



V-Switch 3400



SANRAD V-Switch 3400 Enterprise Series with integrated SANRAD StoragePro software is a versatile, open, high performance and scalable solution. V-Switch 3400 provides the connectivity and comprehensive storage management needed to easily attach a large number of iSCSI servers to an FC SAN. One can also create new, fully managed IP SAN using standard FC storage systems.

V-Switch 3400 provides the best cost performance in the V-Switch Enterprise Series. It uses a real-time operating system and high-end network processors to deliver high performance with complete component and system redundancy.

SANRAD StoragePro software is included and integrated into the V-Switch 3400 and delivers storage pooling, virtualization and management services.

SANRAD StoragePro GDR software can be added to provide unlimited data replication and site recovery between V-Switches located at facilities connected by any local, metropolitan or wide area IP network.

Key Features and Benefits

SAN Connectivity and Management for Every Server.

SANRAD's unique network architecture couples standard IP and FC connectivity with integrated storage virtualization and management. It inexpensively delivers FC SAN connectivity and storage services throughout the enterprise, and is completely non-disruptive.

Customers can maintain and grow their existing FC infrastructures, natively connecting additional servers where performance matters most, and using SANRAD's iSCSI connectivity and management for other purposes including, user file, email or database storage.

SANRAD's V-Switches are storage-agnostic. IT managers can utilize existing resources and employ different brands and classes of storage to meet the varying cost, performance and reliability requirements of the organization.

CREATE AND MANAGE LARGE STORAGE POOLS	Dynamically create large storage pools by consolidating several storage systems into a centrally managed pool that can easily scale to several petabytes.
OPEN HETEROGENEOUS ARCHITECTURE	Use any brand or type storage system directly connected or connected through a FC SAN fabric to the V-Switch for creating and expanding the storage pool.
NETWORK-BASED VIRTUALIZATION AND VOLUME CREATION	Create thousands of custom storage volumes across all connected storage systems within a storage pool to improve storage utilization and reduce costs.
TIERED STORAGE	Combine and virtualize storage systems with diverse properties within the same storage pool to provide various service levels, storage costs and performance grades for different applications.
LOCAL DATA PROTECTION	Mirror data synchronously within a data center or across campus over FC or dedicated fiber optic cables (dark fiber). Use SNAPshot, virtual shadow copy service (VSS) and cloning to help eliminate the possibility of data loss and to ensure business continuity.
HIGH AVAILABILITY	Cluster V-Switches (Active/Active) with automatic failover, fallback and multi-pathing to provide uninterrupted access to data even during system outage.
STORAGE SECURITY	Use Access Control Lists and iSCSI login authentication (CHAP, SRP) for complete access control and data protection.
SIMPLE AND CENTRALIZED MANAGEMENT	Centralize the management of many V-Switches with the StoragePro web-based GUI, or use a comprehensive CLI with SSH.
HIGH SPEED DATA MIGRATION	Copy over 1TB of data per hour between storage systems without interrupting production to simplify maintenance, repair and replacement.
REMOVABLE ONBOARD COMPACT FLASH	Quickly replace or replicate V-Switch configurations. Mirror the configuration database for fast recovery or replacement.
1 UNIT RACK SIZE, FRONT FACING INTERFACES, HOT SWAP POWER SUPPLIES	Save precious rack space and access all network and storage connections from the front face. Adjustable rack mounts fit racks up to 39" in depth. Dual redundant hot-swappable power supplies deliver continuous operation and easy replacement with no down time.
REMOTE REPLICATION AND DISASTER RECOVERY. (SOLD SEPARATELY)	Use SANRAD StoragePro Global Data Replication, GDR, to provide data replication and site recovery between V-Switches located at facilities connected by any local, metropolitan or wide area IP network.



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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 Interfaces:

4 FC ports
 Copper SFP HSSDC2
 Optic LC SFP SW/LW
 1 or 2 Gb/s auto speed detection
 L,N or NL ports

Management Interfaces:

RS232 DB-9 port
 Ethernet 10/100 RJ45 port

Network Interfaces:

3 1Gbit iSCSI Ethernet ports
 Copper RJ45 1000BaseT
 Optic SFP 1000Base-SX
 Optic SFP 1000Base-LX

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
 SSH-2
 RFC 854 Telnet

Fibre Channel ANSI Standards:

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

Management Standards:

SNMP V2
 RFC 2863
 RFC 2011
 RFC 2012
 ID SCSI MIB 05
 ID iSCSI MIB 09

SCSI Standard:

SCSI-3
 SAM-2
 SPC-3
 SBC-2

Ethernet Standards:

IEEE 802.3z
 IEEE 802.3.ab

Wake up on LAN

Removable Compact Flash

Dimensions:

1.75"H x 17.2"W x 22.8" D
 (4.4 H x 43.8 W x 58 D cm).
 Standalone surface mounting or
 fits standard 19 inch EIA rack

Power:

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

Weight:

14.1 lb (6.4 kg)

Operating Temperature:

32° to 122°F (0°-50°C)

Storage Temperature:

-40° to 75°F (-40°-167°C)

Humidity (non-condensing):

10 to 95%

Altitude:

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

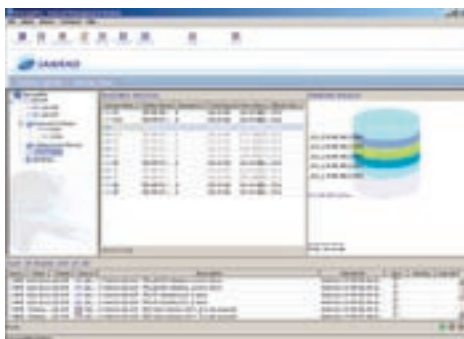
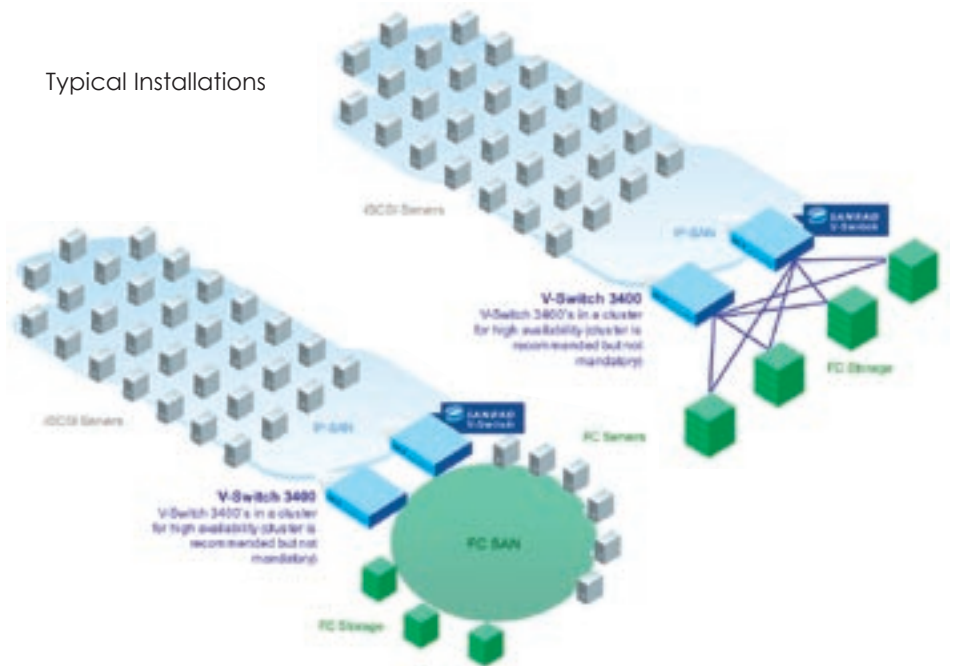
Regulatory Compliance:

EMC (Emission):
 USA & CANADA: FCC part 15 Class A
 Europe and Rest of the World:
 EN55022 Class A
 Immunity: EN55024
 Safety:
 USA & CANADA:
 USA & CANADA: UL60950 (pending)
 Japan: EN60950
 Europe and Rest of the World: EN60950

Rear View of V-Switch



Typical Installations



StoragePro Management GUI