs.)	16.36 kg (36 lb.)	38.5 kg (85 lbs) max
File System	Oracle Solaris ZFS (128-bit addressability)	Oracle Solaris ZFS (128-bit addressability)	Oracle Solaris ZFS (128-bit addressability)
Warranty/Service			
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




SAN Storage Solutions

PILLAR AXIOM 600 STORAGE SYSTEM					
					
Name	Pillar Axiom Pilot	Pillar Axiom Slammer	Pillar Axiom Brick (SATA Drive)	Pillar Axiom Brick (FC Drive)	Pillar Axiom Brick (SSD Drive)
External Interface	<ul style="list-style-type: none"> Two 10/100Base-T Ethernet interfaces for management LAN connectivity 	<ul style="list-style-type: none"> SAN Slammer: Four 4 Gbps or 8 Gbps FC interfaces iSCSI Slammer: Four 1 GbE interfaces for iSCSI host attachments NAS Slammer: Eight 1 GbE or four 10 GbE interfaces for client network connectivity (Optional FC card for tape connectivity) iSCSI Combo Slammer: Four 1 GbE interfaces, Four 4 Gbps or 8 Gbps FC interfaces 	<ul style="list-style-type: none"> NA 		
Internal Interface	<ul style="list-style-type: none"> Four 10/100Base-T Ethernet private management interfaces (PMIs) 	<ul style="list-style-type: none"> Six 10/100Base-T Ethernet interfaces for Pillar Axiom Slammer/Pilot connectivity 26 – 2 Gb or 4 Gb FC interfaces for Brick/Slammer connectivity 	<ul style="list-style-type: none"> Interface to Pillar Axiom Slammer or Cascaded Bricks Four FC interfaces per controller 		
Protocols	<ul style="list-style-type: none"> NA 	<ul style="list-style-type: none"> SAN Protocols: FC protocol, fabric-attached and direct-attached; iSCSI protocol, network-attached or direct-attached NAS Protocols: NFS V2/V3 over UDP or TCP, CIFS, NDMP Other Protocols supported: FTP, HTTP, NDMP, NTP, SNMP, SMTP, SSH 	<ul style="list-style-type: none"> NA 		
Components	<ul style="list-style-type: none"> Two policy controllers per Pilot with active/standby failover Intel Celeron processor per storage controller 2 GB or 4 GB RAM per control unit 	<ul style="list-style-type: none"> Quad-core processors, 48 GB cache Two power supplies and fans per control unit Two active/active storage controllers per Pillar Axiom Slammer 	<ul style="list-style-type: none"> Automatic, transparent failover Two RAID controllers (active/active) Two load-balancing power supplies Enclosure Services Module FC Brick <ul style="list-style-type: none"> One RAID 5 (5+P+S array) Pooled RAID 10 SATA and SSD Brick Brick: 13 drives (one hot spare) <ul style="list-style-type: none"> Two RAID 5 (5+P arrays) Pooled RAID 10 		
Drive Information	NA	NA	1 TB, 2 TB SATA II (7,200 RPM)	300 GB, 600 GB FC (15,000 RPM)	50 GB, 200 GB
Power specifications					
Frequency	50 Hz – 60 Hz	50 Hz – 60 Hz	50 Hz – 60 Hz		
AC voltage	90 VAC – 264 VAC	90 VAC – 264 VAC	90 VAC – 264 VAC		
Max power consumption	128 VA	685 VA	296 VA	372 VA	251 VA RMS
Max heat dissipation	372 BTU/hr	2,020 BTU/hr	1,010 BTU/hr	1,270 BTU/hr	856 BTU/hr
AC plug type	IEC 320 C13 connections	IEC 320 C13 connections	Two IEC 320 C13 connections		
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty		




SAN Storage Solutions


SUN STORAGE 2500-M2 FIBRE CHANNEL ARRAY	
	
Name	Sun Storage 2500-M2 Array
Controller card	Dual RAID controller (FC or SAS)
Cache size (with ECC protection)	2 GB per array
Host interfaces/link speeds	Four or eight 8 Gb/sec FC ports or four 6 Gb/sec SAS2 ports per array
Drive capacity	5 to 96 drives
Supported drives	
FC (15,000 rpm)	N/A
SATA (7,200 rpm)	N/A
SSD	N/A
SAS2 (15,000 rpm)	300 GB, 600 GB
RAID levels	0, 1, 3, 5, 6 (p+q), 10
Power/cooling	
Power AC	110-240V~ at 7.0-2.9 A, 50/60 Hz
Power DC	-42 to -60 V DC at 21.7-15.3 A
Heat output	399 W (1,366 BTU/hr.)
Rack units	2U controller tray, 2U expansion tray
Operating system	Oracle Solaris, Oracle Enterprise Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, Microsoft Windows Operating System
NEBS certified	Yes (AC and DC)
Warranty/service	oracle.com/sun/warranty





Tape Storage

TAPE LIBRARIES			
			
Name	StorageTek SL8500 Modular Library System	StorageTek SL3000 Modular Library System	StorageTek SL150 Modular Tape Library
Max. throughput/hr., native; alternative tape drives provide varying throughput rates	Mid-Range LTO 6 (640 drive, 160 MB/sec): 368.64 TB/hr. Enterprise T10000C (640 drive, 252 MB/sec): 580.6 TB/hr.	Mid-Range LTO 6 (56 drive, 160 MB/sec): 32.2 TB/hr. Enterprise T10000C (56 drive, 252 MB/sec): 50.8 TB/hr.	LTO 6* (20 drives, 160 MB/sec): 11.5 TB/hr.
Max. capacity, native; alternative tape drives provide varying capacities	Mid-range LTO 6 (100,880 slots): 252.2 PB Enterprise T10000C (100,880 slots): 554.85 PB	Mid-range LTO 6 (5,925 slots): 14.8 PB Enterprise T10000C (5,925 slots): 32.6 PB	LTO 6* (300 slots): 450 TB
Max. number of cartridge slots	100,880 slots	5,925 slots	300 slots, LTO only
Number and type of tape drives	Up to 64 drives (single library) or up to 640 drives (complex) of any combination of supported drives, including T10000 B/C (FICON, FC); T9840D (FICON, FC); LTO 5/6 (FC)	Up to 56 drives of any combination of supported drives, including T10000 B/C (FICON, FC); T9840D (FICON, FC); LTO 5/6 (FC)	1 to 20 half-height LTO 5/6* drives (FC, SAS)
Supported host platforms	Oracle Solaris, Oracle Linux, Microsoft Windows, UNIX, Z/OS	Oracle Solaris, Oracle Linux, Microsoft Windows, UNIX, Z/OS	Oracle Solaris, Oracle Linux, Microsoft Windows, UNIX
Any-cartridge Any-slot technology	Yes	Yes	No
Dimensions (H x W x D)	Min. configuration: 93.15 in. x 67.3 in. x 109.0 in. (236.6 cm x 170.81 cm x 276.9 cm)	Min. configuration: 77.5 in. x 36 in. x 48 in. (1.97 cm x 91.4 cm x 122.1 cm)	Min. configuration: 5.15 in. x 18.9 in. x 36.4 in. (13.08 cm x 48.1 cm x 92.5 cm)
Weight	Min. configuration: 3,300 lb. (1,497 kg)	Min. configuration: 790 lb. (361.1 kg)	Min. configuration: 47 lb. (21.5 kg)

*Check with sales representative on the availability of this option.

TAPE DRIVES			
			
Name	StorageTek T10000 Tape Drives	StorageTek T9840D Tape Drive	StorageTek LTO Tape Drives
Average file access time (+load/thread)	T10000C: 60.1 sec T10000B: 62 sec	16.5 sec	LTO 6: 72 sec (74 sec half-height) LTO 5: 71 sec
Data transfer rate, native	T10000C: 240 MB/sec T10000B: 120 MB/sec	30 MB/sec	LTO 6: 160 MB/sec LTO 5: 140 MB/sec
Capacity, native (uncompressed)	T10000C: 5 TB T10000B: 1 TB	75 GB	LTO 6: 2.5 TB LTO 5: 1.5 TB
Interface	4 Gb FC, FICON (automation, rackmount)	2 Gb FC, FICON, ESCON (automation, rackmount)	6 Gb SAS, 8 Gb FC (automation only)
Dimensions—automation (H x W x D)	3.5 in. x 5.75 in. x 16.75 in. (8.89 cm x 14.61 cm x 42.55 cm)	3.25 in. x 15.0 in. (8.3 cm x 38.1 cm)	5.7 in. x 1.6 in. x 8.1 in. (14.47 cm x 4.1 cm x 20.82 cm)


TAPE ENCRYPTION	
	
Name	Oracle Key Manager 2.3
Components	Consists of a cluster configuration (2-20) of Sun Fire rackmounted servers running Oracle Solaris 10 and each containing a Sun Crypto Accelerator 6000 card
Standards/drives supported	FIPS 140-2 security requirements; CCM-AES-256 encryption; up to 3,000 drives (T10000B/C, T9840D, or LTO 4/5/6) and 1,000,000 keys from a single KMS cluster

TAPE VIRTUALIZATION				
				
Name	StorageTek Virtual Storage Manager (VSM) System - VSM 6	StorageTek Virtual Storage Manager (VSM) System - VSM 5e	StorageTek Virtual Storage Manager (VSM) System - VSM 5	StorageTek Virtual Library Extension - VLE
Capacity per VSM/VLE (at 4:1 compression)	10 TB – 1.2 PB (at 10 TB increments)	800 GB, 1.25 TB	1.25-90 TB, scalable in 1 TB increments	330 TB, 660 TB, 990 TB, 1320 TB
Max Capacity (256 systems)	307 PB	32 PB	23 PB	338 PB
Host connectivity	Mainframe	Mainframe	Mainframe	Mainframe
Storage connectivity	8 FICON (Host/RTD) 8 Ethernet IP support (between StorageTek Virtual Library Extension, StorageTek Virtual Storage Manager 5, StorageTek Virtual Storage Manager 6)	8 FICON or 16 ESCON FICON/ESCON only; not both 4 Ethernet IP support (between Oracle's StorageTek Virtual Tape Storage Subsystem and/or StorageTek Virtual Library Extension)	4 FICON (upgradeable to 16) 16 ESCON (upgradeable to 32) 4 Ethernet IP support (between StorageTek Virtual Tape Storage Subsystem and/or StorageTek Virtual Library Extension)	16 Ethernet IP (connection to StorageTek Virtual Storage Manager System 5)
Virtual tape libraries/drives/carts	256 virtual tape drives	256 virtual tape drives	256 virtual tape drives	N/A
Cache	128 GB (physical) 512 GB (effective - 4:1 compression)	8 GB (physical) 32 GB (effective - 4:1 compression)	32 GB (physical) 128 GB (effective - 4:1 compression)	128 GB (physical) 512 GB (effective - 4:1 compression)
Nonvolatile storage	1,752 MB (effective – 4:1 compression)	1,024 MB (effective – 4:1 compression)	1,024 MB (effective – 4:1 compression)	N/A
Min. software requirements	HSC 6.2/VTCS 6.2, z/OS 1.1+	HSC 6.2/VTCS 6.2, z/OS 1.1+	HSC 6.2/VTCS 6.2, z/OS 1.1+	HSC 6.2/VTCS 6.2, z/OS 1.1+

TAPE MEDIA



	StorageTek T10000 T2 Data Cartridge	StorageTek T10000 Data Cartridge
Capacity, native (uncompressed)	5 TB (T10000), 1 TB (Sport)	120 GB (Sport), 500 GB (T10000A); 240 GB (Sport), 1 TB (T10000B)
Drive compatibility	StorageTek T10000C: Read/Write	StorageTek T1000A/T10000B: Read/Write StorageTek T10000C: Read Only
WORM or VoI Safe secure media technology	Yes	Yes
	StorageTek LTO Ultrium 5 Data Cartridge	StorageTek LTO Ultrium 4 Data Cartridge
Capacity, native (uncompressed)	1.5 TB	800 GB
Drive compatibility	StorageTek LTO 5: Read/Write	StorageTek LTO 4: Read/Write StorageTek LTO 5: Read/Write at LTO 4 format
WORM or VoI Safe secure media technology	Yes	Yes

STORAGE NETWORKING			
			
Adapters	StorageTek 8 Gb Fibre Channel PCIe HBA	StorageTek Dual 8Gb Fibre Channel Dual GbE ExpressModule HBA	Sun Storage 6 Gb SAS PCIe HBA
Interface Type	8 Gb FC	8 Gb FC and GbE	6 Gb SAS
Server compatibility	Oracle x86 and SPARC PCIe servers	Oracle blade servers and ExpressModule servers	Oracle x86 and SPARC PCIe servers
Operating system	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows
Form Factor / Ports	PCIe Low Profile, one and two 8Gb FC ports	ExpressModule, two 8Gb FC + two GbE ports	PCIe Low Profile, 8 ports (2 x 4 configuration)
Adapters	Sun Storage 10 GbE FCoE PCIe Converged Network Adapter	Sun Storage 10 GbE FCoE ExpressModule Converged Network Adapter	Sun Storage 6 Gb SAS ExpressModule HBA
Interface Type	10 GbE FCoE	10 GbE FCoE	6 Gb SAS
Server compatibility	Oracle x86 and SPARC PCIe servers	Oracle blade servers and ExpressModule servers	Oracle blade servers and ExpressModule servers
Operating system	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows
Form Factor / Ports	PCIe Low Profile, two 10GbE ports	ExpressModule, two 10 GbE ports	ExpressModule, 8 ports (2 x 4 configuration)
Brocade Fibre Channel Switches	Brocade 6510 Switch	Brocade 5300 Switch	Brocade 300 Switch
Form Factor	1U	2U	1U
Speed/Performance	16 Gbps Fibre Channel	8 Gbps Fibre Channel	8Gbps Fibre Channel
Port Count	24-48 Fibre Channel Ports	48-80 Fibre Channel Ports	8-24 Fibre Channel Ports
Protocol Support	Fibre Channel	Fibre Channel	Fibre Channel
Scalability	Full fabric architecture with maximum 239 switches	Full fabric architecture with maximum 239 switches	Full fabric architecture with maximum 239 switches
Optional Software	12-Port Upgrade, Integrated Routing, Adaptive Networking, ISL trunking, Fabric Watch, Advanced Performance Monitoring	16-port Upgrade, FICON CUP, Integrated Routing, Adaptive Networking, Enterprise Bundle (trunking, advanced performance monitoring, fabric watch, adaptive networking)	8-port upgrade
Brocade Backbone Directors	Brocade 8510-4	Brocade 8510-8	
Form Factor	4U	8U	
Speed/Performance	16Gbps Fibre Channel	16Gbps Fibre Channel	
Port Count	192 Fibre Channel Ports	384 Fibre Channel Ports	
Protocol Support	Fibre Channel	Fibre Channel	
ICL Bandwidth	16 ICLs provide the equivalent of 64 16 Gbps ports. Each ICL port provides 64 Gbps bandwidth over a QSFP (4x16 Gbps) link.	32 ICL ports provide the equivalent of 128 16 Gbps ports. Each ICL port provides 64 Gbps bandwidth over a QSFP (4x16 Gbps) link	
Available Blades	Brocade FX8-24 blade, Brocade 48 port 16Gb blade	Brocade FX8-24 blade, Brocade 48 port 16Gb blade	

Contact Us

For more information about Oracle's Sun servers, storage, and networking equipment, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



Oracle is committed to developing practices and products that help protect the environment

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