

Description

Command Console is a feature-rich, graphical user interface (GUI) providing local and remote management of StorageWorks controllers. It provides an extremely user-friendly method of monitoring, configuring, and troubleshooting a large number of storage subsystems.

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.

In short, Command Console is your remote, graphical window into the operation of your storage subsystems!

Features

The major features of the Command Console are:

- Easy, graphical configuration of the storage system
- Graphical view of the controller and its physical and logical storage elements
- High and low-level status monitoring of the storage subsystem using colored icons
- Remote fault notification by pager
- Controller firmware download facility
- Automatic event logging in Windows NT
- Network connection via TCP/IP protocol. Both TCP/IP and SNMP fault notification protocols
- Host port SCSI bus virtual terminal connection
- Direct, serial port connection
- User and feature access protection preventing access to configuration capabilities

- The Agent can be configured to notify the user of a problem or event without an active Client. (Only available to Digital UNIX, Sun Solaris, HP-UX, and IBM AIX users.)

Program Modules

Command Console consists of two program modules:

- Command Console Client - the GUI portion of Command Console. The Client is a 32-bit application designed to run on Microsoft Windows NT[®] 3.51/4.0 and Windows 95[®] on Intel systems.
- Command Console Agent - the host-resident program that works with the Client for network connectivity. The Agent is available for Windows NT[®] 3.51 and 4.0, Digital OpenVMS[®] Alpha[®] 6.2 and 7.0, Digital UNIX[®] 3.2D and 4.0, Sun[®] Solaris[®] 2.4, 2.5 and 2.5.1, IBM[®] AIX[®] 4.1.4 and 4.2, and Hewlett[®] Packard HP-UX 10.01 and 10.10 host for both 700 and 800 series systems.

RAID Support and Terminology

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

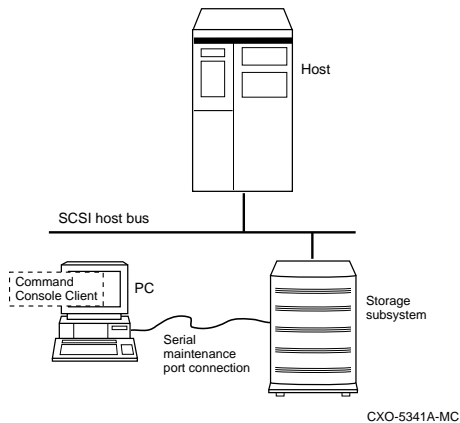
- RAID 0 - disk striping.
- RAID 1 - disk mirroring
- RAID 0+1 - striped mirroring
- RAID 3/5 - striped parity RAID

Connection Options

You can connect the Command Console client to your storage subsystem in three ways:

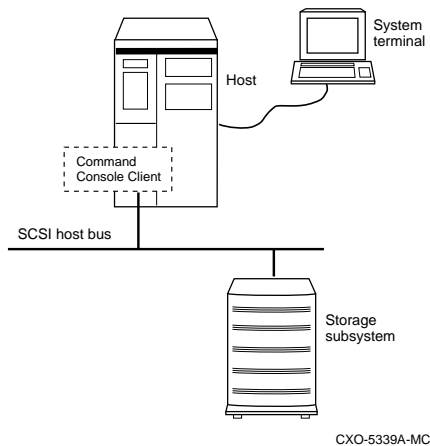
Direct Serial Port Connection

The simplest connection to the storage subsystem is a direct, cable connection from the maintenance console running the Command Console Client to one of the subsystem controller's serial maintenance ports.



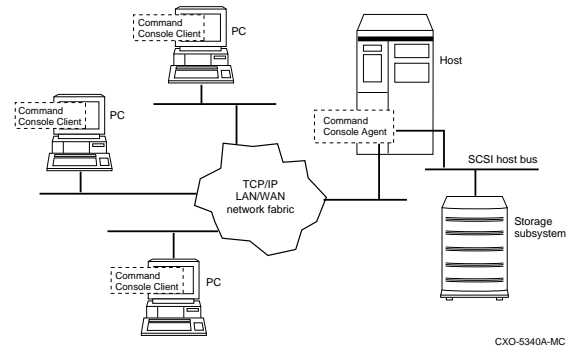
Host-Bus SCSI Connection

You can connect to your storage subsystem using the host SCSI bus by running the Command Console Client on your host system.



Network Connection

Command Console also has sophisticated networking capabilities. If you are running the Command Console client on a maintenance console that has a TCP/IP network connection, you can connect the program to your storage subsystem via the network. To connect this way, you must run the Command Console Agent program in your host.



The Agent acts as the Client's assistant in controlling your storage subsystem. 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. Agent can also be used for access protection.

You can run up to 32 concurrent Client stations at a time. 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.

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

Command Console provides pass-through error information for all types of controller problems.

If the Client is used on a system running Windows NT 3.51 or 4.0, the program makes full use of NT's event logging facility.

The Agent is capable of issuing errors without the need of an active Client. The errors can be directed to the SYSLOG facility, mailed to specific users or use the standard SNMP asynchronous notification.

Pager Fault Notification

Command Console offers the capability to notify up to three numeric pagers, in user-specified shifts, when subsystem faults occur. Pager information consists of both subsystem identification and fault category codes.

Client Privileges

There are three levels of access a client has for communicating with the storage subsystem. The user configures the privileges levels within the Agent.

- Overall status - Monitor event changes with notification
- Detailed Status - View event changes with the GUI
- Configuration - Allows configuration of the subsystem(s) and above features noted

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 3.51 (build 1057 or later)/4.0 or Windows 95 (build 950 or later).
Disk Space	All programs and files <5 MB.
Monitor	VGA
Input Devices	Keyboard, mouse
Modem	Hayes-compatible
SCSI Adapter	Fast Wide Differential (FWD)
Serial Port	(for connection via serial port only)
Network Adapter	TCP/IP-compatible network card (for network connection only).
Controller Compatibility	RAID Array 450, Enterprise Storage Array (ESA), HSZ40/50 with HSOF 3.0/5.0

Controller Hardware/Firmware Compatibility

Command Console is compatible with StorageWorks RAID 450 and Enterprise Storage Array (ESA), HSZ40 with HSOF 3.0 and HSZ50 with HSOF 5.0.

Enclosure Hardware Compatibility

Command Console provides specific, graphical representations for StorageWorks 24-device pedestal enclosures. StorageWorks data center cabinets are supported with logical shelf views.

Command Console only supports disk devices that are attached to the storage subsystem. For a list of the disks supported, refer to either the HSZ40/50 Array Controller Operating Software (HSOF) Version 3.0/5.0 or the release notes for the applicable platform kit.

Distribution Media

Command Console is distributed via CD-ROM. Documentation is online.

Ordering Information

Command Console is bundled with certain StorageWorks controller products. You can also obtain the product directly through your sales representative.

Software Licensing

Command Console is furnished under license only.

For more information on licensing terms and policies, contact your sales representative.

Software Warranty

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