

Snap Server™ 18000

KEY FEATURES:

Unified Block and File Storage with Industry-Standard iSCSI Support

Scalable from 2TB to 30TB

Dual Intel Xeon Processors

Battery-Backed NVRAM

Redundant Hardware Components

Snapshot Technology

Integrated CA eTrust Antivirus Software

Active Directory Service (ADS) Support

Embedded BakBone NetVault Software

NDMP Support

Optional S2S v2 Byte-Level Replication Software

High-Performance Block and File Storage for Enterprise Data Management

The Snap Server 18000 redefines cost-effective enterprise storage with its high-powered performance, unified block and file storage architecture, centralized storage management, comprehensive data protection suite, advanced data availability, and instant, best-in-class, scalability. Ideal for primary and secondary storage with a wide range of applications, the 18000 simplifies the management of data distributed throughout the enterprise.

Unmatched Price/Performance

Advanced performance features, including dual Intel Xeon processors with Symmetric Multi-Processing (SMP) capabilities, **Serial ATA (SATA) disk drives**, 2GB of Double Data Rate (DDR) system memory and 512MB of battery-backed cache make the 18000 the fastest Snap Server ever. Combine this level of performance with an unbelievable price and it's easy to see that the 18000 delivers unbeatable value in its class.

Seamless Microsoft Interoperability

Snap Appliance is committed to delivering storage solutions that are highly interoperable with Microsoft technologies. In addition to cross-platform file support for mixed Windows, UNIX/Linux, and Macintosh environments, the Snap Server 18000 has received the Microsoft "Designed for Windows" logo which ensures interoperability and quality assurance when it is used as an iSCSI target with Microsoft Windows Server 2003.

Best-in-Class Scalability

Add Snap Disk 30 expansion arrays to meet growing storage needs, up to a total capacity of 30TB. Our unique Instant Capacity Expansion (I.C.E.) feature for on-demand scalability and



provisioning allows you to easily increase storage space without the risk involved with time-consuming RAID reconfiguration.

Advanced Data Availability

RAID 5, hot-swappable SATA disk drives, redundant power and cooling, dual-Gigabit Ethernet ports, battery-backed nonvolatile memory (NVRAM), and UPS support maximize system and data availability. Optional S2S (Server-to-Server) Synchronization software delivers advanced, asynchronous byte-level data replication ideal for nearline backup or off-site disaster recovery.

The feature-rich 18000 is also an ideal solution for common storage challenges.

Application Server Storage

The Snap Server 18000 has been awarded Microsoft's iSCSI "Designed for Windows" logo, making it ideal for storing Microsoft Exchange and SQL Server data. The 18000 also supports iSCSI initiators for Solaris and Linux and can easily be used for cost effective capacity expansion of existing servers. iSCSI removes the distance limitations associated with direct-attached storage (DAS) and leverages industry-standard Ethernet to eliminate the cost and complexity associated with Fibre Channel storage area networks (SANs).

Storage Consolidation

Consolidating storage allows enterprises to significantly increase return on investment (ROI) and reduce the total cost of ownership (TCO). By integrating iSCSI to offer simultaneous block and file storage on a single device, the Snap Server 18000 eliminates the need for disparate storage pools, simplifies data management, consolidates storage resources, and maximizes storage dollars.

Accelerated Backup

Reduce backup and restore times by backing up directly to the Snap Server 18000 and then archiving to tape. The native Snapshot technology embedded in the GuardianOS provides consistent, point-in-time incremental backups; store them online to further reduce tape costs. Integrated BakBone NetVault software, backup agent support for VERITAS, CA, and Legato, and Network Data Management Protocol (NDMP) support provide the ultimate backup flexibility.

GuardianOS Specifications

Network Transport Protocols

- TCP/IP
- UDP/IP
- AppleTalk

Network File Protocols

- Microsoft Networks (CIFS/SMB)
- UNIX (NFS v2/3)
- Apple (AFP 2.0)
- Internet (HTTP 1.1)
- File Transport Protocol (FTP)

Network Block Protocols

- iSCSI Target Support
 - Snap Servers running GuardianOS v3 SPT or higher
- iSCSI Software Initiator Support
 - Windows: Microsoft iSCSI Initiator v1.03, 1.04
 - Solaris: Cisco SN 5400 Series iSCSI Driver v3.3.5
 - Linux: UNH-iSCSI Initiator v1.5.3
- iSCSI Hardware Initiator Support
 - Intel PRO/1000T IP Storage Adapter v2.0, 2.1
 - Alacritech SESt001 iSCSI HBA Adapter

Network Client Types

- Windows: 95, 98, Me, NT 4.0, 2000, 2003, XP
- Macintosh: OS 8.x, 9.x, 10.x
- UNIX: Solaris 7, 8, 9; HP-UX 11; AIX 4.3.3, 5.x
- Linux: Red Hat Linux 7.x, 8.x, 9.x

Server Emulation

- Windows 2000/2003
- Windows NT 4.0
- AppleShare 6.0
- NFS v2/3
- FTP

Automatic IP Address Assignment

- Supports DHCP for automatic assignment of IP address

Network Security

- CA eTrust Antivirus Software
- Microsoft Active Directory Service (ADS Member Server)
- Kerberos Authentication v5
- CHAP Authentication (iSCSI target level)
- Microsoft Lightweight Directory Access Protocol (LDAP v3 client)
- Windows NT Domain (member server)
- UNIX Network Information Service (NIS) Support
- File and Folder Access Control List (ACL) Security for Users and Groups
- Secure Sockets Layer (SSL) v2/3 128-bit Encryption
- Transport Layer Security (TLS) v1

System Management

- Browser-based User Interface for Remote Administration
- Snap Server Manager™ Client-based Setup Utility (platform-independent)
- Secure Shell (SSH) for backup agent installation
- SNMP (MIB II and Host Resource MIB)
- User Disk Space Quotas for Windows, Macintosh, and UNIX/Linux
- Group Disk Space Quotas for UNIX/Linux
- Environmental Monitoring
- Email Notification Alerts

RAID Options

- The Snap Server 18000 can be configured or enhanced performance or maximum file protection. Options include:
- RAID 5 (drive striping with parity): For each array, the size of one drive is reserved for parity. Provides the best combination of performance and data protection.
 - RAID 1 (drive mirroring): One or more drives duplicate one drive for maximum data protection.
 - RAID 0 (drive striping): Large virtual drive with data striped across all drives of the array to provide maximum performance with no loss in usable capacity.
 - 24 drives maximum per RAID
 - Global hot spare support
 - Instant Capacity Expansion (I.C.E.) logically groups RAIDs for dynamic online scalability
 - 16TB maximum per volume

Data Protection

- Snapshots: Snapshot technology enables immediate or scheduled point-in-time images of the file system. Supports up to 50 concurrent snapshots.
- Replication: Optional S2S v2 byte-level replication for nearline backup and recovery.
- Local Backup: Integrated BakBone NetVault Workgroup Edition.
- Network Backup: Supports VERITAS NetBackup/Backup Exec, CA BrightStor ARCserve/Enterprise, Legato NetWorker, BakBone NetVault, Microsoft Backup Software for Windows 95, 98, Me, NT, 2000, XP, and NDMP v2, v3, v4. Compatible with Dantz Retrospect for Macintosh.
- Windows Clients: Standard Symantec DataKeeper software (unlimited user license) included for backup of Windows clients.
- Client Imaging: Compatible with Symantec V2i Protector Desktop Edition for image-based backup and restore of Windows clients.
- Server Imaging: Compatible with Symantec V2i Protector Server Edition for image-based backup and restore of Windows servers.
- UPS Support: APC brand UPS with Network Management Cards are supported for graceful system shutdown.

Worldwide Warranty

Snap Appliance hardware and software are backed by world-class service and support to protect your investment from downtime. With Snap Care™ services, you have complete peace of mind.

Standard services with the Snap Server 18000 include:

- Three-year limited hardware warranty
- One-year Snap Care™ Silver Next Business Day (NBD) Onsite Service
- One-year GuardianOS™ Bronze Software Maintenance Service

Optional Support Programs

- Bronze Software Maintenance Service (three-year)
- Silver Next-Business-Day Onsite Service (three-year)
- Gold Same-Day Onsite Service (one-year, three-year)

Snap Server 18000 Specifications

Physical

- Width: 17.3 in. (439.4 mm)
- Height: 3.5 in. (88.9 mm), 2U
- Depth: 26.5 in. (673 mm)
- Weight: 70 lbs. (31.75 kg)

Agency Certifications

- UL, cUL, CE, FCC Class A, C-Tick, Nemko, TuV

Processor

- Dual 3.06GHz Intel Xeon Processors with Symmetric Multi-Processing (SMP)
- 512KB L2 cache and 533 MHz front-side system bus

ECC Memory

- 2GB PC2100 DDR SDRAM running at 266MHz

Nonvolatile Memory

- 512MB Battery-backed NVRAM

Drive Configuration

- Eight (8) 250GB hot-swappable Serial-ATA (SATA) drives with 2TB raw capacity
- Preconfigured as a RAID 5 array (1.62TB usable capacity)

Network Interface

- Dual-Gigabit Ethernet ports (autosensing 10/100/1000)
- Support for stand-alone, failover and load-balancing modes

Expansion Array Interface

- Optional single port Fibre Channel Host Bus Adapter (auto-negotiating 1Gbps/2Gbps)

Local Tape Backup Interface

- Dual-channel Ultra320 SCSI 68-pin VHDCI

Available PCI-X Expansion Slots

- One (1) full-height 64-Bit/133MHz
- Three (3) half-height 64-Bit/133MHz

Power

- Power Supplies: Dual 500W (hot-swappable)
- Power Rating: 100-240 VAC, 47-63 Hz, autosensing
- Input Current: 3.2A (RMS) for 115 VAC, 1.6A (RMS) for 230 VAC
- Power Consumption: 370W (steady state) 500W (maximum)

Heat Dissipation

- 1262 BTUs/hr

IT Power Systems

The Snap Server 18000 is also designed for IT power systems with phase-to-phase voltage 230 V

Predicted Reliability

- System MTBF (raw): 18,675 Hrs¹
- System MTBF (redundant): 107,312 Hrs²

Environmental limits, operating

- Temperature: 50° F to 95° F (10° C to 35° C)
- Non-condensing humidity: 15% to 90%
- Vibration: .01G at 10-300Hz random for up to 120 minutes
- Shock: 6 pulses of 33G for up to 2 ms
- Altitude: -50 ft to 10,000 ft (-16 m to 3,048 m)

Environmental limits, non-operating

- Temperature: 14° F to 149° F (-10° C to 60° C)
- Non-condensing humidity: 5% to 95%
- Vibration: 2G at 5-500Hz for up to 90 minutes
- Altitude: 0 ft to 35,000 ft (0 m to 10,668 m)



Snap Appliance, Inc.
125 S. Market St.
San Jose, CA 95113
888-343-SNAP (7627)
International: 408-795-3600

1. Calculated from Bellcore Reliability Prediction Procedure TR-332, Issue 6.
2. Factors out redundant (N+1) components including disk drives, power supplies and cooling fans.

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