QUICKSPECS

MODELS

StorageWorks Command Console V2.1

Overview

Command Console is a full-featured, graphical user interface (GUI) providing local and remote management of StorageWorks™ controllers. It is a user-friendly tool for monitoring, configuring, and troubleshooting storage subsystems.

Command Console can be connected to the StorageWorks controller in several ways. Once connected, the program issues commands and interprets the responses sent by the controller. The user interface displays the logical and physical layout and status of a selected subsystem in graphical form.

Command Console consists of two major components: the Client and the Agent. The Client, which includes the user interface and some additional services, provides a window into your storage subsystems. The Agent is a host-resident program that is an interface between the Client and the host's storage controller, which interprets and transfers information.

Command Console is Year 2000 compliant.

FEATURES

The major features of the Command Console are:

- Easy, graphical configuration of the storage system using an interface similar to Windows Explorer®
- Graphical view of the controller and its physical and logical storage elements
- Status monitoring of the storage subsystem using intuitive icons
- Fault notification by pager, electronic mail, and event log entries
- Management of multiple host systems through a TCP/IP network connection
- Direct serial port connection
- Direct SCSI port connection
- Robust security that prevents unauthorized access to configuration capabilities

Command Console Agent

The Agent acts as the Client's assistant in controlling the storage subsystem. The Agent continuously monitors the subsystem and notifies the Client of changes.

Commands sent from the Client are received by the Agent and are routed to the storage subsystem via the subsystem's SCSI host bus. Subsystem status is transmitted back to the Client from the Agent via the network connection. The Agent also authenticates users based on the operation being performed to the subsystem. In addition, the Agent can also inform the user of changes via SNMP and electronic mail (on UNIX® and OpenVMS platforms).

On the OpenVMS platform, the Agent supports Digital's TCP/IP Services for OpenVMS, and Process Software's MultiNet and TCPware products.

RAID Support

Command Console provides graphical configuration support for the following RAID configurations:

- RAID 0 - disk striping
- RAID 1 - disk mirroring
- RAID 0+1 - striped mirroring
- RAID 5/3 - striped parity
- JBOD

Connection Options

The Command Console client can be connected to the storage subsystem in three ways:

Network Connection - Command Console Client can connect to a maximum of 128 Agents via a TCP/IP network connection. From the Client, the agents can be managed on multiple host platforms.

Direct Serial Port Connection - Command Console Client can also be connected to the subsystem via a direct, cable connection (RS232) from the PC to the subsystem controller's serial maintenance port, where available. No Agent is required for this configuration.

Host-Bus SCSI Connection - The Command Console Client can be run on Windows NT host systems and manages the storage subsystem using the host SCSI bus, where applicable.

FEATURES *(continued)*

Controller Compatibility

The Command Console supports the following RAID controllers:

- HSZ20, HSZ40, HSZ50 and HSZ70
- HSJ30, HSJ40, HSJ50, HSD30, and HSD50
- KZPAC and KZPSC
- HSZ22
- HSG80

Command Console Client is compatible with the Agent V1.1B. Client can monitor and configure controllers on hosts running the Agent V1.1B. Only one version of Command Console Agent can run on a host.

Command Console Scalability

Up to 128 host systems can be connected concurrently, each with up to 32 storage subsystems, for a maximum of up to 4096 concurrent subsystem connections and a total of 2.65 TB of storage.

Using a network connection, the storage subsystem can be configured and monitored from anywhere on the LAN. If the LAN has WAN or Internet connectivity, the subsystem with TCP/IP network reliability from anywhere in the world.

Error Handling

Command Console provides Pass-Through error information for all types of controller problems. If the Client runs on a Windows NT   system, the program makes full use of the Windows NT event logging facility. The Agent can issue errors without an active Client. The errors can be directed to the syslog facility, or a pager, can be mailed to specific users, or can use the standard SNMP asynchronous notification.

Pager Fault Notification

Command Console offers the capability to notify multiple alphanumeric or numeric pagers, in user-specified shifts, when a subsystem faults. Pager information consists of both subsystem identification and fault category codes. The application event service must be running on the Client in order for pager notification to be received.

Command Console Security

A client has three levels of security access for communicating with the storage subsystem. The user configures the privilege levels within the Agent.

- Overall status - Monitor event changes with notification
- Detailed Status - View event changes with the graphical user interface (GUI)
- Configuration - Allow configuration of the subsystem(s) and the preceding features noted

SCSI Device Management Support

Command Console provides SCSI device management support by monitoring the storage devices connected to SCSI adapters. The Device Management Storage Window displays the status of the adapter and the devices attached to it. In addition, device firmware can be updated and mode page information, static information such as vendor ID, product ID, and device type and capacity can be viewed.

FEATURES *(continued)*

Minimum System Requirements

Following are the minimum system requirements for Command Console Client:

Architecture	Intel 486/66 MHz with 16 MB of memory
Operating system	Windows NT V3.51 SP5, V4.0 SP3, or Windows 95a, Windows 95 OCR
Disk space	All programs and files <5 MB
Monitor	VGA
Input devices	Keyboard, mouse
SCSI adapter	Fast Wide Differential (FWD)
Modem	Hayes-compatible (required for paging only)
Serial port	For connection via serial port only for HSZ controllers
Network adapter	TCP/IP-compatible network card (required for network connection only)
Pagers	Alphanumeric pagers: PageNet® and MobileComm® Numeric pagers: Any that support input of a numeric message followed by a pound (#) sign, including those that implement PINs. Required for paging only.

The SCSI Device Management Storage Window supports Windows NT V4.0 SP3, Windows 95a, and the Windows 95 OCR.

Enclosure Hardware Compatibility

Command Console provides specific, graphical representations for the StorageWorks StorageWorks enclosures supported by the controller. For example, Command Console displays representations of a 7-device, single controller Configuration, a 14-device, dual controller configuration, and more for the HSZ22 controller.

SCSI Device and Adapter Compatibility

Command Console's Device Management Storage Window and Agent support SCSI-2 devices that reside in supported configurations. Note that the Agent runs on Windows NT V4.0 systems and Compaq's Digital UNIX V4.0b and V4.0d systems only.

In addition, the following embedded adapters are supported:

- Qlogic 1020 chip
- Qlogic 1040 chip

NCR 53C810 / SYM20810

Warranty[1]

Command Console is furnished with a limited warranty. For more information on warranty terms contact your Compaq sales representative.

FEATURES *(continued)*

Operating Systems Supported

The following table describes the operating system platforms and versions supported by the Command Console Controller Agents:

Controller	Operating System	Version
HSZ20	Windows NT Alpha	4.0 SP3
HSZ40	Windows NT Intel	3.51 SP5 and 4.0 SP3
HSZ50	Digital UNIX	3.2g and 4.0b-d
HSZ70	OpenVMS Alpha	6.2-1H3 and 7.1-1H1
	HP-UX	10.2 and 11.0
	IBM AIX	4.2 and 4.3
	Sun Solaris	2.51 and 2.6
	Silicon Graphics IRIX	6.2 and 6.4
HSJ30	OpenVMS Alpha	6.2-1H3 and 7.1-1H1
HSJ40	OpenVMS VAX	6.2 and 7.1
HSJ50		
HSD30		
HSD50		
KZPSC	Windows NT Alpha	4.0 SP3
KZPAC	Windows NT Intel	3.51 SP5 and 4.0 SP3
	Digital UNIX	3.2g and 4.0b-d
HSG80	Windows NT Alpha	4.0 SP3
	Windows NT Intel	3.51 SP5 and 4.0 SP3
HSZ22	Windows NT Alpha	4.0 SP3
	Windows NT Intel	3.51 SP5 and 4.0 SP3

[1] Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details. In Canada, consult the Product Information Center at 1-800-567-1616 for details.