



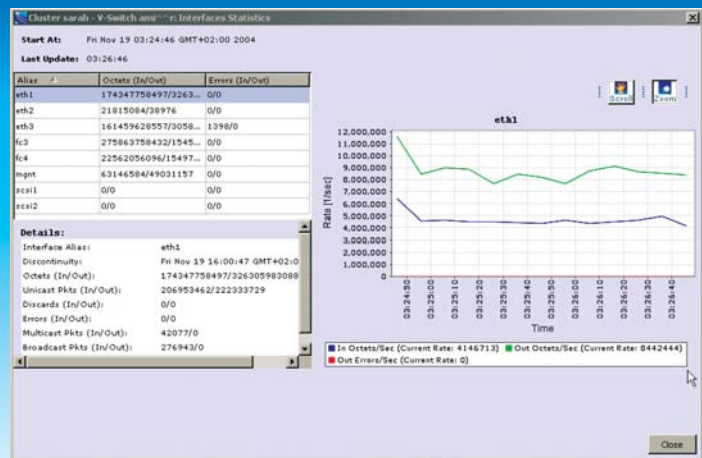
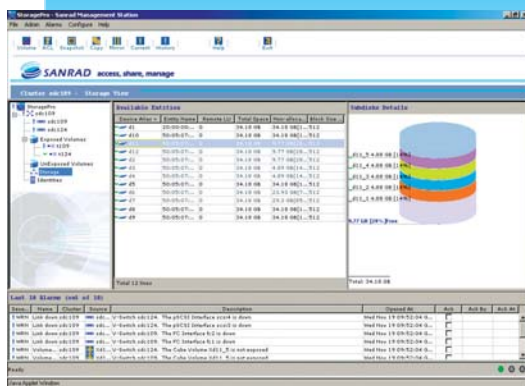
Total
iSCSI SAN

V-Switch 3000

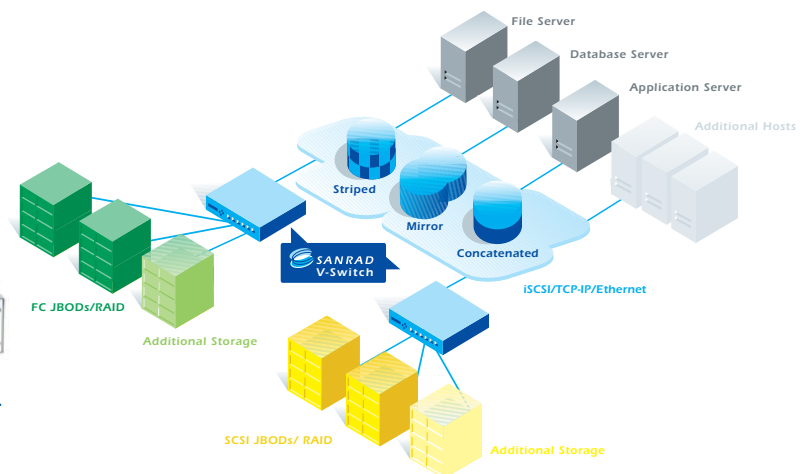
SANRAD V-Switch 3000™ is an enterprise class all-in-one IP-SAN for IT professionals requiring the utmost in reliability, serviceability and performance. V-Switch 3000 combines a truly interoperable multi-port, multi-protocol storage switch platform with comprehensive onboard StoragePro™ Services.

SANRAD StoragePro Services operate within the V-Switch providing intelligent storage services, protocol conversion and data replication that enable IT professionals to build an all-in-one iSCSI IP SAN. SANRAD StoragePro Management provides an easy way to centrally manage a single V-Switch, a V-Switch cluster or multiple V-Switches simultaneously, providing a comprehensive and highly scalable IP-SAN.

StoragePro Management provides a simple and unified interface for configuring iSCSI SANs and viewing storage performance alerts.



Rear of V-Switch 3000 supporting both FC and SCSI storage systems. Also available for FC storage only or SCSI storage only.



StoragePro Services gather all storage resources connected to the V-Switch into a single pool. From these pooled resources, administrators can define policies and services independent of the attached storage systems brand, type, or protocol. In the same way, new logical volumes can be defined from the pooled storage resources and can take almost any shape and size, independent of physical barriers such as RAID enclosures, physical disks, protocols, and distance.

V-Switch 3000 Key Features and Benefits

Open - iSCSI storage bridging and switching platform

Standardized connectivity across Ethernet environments, linking servers with any storage system for flexible and cost-effective creation of SANs using heterogeneous storage infrastructures including FC, SCSI, iSCSI, SATA and FC fabric.

High availability for fault tolerant access to data

Active/Active system failover, failback and multi-pathing ensure continuous data availability for diverse business applications.

Storage fault tolerance for 24/7 business continuity

Replication, Snapshots and migration of data across multiple storage systems, prevent data loss and automatically route users to available storage resources. Removable Compact Flash mirrors the configuration database for fast recovery. Network Layer RAID 0, 1, 0+1, and 10.

Network-based storage pooling and virtualization with volume management for capacity management across enclosures

Storage Pooling, Volume Spanning, Resizing and Striping enable the creation of custom storage volumes across physical disks and enclosures, for optimal performance of applications, maximum utilization of storage resources and cost effective service growth.

Advanced traffic management maximizing storage performance

Read and write multi-pathing to FC and SCSI storage systems load balances data requirements across multiple mirrored copies, accelerating data retrieval for the best user experience.

Storage security for complete access control and protection of data

Access Control Lists, iSCSI login authentication, VPN support and data encryption for access control and remote data security.

1 Unit rack size

Compact size saves you precious rack space.

StoragePro Management System Key Features and Benefits

Manage and view storage volumes using remote management and web-based GUI for centralized control

StoragePro can be managed by a SANRAD browser based GUI for simple administration of one or many V-Switches. A complete CLI can also be used for customizing or automating StoragePro operations to synchronize with server applications. StoragePro also supports Telnet.

Administer the IP SAN from a centralized interface

Easily manage a global infrastructure of SANRAD V-Switches from a single interface to allocate storage capacity from any device, anywhere, anytime.

Monitor performance and traffic on the V-Switch

Monitor traffic statistics on each storage and network interface to increase application performance. Monitor counters and generate reports defined by standard MIBs including TCP/ IP, FC, SCSI and iSCSI interfaces

Check system health to ensure uninterrupted storage services

Have a single view of V-Switch fans, power supplies and temperature. Monitor error levels for network and storage interfaces, TCP/IP layers, iSCSI sessions and connections.

Understand your iSCSI topology

Review server connections to specific storage volume.

Utilize your capacity intelligently

Precisely allocate your storage resources as needed and manage unallocated capacity to improve storage efficiency.

Detect and troubleshoot faults

SNMP generates alarms and logs for user defined events. StoragePro generates email messages for real-time tracking and monitoring of both SANRAD V-Switch and StoragePro.

Technical Specifications

Storage Virtualization and Volume Management:

- Maximum no. of servers supported: 200
- Maximum no. of volumes supported: 51,200
- Maximum capacity: 4096 TB (4.096 PB)
- Maximum volume size: 64 TB

FC Specifications:

- 1 or 2 Gb/s auto speed detection
- Pluggable SFP connectors
- L or N or NL ports

Parallel SCSI

Specifications:

- Up to 160 MB/s
- LVD or SE transceiver modes
- VHDCI 68 pin connectors

Storage Interfaces:

4 FC or 4 SCSI or 2 FC and 2 SCSI

Management Interfaces:

- RS232 DB-9 port
- Ethernet 10/100 RJ45 port
- LCD 2 Lines with 16 characters each and six operating buttons

Ethernet Standards:

- IEEE 802.3z
- IEEE 802.3.ab

Network Interfaces:

- 3 Gbit iSCSI Ethernet ports
- Copper RJ45 1000BaseT
- Optic SFP 1000Base-SX
- Optic SFP 1000Base-LX

- **Removable Compact Flash**

Internet Standards:

- RFC791 IP v4
- RFC 793 TCP, RFC 894 IP/Ethernet
- RFC 1042, IP/802
- RFC 1517
- RFC 792 ICMP, 950 ISSP
- RFC 3720 - iSCSI

Fibre Channel ANSI Standards:

- FC-AL-2
- FC-PLDA
- FC-FLA
- FC-PH-3
- FCP

Management Standards:

- SNMP V2
- RFC 854 Telnet
- RFC 2863
- RFC 2011
- RFC 2012
- RFC 2013
- ID SCSI MIB 05
- ID iSCSI MIB 09

SCSI Standards:

- Ultra 3 SCSI 160
- Wide Ultra2 SCSI 80
- Ultra2 SCSI 40
- SCSI 3

Dimensions:

1.75" H x 17.2" W x 17.6" D (4.4 H x 43.8 W x 44.6 D cm),
Standard 19 inch EIA rack or standalone

Power:

Dual Hot Swap Power Supplies 100-250V, 50-60Hz Auto, Switching, 75 WATT

Weight: 11.9 lb (5.4 kg)

Operating Temperature: 32° - 122° F (0° - 50° C)

Storage Temperature: -40° - 75° F (-40° - 167° C)

Humidity (non-condensing): 10% to 95%

Altitude: -500ft - 10,000ft; (-152m - 3050m)

Regulatory Compliance:

EMC (Emission):

USA & CANADA: FCC part 15 Class A

Europe and Rest of the World: EN55022 Class A

Immunity: EN55024

Safety:

USA & CANADA: UL60950

Japan: EN60950

Europe and Rest of the World: EN609050

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