

## MODELS

Compaq StorageWorks™  
Command Console

## OVERVIEW

Command Console is a feature-rich, graphical user interface (GUI) providing local and remote management of *StorageWorks* controllers. It is a user-friendly tool for monitoring, configuring, and troubleshooting Compaq storage array and controllers.

Command Console can be connected to your *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 to interpret and transfer 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

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The Agent acts as the Client's assistant in controlling your 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 Compaq's TCP/IP Services for OpenVMS, and Process Software's MultiNet and TCPware products.

### RAID Support

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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

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You can connect the Command Console client to your 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, you can manage the agents 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** - You can run the Command Console Client on Windows 2000 host systems and manage the storage subsystem using the host SCSI bus, where applicable.

## **FEATURES** *(continued)*

### **Controller Compatibility**

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The Command Console supports the following Compaq RAID controllers:

- HSZ20, HSZ40, HSZ50 and HSZ70
- HSJ30, HSJ40, HSJ50, HSD30, and HSD50
- KZPAC, KZPSC, and KZPCC
- HSZ22
- HSG80 and HSG60

### **Fibre Channel Components**

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The Command Console also supports the following Compaq Fiber Channel components:

- 7 and 12 port fiber channel hubs
- SANswitches 8, 12, and 8-EL
- Fiber channel tape controllers I and II

### **Command Console Scalability**

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You can connect concurrently to up to 128 host systems, each with up to 32 storage subsystems for a maximum of up to 4096 concurrent subsystem connections and a total of 2.65PB of storage.

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

### **Error Handling**

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Command Console provides pass-through error information for all types of controller problems. If the Client runs on a Windows NT/2000 system, the program makes full use of the Windows NT/2000 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**

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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**

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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 GUI
- **Configuration** - Allow configuration of the subsystem(s) and above features noted.

### **SCSI Device Management Support**

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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, you can update device firmware and view mode page information, as well as static information such as vendor ID, product ID, and device type and capacity.

## FEATURES *(continued)*

### Minimum System Requirements

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Following are the minimum system requirements for Command Console Client:

Architecture	Intel Pentium with 16 MB of system memory.
Operating system	Windows 2000 & WIN NT 4.0 SP5 and greater
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 <sup>®</sup> and MobileComm <sup>®</sup> . Numeric pagers: Any that support input of a numeric message followed by a pound (#) sign, including those that implement PINs. Required for paging only.

### Availability

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Command Console client and various agents are available through Compaq provided platform solution kits. Platform solution kits are available for various operating system support. Platform solution kit part numbers are available at the product web site.