

QUICKSPECS

MODELS

SAN Solution for Storage Consolidation

Part Numbers

4-Server Solution

StorageWorks
176947-001
2T-SANFC-04

Modular StorageWorks

198214-001
2T-SANMD-04

8-Server Solution

StorageWorks
176948-001
2T-SANFC-08

Modular StorageWorks

198215-001-001
2T-SANMD-08

Feature List:

- Consolidates storage for up to 8 servers
- Tested with Microsoft Exchange and Oracle Server
- Includes configuration and sizing guides
- Supports Windows NT, Tru64 UNIX, OpenVMS, and Solaris
- Easily managed, high performance solution
- Complete Storage Area Network

PRODUCT DESCRIPTION / OVERVIEW

The SAN Solution for Storage Consolidation is a pre-tested configuration of hardware, management software, device driver software, and installation methods that is intended for customers who will benefit by combining the data for multiple servers onto an easily managed, flexible SAN environment.

The solution includes all components needed to build a highly available, easily managed Storage Area Network that can satisfy the storage needs of up to eight servers (16 port switch, ESA/EMA12000 version) or up to four servers (8 port switch, RA/MA8000 version). The solution supports any combination of Windows NT, Tru64 UNIX, OpenVMS, and Sun Solaris servers. To facilitate deployment, it includes application test data for Oracle Server and Microsoft Exchange Server.

CUSTOMER BENEFITS

- Excellent solution for storage consolidation across heterogeneous, multivendor servers. The Solution simplifies storage management by reducing the total number of storage systems needed to support a number of servers.
- Supports clustered and standalone servers for the highest application service levels.
- Includes the *StorageWorks* Command Console management application, which provides a Graphical User Interface (GUI) management system for up to 1000 storage systems in one or more SANs. User selectable views show each storage system in either a physical view (looks like the storage system front panel) or logical view (shows configuration of Logical Units). SWCC also supports error notification and reporting.
- Application characterization data facilitates deployment.
- Highly scalable capacity and high performance to support today's eBusiness applications.
- Provides a platform for enhanced data protection options such as remote copy (using *SANworks* Data Replication Manager and snapshot copies (using *SANworks* Enterprise Volume Manager).
- Compatible with other *SANworks* software products such as Storage Resource Manager, which provides consolidated report of the storage capacity usage characteristics of each user.

PLATFORM, SOFTWARE AND APPLICATION SUPPORT

The SAN Solution for Storage Consolidation is tested with the following operating systems and applications:

- Microsoft Exchange on Windows NT
- Oracle Server on Tru64 UNIX, OpenVMS, Windows NT, and Sun Solaris

Tru64 Clusters, OpenVMS Clusters, and MSCS Clusters are supported. Check <http://www.compaq.com/products/storageworks> for up to date platform information for ProLiant, multi-vendor and specific operating system version support.

HARDWARE SUPPORT

The SAN Solution for Storage Consolidation includes the following components. The solution is delivered in two identical cabinets, each containing a storage array, a switch, and redundant power. The SAN Solution for Storage Consolidation uses standard, fully supported Compaq hardware and software products. All supporting material, including support, configuration, and diagnostic functions are exactly the same as those used in the individual products. All support, configuration, and diagnostic software is included in the solution.

- RA/MA 8000 Modular Storage Array (4-server solution) or ESA/EMA 12000 Modular Storage Array (8-server solution). These disk subsystems deliver highly available storage capacity, excellent performance capabilities, the ability to securely present storage simultaneously to multiple servers, The solution holds up to 5.2 TB, and can support up to 7.75 TB of disk and higher performance with optional controllers.
- 8- or 16- port Fibre Channel switch. The switches support extremely high I/O rates and are never the bottleneck in the SAN installation. The fabric zoning feature enables the SAN to grow to support additional switch, storage, and server connections.

SOLUTIONS / OTHER SUPPORT

In addition to the specific operating systems and applications tested for this solution, the solution components and configuration guides can be applied to all platforms supported by the component products.

- All application data provided with this solution also applies to the RA8000 based and ESA12000 based SAN Solution for Storage Consolidation, Part Numbers 176947-001 and 176948-001.

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DOCUMENTATION

The SAN Solution includes the following documentation, which is intended to describe all major features, their use, and to facilitate deployment of this solution.

- Installation Guide describes best practices for installing the solution and configuring logical disks (LUNs).
- Technical White Paper describes the solution and implementation methodologies in detail.
- Management Guide describes management software features and capabilities.
- RA/MA8000 or ESA/EMA12000 Installation Manual, User Guide, and other standard product documentation
- Switch/8 or Switch/16 Installation Manual, User Guide, and other standard product documentation

SOLUTION PRODUCT SERVICES

The following services are available from Compaq Customer Services.

- Installation service: Assembly of hardware components, configuration of storage subsystems and Fibre Channel switches into a SAN storage system, installation of management software, and system health check.
- Data Migration service includes migration of customer's Exchange and Oracle data from existing disks to the SAN Solution disks.
- Phone Home service for remote health monitoring of SAN Solution components by Compaq.

SOLUTION WARRANTY

The SAN Solution for Storage Consolidation is covered by a three-year parts warranty, one-year on-site warranty and a one-year labor warranty.

STORAGEWORKS SAN SOLUTION FOR STORAGE CONSOLIDATION SPECIFICATIONS

The SAN Solution for Storage Consolidation is a pre-tested integrated configuration that includes the following Compaq products.

Refer to the QuickSpecs or Detailed Descriptions for the individual product specifications.

O/S Support

Windows NT, SP 3, 4, 5
Tru64 UNIX 4.0f, 5.0
OpenVMS 7.2, 7.2-1
Sun Solaris 2.6, 2.7

Hardware Configuration

MA 8000 Modular Array, dual controller, OR	175992-B21
EMA12000 Modular Array, dual controller	175993-B21
Array Controller Software v8.5F	128697-B21
Fibre Channel Switch 8 or Switch 16	158222-B21 or 158223-B21

Required Options

Intel Server PCI Host Bus Adapter	380574-001
Alpha Server Host Bus Adapter	380574-001
Sun Host Bus Adapter	123503-001 (S-bus) or 380576-001 (PCI bus)

Operating System Solution Kits

Windows NT	380551-001
Tru64 UNIX	380553-001
OpenVMS	380555-001
Sun Solaris	380554-001

StorageWorks Drives for RA/ESA Storage Systems

36 GB 10K RPM 1"	176496-B22
18 GB Ultra2 SCSI 7.2K RPM 1"	388144-B22
18 GB Ultra2 SCSI 10K RPM 1"	128418-B22
9 GB Ultra2 SCSI 7.2K RPM 1"	123065-B22
9 GB Ultra2 SCSI 10K RPM 1"	328939-B22
0.6" Drive Extenders (package of 4)	148649-B21

Note: extenders (top hats) are attached to 1" drives so they can be used in 1.6" drive bays.

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STORAGEWORKS SAN SOLUTION FOR STORAGE CONSOLIDATION SPECIFICATIONS *(continued)*

StorageWorks Drives for MA/EMA Modular Storage Systems

18.2GB Ultra2 SCSI 10K RPM 1"	128418-B22
18.2GB Ultra2 SCSI 7.2K RPM 1"	388144-B22
9.1GB Ultra2 SCSI 10K RPM 1"	328939-B22
9.1GB Ultra2 SCSI 7.2K RPM 1"	123065-B22

CarePaq (service & support)

Software Product Services (recommended for all installations)

- Telephone support
- New version update services, including license and media/documentation subscription services

Hardware Product Services

- Installation services
- On-site Maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage
- RAID setup and performance consulting via statement of work

Warranty

Standard Warranty and any enhanced warranty options