

Solaris™ Volume Manager in the Solaris 9 Operating Environment

Making data accessible and available — 24x7.

Sun™ ONE
Open Net Environment



Key feature highlights

RAID 0 disk striping enables parallel I/O and load balancing for improved performance.

RAID 1 and RAID 5 handle disk failures transparently.

A hot-spare facility provides automatic online recovery.

SNMP traps for event notification.

Soft partitioning allows thousands of partitions and file systems on a disk or RAID volume.

Graphical user interface simplifies management and logs commands to support script-based configuration.

Straightforward command-line interface simplifies remote administration.

Alternate path support enables Solaris Volume Manager to ensure continuous data availability in the event of controller failure.

Concatenation and the UFS grow file system command allow the construction of large logical devices and enable online expansion and reconfiguration.

Includes CIM/WBEM API for direct monitoring and control.

Today's explosive levels of growth — in terms of bandwidth, networks, and digital devices — are driving an even greater shift towards a services model of computing. The Services on Demand approach moves the burden of a computing infrastructure from end users and their PCs to the organizations that provide the services. Since its inception in 1982, Sun has been driven by a singular vision — The Network Is The Computer™ — and has helped businesses harness the transforming power of the network in order to create, deploy, and deliver reliable Services on Demand.

As the foundation for the Sun™ Open Net Environment (Sun ONE) — Sun's vision, architecture, platform, and expertise for delivering Services on Demand — the Solaris™ 9 Operating Environment provides an integrated yet open architecture for building and deploying Services on Demand. The Solaris 9 Operating Environment (OE) offers new levels of performance in scalability, availability, manageability, and security, and delivers a complete and highly refined environment designed to enable customers to increase service levels while decreasing costs and reducing IT risks.

Solaris Volume Manager

As more and more mission-critical applications move from proprietary mainframes to open platforms, the need for robust storage management and performance optimization increases. Data must be instantly accessible and available — 24 hours a day, 7 days a week. Taking a system offline to perform traditional maintenance is not an option. Solaris Volume Manager (formerly Solstice DiskSuite™) software provides tools to achieve these goals.

Solaris Volume Manager is a disk and storage management solution designed to meet the demands of Solaris software users. A component of the Solaris Operating Environment, Solaris Volume Manager helps provide high data availability and reliability, enhanced system and I/O performance, and simple large system and disk administration.

Enhanced Data Availability

With Solaris Volume Manager, you gain a powerful set of tools designed to enhance data availability — and help ensure that your organization remains productive — through around-the-clock access to information.

RAID 1

Solaris Volume Manager software provides a comprehensive data-redundancy solution. It transparently maintains mirror copies of data and automatically uses the surviving copy in the event of hardware failure.

RAID 1 + 0

Solaris Volume Manager intelligently provides RAID 1 + 0 capabilities when the underlying devices are identical physical disks. If logical devices can support internal redundancy, as in

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the case of network storage devices, Solaris Volume Manager provides RAID 0 + 1.

RAID 5

The RAID 5 feature in Solaris Volume Manager provides highly available data storage at a lower cost — using less disk space — than mirroring. By distributing parity information across all disks in the RAID array, it allows recovery from any single disk failure within the array without data loss.

Soft Partitioning

The soft partitioning feature in Solaris Volume Manager allows a physical disk, storage device LUN, or a RAID 0, RAID 1, or RAID 5 volume to be subdivided into soft partitions, up to thousands if necessary, each of which can contain a file system. The size of each soft partition is independently configurable. Soft partitions provide the flexibility to effectively utilize high-capacity storage devices and precisely configure the storage to match every business need.

Hot Spares

Online system recovery is supplemented with a hot-spare utility that automatically replaces failed RAID 1 or RAID 5 components. This facility migrates new partitions to replace failing ones. Users continue to access the surviving copy of data while the new component is updated — without interrupting service.

Improved Performance and System Monitoring

Solaris Volume Manager improves both I/O and system performance. Disk striping

augments application performance by increasing I/O throughput — spreading the I/O load over several disks to increase the throughput available to a single process. Solaris Volume Manager also provides a performance monitor to more effectively manage disk subsystems. It helps minimize performance bottlenecks by identifying potential ones before they occur.

Improved Data Reliability and Integrity

Solaris Volume Manager software provides the cornerstone for data reliability and integrity in your enterprise. It incorporates technology that helps ensure consistency across mirrors.

Increased File System Capacity

In the past, when a UNIX® file system ran out of space, files had to be moved around or the file system needed to be completely reconstructed on a larger disk. The result: service interruption. Solaris Volume Manager solves this problem by allowing a single file system to span multiple physical disks. Space is no longer an issue, and neither is downtime. With Solaris Volume Manager, just add a new component to the underlying device, issue a single command to grow the file system, and continue without downtime or interruption.

Easy and Flexible Administration

Solaris Volume Manager provides the flexibility and agility necessary to effectively manage your growing, dynamic storage environment. It offers a powerful, simple GUI, as well as provides an open standard-based CIM/WBEM API and the traditional command-line interface.

The GUI provides error-free setup of volumes, including RAID 1, RAID 5, and soft partitions, as well as easy, ongoing administration of storage subsystems. It delivers a visual representation of the subsystem along with interactive filtering capabilities — both invaluable in managing large, complex storage subsystems.

About Sun ONE

The Sun Open Net Environment (Sun ONE) is Sun's vision, architecture, platform, and expertise for delivering Services on Demand today and in the future. Based on open standards such as Java™ and XML technology, Sun ONE provides a highly scalable and robust framework for building and deploying a variety of Services on Demand — from traditional Web-based applications to future context-aware Web services. By simplifying the way Web services are created, assembled, and deployed, the Sun ONE platform can enhance productivity, speed time to market, and increase business opportunities for enterprises worldwide.

System Requirements

Solaris Volume Manager is a feature of the Solaris Operating Environment

50 MB of disk space (minimum of two drives)

For More Information

To learn more about Solaris Volume Manager and the Solaris Operating Environment, visit sun.com/solaris. For additional information on Sun ONE, visit sun.com/sunone.

Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, CA 94303-4900 USA Phone 800 786-7638 or +1 512 434-1577 Web sun.com



Sun Worldwide Sales Offices: Africa (North, West and Central) +33-13-067-4680, Argentina +5411-4317-5600, Australia +61-2-9844-5000, Austria +43-1-60563-0, Belgium +32-2-704-8000, Brazil +55-11-5187-2100, Canada +905-477-6745, Chile +56-2-3724500, Colombia +571-629-2323, Commonwealth of Independent States +7-502-935-8411, Czech Republic +420-2-3300-9311, Denmark +45 4556 5000, Egypt +202-570-9442, Estonia +372-6-308-900, Finland +358-9-525-561, France +33-134-03-00-00, Germany +49-89-46008-0, Greece +30-1-618-8111, Hungary +36-1-489-8900, Iceland +354-563-3010, India-Bangalore +91-80-2298989/2295454; New Delhi +91-11-6106000; Mumbai +91-22-697-8111, Ireland +353-1-8055-666, Israel +972-9-9710500, Italy +39-02-641511, Japan +81-3-5717-5000, Kazakhstan +7-3272-466774, Korea +822-2193-5114, Latvia +371-750-3700, Lithuania +370-729-8468, Luxembourg +352-49 11 33 1, Malaysia +603-21161888, Mexico +52-5-258-6100, The Netherlands +00-31-33-45-15-000, New Zealand-Auckland +64-9-976-6800; Wellington +64-4-462-0780, Norway +47 23 36 96 00, People's Republic of China-Beijing +86-10-6803-5588; Chengdu +86-28-619-9333; Guangzhou +86-20-8755-5900; Shanghai +86-21-6466-1228; Hong Kong +852-2202-6688, Poland +48-22-8747800, Portugal +351-21-4134000, Russia +7-502-935-8411, Singapore +65-6438-1888, Slovak Republic +421-2-4342-94-85, South Africa +27 11 256-6300, Spain +34-91-596-9900, Sweden +46-8-631-10-00, Switzerland-German 41-1-908-90-00; French 41-22-999-0444, Taiwan +886-2-8732-9933, Thailand +662-344-6888, Turkey +90-212-335-22-00, United Arab Emirates +9714-3366333, United Kingdom +44-1-276-20444, United States +1-800-555-9SUN or +1-650-960-1300, Venezuela +58-2-905-3800

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