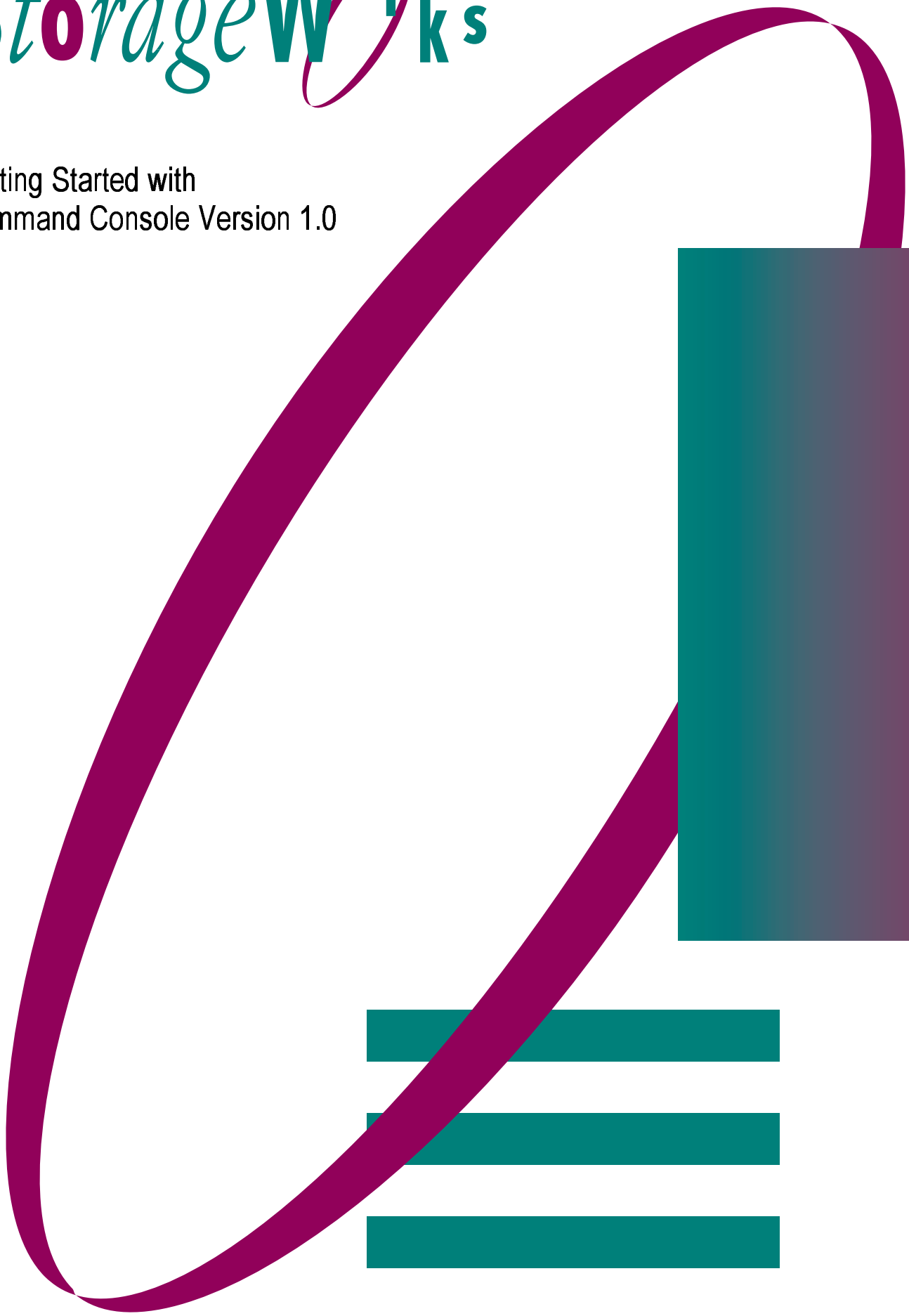
StorageWorks™

Getting Started with Command Console Version 1.0



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Revision History		
Revision	**Date**	**Content**
A	8/96	Version 1.0 release
B	8/96	Minor corrections

Contents

CONNECTION OPTIONS **2**

GETTING STARTED **4**

STEP 1: INSTALLING THE ACROBAT READER 5
STEP 2: ACCESSING THE DOCUMENTATION 6
STEP 3: READING THE RELEASE NOTES 7
STEP 4: CHOOSING A CONNECTION TYPE 8
STEP 5: INSTALLING THE CLIENT PROGRAM 9
STEP 6: INSTALLING AND CONFIGURING THE AGENT PROGRAM 10
Special Windows NT Installation Instructions 11
Special UNIX Agent Installation Instructions 11
Installing Additional Agents 11
Agent Documentation for Alpha® Platforms 12

USING COMMAND CONSOLE **13**

Starting Client with Network Connections 13
Starting Client with a Local Connection 13
Uninstalling Command Console 13
More Information 13

Introduction

Command Console is a feature-rich, graphical user interface (GUI) and remote management program for 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.

Command Console consists of two programs:

- Command Console Client is the graphical user interface portion of Command Console. Client runs on a local system with either Microsoft Windows 95® or Windows NT®. You can connect Client to your storage subsystems using either local or network connections.
- Command Console Agent is a companion program that runs on your host systems. Agent enables Client to communicate with your storage subsystems over a network. Agent is available for the Windows NT® and Digital UNIX® operating systems.

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

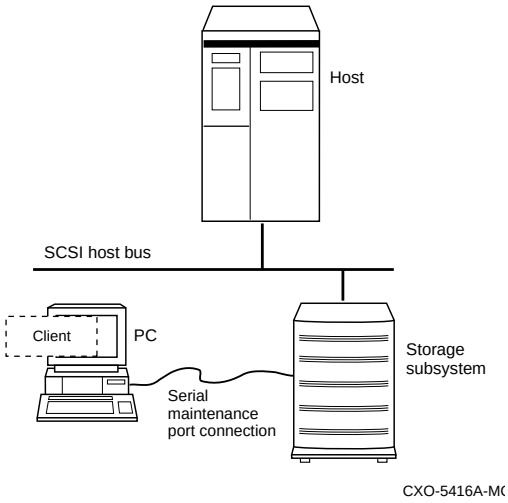
Features

- Direct, serial port connection
- Host port SCSI bus virtual terminal connection
- Network connection via TCP/IP protocol. Both TCP/IP and SNMP fault notification protocols.
- Graphical view of the controller and its physical and logical storage elements
- Easy, graphical configuration of the storage system
- High and low-level status monitoring of the storage subsystem using colored icons
- Remote fault notification by pager
- A controller firmware download facility.
- Automatic event logging in Windows NT 3.51
- User and feature access protection

Connection Options

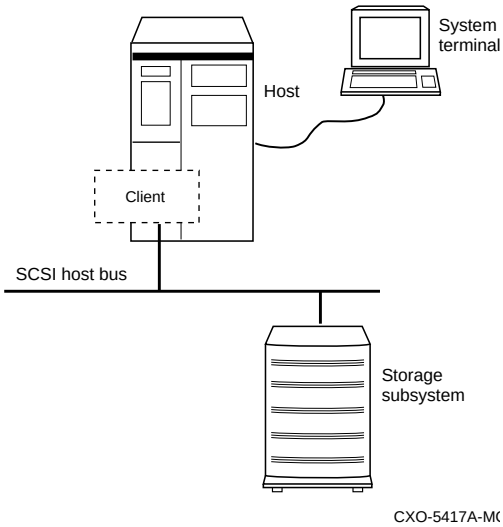
You can connect Command Console to your storage subsystems in three ways:

Direct Serial Port Connection



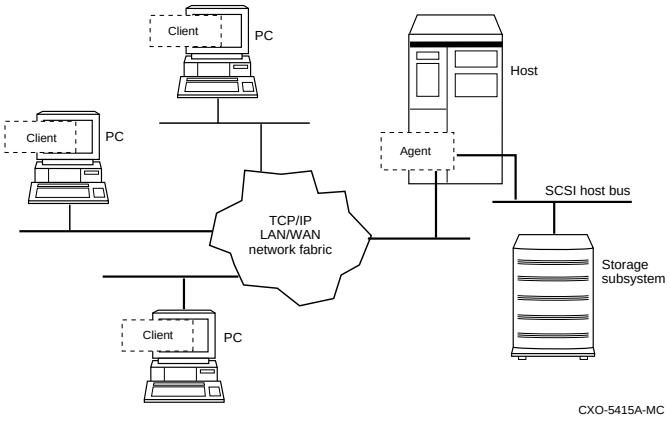
The simplest connection to the storage subsystem is a direct, cable connection from the local system running Command Console Client to one of the subsystem controller's serial maintenance ports.

Host-Bus SCSI Connection



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

Network Connection



Command Console has sophisticated networking capabilities. If the local system you are running Client on 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.

Agent acts as Client's assistant in controlling your storage subsystem. Commands sent from Client are received by Agent and are routed to the storage subsystem via the subsystem's SCSI host bus. Subsystem status is transmitted back to Client from 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.

Getting Started

Follow these simple steps to install Command Console:

1. Install the Adobe Acrobat Reader, so that you can view the documentation on the accompanying CD–ROM.
2. Access the documentation on the accompanying CD–ROM.
3. Read the release notes on the CD–ROM.
4. Choose either a local or network connection for Client.
5. Install the Client software on your local system.
6. If you chose the network connection method, install the Agent software in your host(s).

The following sections provide you with detailed information on how to complete each step.

Step 1: Installing the Acrobat Reader

The CD–ROM that accompanies this booklet contains your Client and Agent programs along with complete, on-line information about them. Much of the information is presented in Adobe Acrobat format, and you must install the Acrobat Reader to access it. Here's how to install the Reader:

1. Place the Command Console CD–ROM in your local system's CD–ROM drive.
2. In Explorer or File Manager, open the *\ACROREAD* directory.
3. Double click the *ACROREAD.EXE* file. The Acrobat Reader setup program begins, prompting you for basic installation information.
4. Enter the appropriate information in response to the prompts.
5. Your Acrobat Reader is installed!

Note that you cannot install the Acrobat Reader on a Digital Equipment Corporation Alpha® Windows NT system. If you're running Agent programs on an Alpha system and wish to view the Agent documentation locally, it's provided in Word for Windows® format in the *\DOCS* subdirectory on the CD–ROM.

Step 2: Accessing the Documentation

To use the Acrobat Reader, double click the Acrobat Reader icon in the Adobe Acrobat program group, or access the Reader from the Start menu, as appropriate for your operating system.

Use the File menu's Open option to open the *\DOCS* directory on the CD–ROM. You can select any file ending with ".PDF" to view. The following table shows the file names of the documents in the *\DOCS* directory:

Document	File name ends in...
Release Notes	...RN*x*.PDF
Software Product Description	...SD*x*.PDF
Getting Started (the document you are reading now)	...GS*x*.PDF
Windows NT Agent User Guide	...INUG*x*.PDF
Digital UNIX Agent User Guide	...DUUG*x*.PDF

Once you've installed Client, you can also access its Windows® Help information. The on-line help includes detailed information on the installation, configuration, and use of Command Console.

Step 3: Reading the Release Notes

You'll find an on-line version of the release notes in the *DOCS* directory on the CD–ROM. Look for the file name ending with the letters "...RN*x*.PDF".

View the notes with your Acrobat Reader to familiarize yourself with any last-minute issues that came up as the product was being released.

Step 4: Choosing a Connection Type

Choose either a local or network connection type for the connection between Client and your storage subsystems. Keep your decision in mind as you determine whether or not to install Agent programs.

Step 5: Installing the Client Program

Before you can install Client, make sure that the system you'll be installing it on meets the following minimum requirements:

Architecture	Intel® 486/66 MHz, 16 MB memory, 10 MB free disk space, CD-ROM drive
Operating system	Windows NT 3.51 (build 1057 or later) or Windows 95 (build 950 or later)
Monitor	15" VGA
Input devices	Keyboard, mouse
Modem	Hayes-compatible
SCSI adapter (for local connection via host bus only)	fast/wide/differential (for StorageWorks 6-port controllers) OR fast/wide/single-ended (for StorageWorks 2-port controllers)
Serial port (for connection via serial port only)	standard, PC serial port capable of at least 9600 baud.
Network adapter	TCP/IP-compatible network card (for network connection only)
Controller compatibility	StorageWorks 2 or 6-port controller running operating firmware Version 3.0 or higher.

If your local system meets the minimum requirements, install the Client program as follows:

1. Place the Command Console CD–ROM in your local system's CD–ROM drive.
2. In Explorer or File Manager, open the *\CLIENT* directory.
3. Double click the *INSTALL.BAT* file. The Client installation program begins, prompting you for a directory in which to install Client.
4. Enter the appropriate information in response to the prompts. The install program completes the installation.

   In Windows NT, the program installs a Command Console program group with two icons. In Windows 95, it installs a Start menu item.

   Ignore any messages warning about the replacement of existing files.
5. If you're installing in Windows 95, close the remaining MS-DOS window by double clicking the icon in the upper right-hand corner of the window.
6. Your Client program is installed!

Step 6: Installing and Configuring the Agent Program

Agent is Client's network assistant. You'll need one Agent program running on each host system you wish to connect to Client over the network. The Agent installation program installs the Agent program of your choice at the host system of your choice.

The following installation instructions cover Agents for all operating systems. Ignore any information that does not apply to the Agent you wish to install.

NOTES

You can install a Windows NT Agent only on a host system on which you can run the CD-ROM.

You can install an Agent for any other operating system only from a Windows NT system with a CD-ROM. Further, you can only install this Agent over a network connection to a remote host.

You can run the Agent installation program on either Intel® or Digital Equipment Corporation Alpha® Windows NT platforms.

Installing an Agent

Here's how to install an Agent in one of your host systems:

1. Your host's system resources must meet the minimum requirements to run the Agent program you wish to install. The minimum system requirements for each Agent type are listed in its user guide on the accompanying CD–ROM. Before going on, verify that each of your host systems will support the Agent you wish to install.
2. Before you can install an Agent, at least one logical volume must exist on each storage subsystem you wish to connect to. If your subsystems do not each contain at least one volume, use your operating system utilities to connect to your controller's command line interpreter (CLI) interface to create one. Subsystems without at least one logical volume are invisible to Agent and the host operating system.
3. Place the Command Console CD–ROM in your local system's CD–ROM drive.
4. Open the *\AGENTS* subdirectory in File Manager.
5. Double click the *INSTALL.BAT* file.

   The installation program begins, displaying a series of windows in which you must enter configuration information for your Agent.
6. Enter the appropriate information in each window, until you have completed the installation of your Agent.

   Click the *Info* button on any window for helpful information on its use.

   If you are installing an Agent on a host system running Windows NT, be sure to read the "Special Windows NT Agent Installation Instructions" below for more information.

   If you are installing an Agent on a host system running a type of UNIX be sure to read the special instructions included in some *Info* windows. See "Special UNIX Agent Installation Instructions" below for more information.

Special Windows NT Installation Instructions

If you installed an Agent with a *Service Startup Type* of *Manual*, you'll need to restart Agent manually each time you boot its host system. If you selected the *Automatic* type, your agent starts automatically when you boot the host system.

In either case, you must manually start Agent after you first install it.

To manually restart Agent, perform the following actions:

1. Click on the Control Panel icon to open it.
2. Click the *Services* icon.
3. Click *Steam.*
4. Click *Start.*

Your Windows NT Agent starts and executes as a background task.

Special UNIX Agent Installation Instructions

When you run the Agent installation program from Windows NT, and you select a UNIX-based Agent type, the program performs the installation over the network. You must have access to the superuser (root) account on the remote host, and your local system must have network access to the remote system.

The installation program prompts you for the remote host's name, along with your personal user name and password. It then uses the file transfer protocol (FTP) to transfer the Agent files to the remote host's */tmp* directory. When the files are transferred, the program opens a separate Telnet window on your local system. You must use the Telnet window to complete the remaining steps of the Agent installation.

Perform the following actions in the Telnet window to complete your Agent installation. Use the special instructions included with the text-based prompts for assistance as you go along.

1. Log on to the remote host system using your personal user name and password.
2. Enter "su" and the superuser password to become superuser.
3. Enter "cd /tmp" to change your working directory to the */tmp* directory containing the Agent software.
4. Enter "sh install.sh" to start the UNIX, Bourne-shell installation script.
5. Follow the text-based prompts to complete your UNIX Agent installation.

Your UNIX-based Agent is installed as a background task, and it automatically runs at all times once it is installed.

Installing Additional Agents

You may want to install Agents on your other host systems. To install more Agent programs, simply repeat the procedure above, using the appropriate host system name and Agent type for each session.

Agent Documentation for Alpha® Platforms

If you're running the Agent programs on a Digital Equipment Corporation Alpha® Windows NT platform, you cannot install the Acrobat Reader. The *\DOCS* subdirectory on the CD–ROM contains Agent user guides in Word for Windows format for use in this situation.

Using Command Console

Once you've installed the program, you'll want to learn how to start it and use it.

Starting Client with Network Connections

To start Command Console Client using network connections to your storage subsystems, double click the Command Console icon in the Command Console program group in Windows NT or the Command Console Start menu entry in Windows 95.

You can also use the following command line at a Windows NT or Windows 95 command prompt to start Client for use with network connections:

`\`*`path_to_client_directory`*`\swcc.exe -d `*`your_host_system your_host subsystem`*

where "-d *your_host_system your_host subsystem*" is an optional set of parameters that enables you to specify a host system and a subsystem to start Client with. If you specify these parameters, Client opens with the host system selected and the subsystem displayed in the Subsystem Window. If Client is not already aware of the system and subsystem, it adds them to the Navigation Window.

If you start Client without the parameters, it runs with its existing system and subsystem configuration.

Starting Client with a Local Connection

You can also use the following command line at a Windows NT or Windows 95 command prompt to start Client for use with a local connection:

`\`*`path_to_client_directory`*`\swcc.exe direct`

Client starts and executes with menu options and other functionality adjusted for connection to a single subsystem via serial or SCSI host bus connection.

Uninstalling Command Console

To uninstall Command Console, click the Remove Command Console icon in Windows NT. In Windows 95, use the Add/Remove Programs utility in the Control Panel.

More Information

This document is provided only to get you started in using Command Console. Most of the information you will need to use the program is contained in the on-line documentation. Read Client's on-line help for detailed instructions on configuring and connecting Client to your subsystems.