Network Management Station Installation Guide

Ascend Communications, Inc.

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About This Guide

This guide describes software installation instructions for setting up your UNIX Network Management Station (NMS) platform. The *Network Management Station Installation Guide* is a task-oriented guide that describes step-by-step, the process for installing the software necessary to configure Cascade switches. This guide is intended for the system administrator who is responsible for the installation and setup of the NMS.

The Network Management Station Installation Guide is for new installations of SYBASE 11, HP OpenView 4.11, and CascadeView. This guide does not include instructions on upgrading to SYBASE 11 or HP OpenView 4.11. However, this guide does include procedures on upgrading CascadeView.

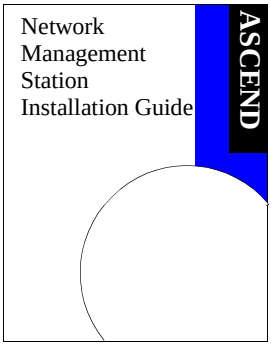
What You Need to Know

As a reader of this guide, you should be familiar with basic UNIX operating-system commands and know how to use a mouse. You should possess a working knowledge of relational database software to properly maintain SYBASE. This guide assumes that you have installed the Cascade switch hardware. Refer to one of the following hardware installation guides for more information:

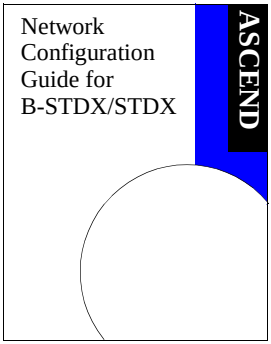
- *STDX 6000 Hardware Installation Guide*
- *B-STDX 8000/9000 Hardware Installation Guide*
- *CBX 500 Hardware Installation Guide*

Documentation Reading Path

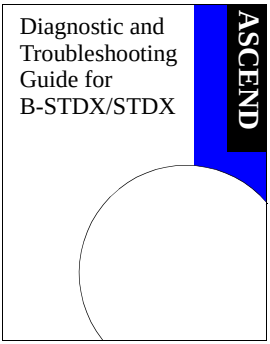
The following Cascade manuals provide the complete document set for the NMS 2.3 UNIX platform:



Describes how to set up the Network Management Station (NMS), prerequisite tasks, hardware and software requirements, and installation instructions.



After setting up your NMS, use this guide to define your network, configure switches, and download your configuration from the NMS to the switch. *This guide assumes that you have already installed CascadeView.*



After configuring your network, use this guide to monitor and troubleshoot your network. *This guide assumes that you have already installed CascadeView.*

How to Use This Guide

Before you read this guide, read the Software Release Notice (SRN) that accompanies the software. This section highlights the chapters and contents in this guide.

Read	To Learn About
Chapter 1	Installation prerequisites, system, hardware and software requirements.
Chapter 2	The *Cascade-recommended* instructions for installing Solaris 2.4 and Motif 1.2.5 on your UNIX NMS platform.
Chapter 3	The *Cascade-recommended* instructions for upgrading and installing Solaris 2.5.1 and CDE on your UNIX NMS platform.
Chapter 4	Preparing for a SYBASE 11 installation.
Chapter 5	Installing SYBASE 11.
Chapter 6	Installing HP OpenView 4.11.
Chapter 7	Installing CascadeView.
Chapter 8	Upgrading to CascadeView XX.
Chapter 9	Backup procedures.
Chapter 10	NMS start up and shut down procedures.
Chapter 11	Installing a two-system configuration
Appendix A	Configuring a remote backup server.
Appendix B	SYBASE 11 backups to the remote backup server.
Appendix C	IP discovery.
Appendix D	Configuring an additional Cascade device.
Appendix E	Re-integrating CascadeView with HP OpenView
Appendix F	SYBASE 11 worksheet

What's New in This Guide

Table 1 lists the new enhancements made to this guide.

Table 1. Documentation Enhancements

Changes/Enhancements to this Guide	Described in
Installing the Solaris 2.4 cluster patch file and Motif 1.2.5	Chapter 2
Installing Solaris 2.5.1, the Solaris 2.5.1 cluster patch file, and Common Desktop Environment	Chapter 3
Using Cascade's installation scripts to prepare for SYBASE 11 installation	Chapter 4
Using Cascade's installation scripts to install SYBASE 11	Chapter 5
Using Cascade's installation scripts to prepare for HP OpenView 4.11 installation	Chapter 6
Using Cascade's installation scripts to install HP OpenView 4.11	Chapter 6
Using Cascade's installation scripts to install CascadeView	Chapter 7
Using Cascade's installation scripts to upgrade CascadeView	Chapter 8
Backing up SYBASE and HP OpenView databases	Chapter 9
Starting up and shutting down the NMS	Chapter 10
Installing a two-system configuration	Chapter 11
Configuring a remote backup server	Appendix A
Performing SYBASE backups to the remote backup server	Appendix B
Enabling and disabling IP Discovery	Appendix C

Table 1. Documentation Enhancements

Changes/Enhancements to this Guide	Described in
Configuring additional Cascade devices	Appendix D
Re-integrating CascadeView with HP OpenView	Appendix E
Filling out the SYBASE 11 worksheet	Appendix F

Related Documents

This section lists the related Cascade and third-party documentation that may be useful to reference.

Cascade

- *STDX 6000 Hardware Installation Guide* (Product Code: 80006)
- *B-STDX 8000/9000 Hardware Installation Guide* (Product Code: 80005)
- *CBX 500 Hardware Installation Guide* (Product Code: 80011)
- *SYBASE 11 SQL Server Upgrade Guide* (Product Code: 80040)
- *Upgrading to Solaris 2.5.1 and HP OpenView 4.11* (Product Code: 80045)
- *CBX 500 Network Administrator's Guide* (Product Code: 80012)
- *Network Configuration Guide for B-STDX/STDX* (Product Code: 80017)
- *Diagnostic and Troubleshooting Guide for B-STDX/STDX* (Product Code: 80018)
- *Bulk Statistics Collector for B-STDX/STDX* (Product Code: 80032)
- *Configuring ISDN Services for B-STDX* (Product Code: 80039)
- *Cascade Enterprise MIB Definitions* (Product Code: 80015)

Third Party

- *Solaris 2.4 System Configuration and Installation Guide*

- *Solaris 2.5.1 System Configuration and Installation Guide*
- *HP OpenView 4.11 Network Node Manager Documentation Set*
- *SYBASE SQL Server Reference Manual: Volumes 1 and 2*
- *SYBASE SQL Server System Administration Guide*

Conventions

This guide uses the following conventions to emphasize certain information, such as user input, screen prompts and output, and menu selections. For example:

Convention	Indicates	Example
`Courier Bold`	User input on a separate line.	**`eject cdrom`**
Courier	Screen or system output.	Please wait...
[*bold italics*]	Variable parameters to enter.	**[*your IP address*]**
`<Return>`	Press Return or Enter.	`<Return>`
Boldface	User input and screen options in text.	Type **cd install** and ... Select **None** ...
Menu ⇒ Option	Select an option from the menu.	CascadeView ⇒ Logon
Black border surrounding text	Notes and warnings.	See examples below.
Italics	Book titles, new terms, and emphasized text.	*Network Management Station Installation Guide*

Provides helpful suggestions or reference to materials not contained in this manual.

Warns the reader to proceed carefully in order to avoid equipment damage or personal harm.

Customer Comments

Customer comments are welcome. Please fill out the Customer Comment Form located at the back of this guide and return it to us.

1

Overview

The Network Management Station (NMS) for UNIX is a dedicated Sun SPARCstation on which you run software programs used to configure, monitor, and control a Cascade switch network. This chapter describes the minimum hardware and software requirements needed to set up the UNIX NMS.

General Requirements

Cascade recommends that you use a dedicated SPARCstation for the purpose of network management.

NMS Hardware Requirements

You can configure your Network Management Station in a variety of ways. Refer to the following sections for guidelines:

- “Single-System Configuration” on page 1-3
- “Two-System Configuration” on page 1-4
- “Large System Configuration” on page 1-6

These sections provide tables to help you configure your NMS. To interpret the information, you need to know:

- Number of switches in your network
- Number of users managing your network

Once you have this information, you can identify the workstation(s) that best fits your NMS configuration. For example, if you are installing a single-system configuration with 40 switches and 15 users, you can use an Ultra 1 Model 200E (refer to Table 1-1, “Single-System Configuration” on page 1-3). If your NMS configuration consists of more than 40 switches and 15 users, select the next workstation on the list. The table lists each workstation in order of performance (low to high).

Single-System Configuration

In a single-system configuration, SYBASE is used with one Cascade product (CascadeView, Bulk Statistics, or CNM Proxy Agent). A single-system configuration can support multiple SYBASE databases if you size your system properly. However, multiple SYBASE databases affect system performance. Cascade recommends installing a two-system configuration or a large system configuration if your SYBASE installation supports multiple SYBASE databases.

Table 1-1 lists the hardware needed to run SYBASE 11, HP OpenView 4.11, and CascadeView. The workstation must be equipped with the following:

- 1/4-inch tape drive
- CD-ROM drive
- 3 1/2-inch floppy drive

Table 1-1. Single-System Configuration

# of Switches	# of Users	Workstation	# of CPUs	Hard Drive (all workstations)	RAM
<10	1	SunSparc 5 Model 110 or higher (lab configuration only)	1	2 disks, minimum 3 GB total, (1) 2.1 GB and (1) 1.05 GB	96 MB
10-15	<10	Ultra 1 Model 140			128 MB
15-50	10-20	SunSparc20 Model 712 Ultra 1 Model 170 or 170E	2		
		Ultra 2 Model 1170 Ultra 1 Model 200E Ultra 2 Model 1200			256 MB
50-100	20-40	Ultra 2 Model 2170 Ultra 2 Model 2200			256-512 MB

Two-System Configuration

A two-system configuration requires HP OpenView and CascadeView to reside on one workstation, and SYBASE on another workstation. This type of configuration enables your SYBASE Server to support multiple SYBASE databases (CascadeView, Bulk Statistics, CNM).

Table 1-2 lists the hardware requirements needed for the HP OpenView Server, and Table 1-3 lists the hardware requirements needed for the SYBASE Server.

Both systems must be equipped with the following:

- 1/4-inch tape drive
- CD-ROM drive
- 3 1/2-inch floppy drive

Table 1-2. HP OpenView Server (System 1)

# of Switches	# of Users	Workstation	# of CPUs	Hard Drive (all workstations)	RAM
<10	1	SunSparc 5 Model 110 or higher (lab configuration only)	1	2 disks, minimum 3 GB total, (1) 2.1 GB and (1) 1.05 GB	96 MB
10-15	<10	Ultra 1 Model 140			128 MB
15-50	10 to 20	SunSparc20 Model 712 Ultra 1 Model 170 or 170E	2		
		Ultra 2 Model 1170 Ultra 1 Model 200E Ultra 2 Model 1200			256 MB
50-100	20-40	Ultra 2 Model 2170 Ultra 2 Model 2200			256-512 MB

Table 1-3. SYBASE Server (System 2)

Workstation	# of CPUs	Hard Drive (all workstations)	RAM
SunSparc 5 Model 110 or higher (lab configuration only)	1	2 disks, minimum 3 GB total, (1) 2.1 GB and (1) 1.05 GB	128 MB
Ultra 1 Model 140			
SunSparc20 Model 712	2		
Ultra 1 Model 170E	1		
Ultra 1 Model 200E			
Ultra 2 Model 2170	2		256 MB
Ultra 2 Model 2200			

Cascade recommends a SYBASE Server workstation with multiple CPUs. Additional CPUs increase performance to support multiple SYBASE databases (CNM, Bulk Statistics). In addition, you should consider using a volume manager (Veritas™ or Solstice DiskSuite™) on a production SYBASE Server to deploy RAID (redundant array of inexpensive disks) technology. RAID technology is a method of using several hard disk drives in an array to provide fault tolerance in the event that one or more drives fail. RAID technology improves redundancy and limits downtime.

Large System Configuration

Cascade recommends a large system configuration if your installation has 50+ users and 50+ switches. In a large system configuration, SYBASE, Bulk Statistics, and one other Cascade product (CascadeView, Bulk Statistics, or CNM) can reside on one workstation. In addition, SYBASE supports all Cascade Server products that reside on remote systems.

Table 1-4 lists the hardware needed to run a large-system configuration. The workstation must be equipped with the following:

- 1/4-inch tape drive
- CD-ROM drive
- 3 1/2-inch floppy drive

Table 1-4. Large-System Configuration

# of Switches	# of Users	Workstation	# of CPUs	Hard Drive	RAM
50+	<50	Sparc 1000E	2 to 8	2 disks, minimum 3 GB total, (1) 2.1 GB and (1) 1.05 GB	512 MB
	50-200	Sparc 2000E	8 to 20		
		Ultra 3000	4 to 6		1 GB
		Ultra 4000/5000	6 to 12		
		Ultra 6000	12 to 28		

Redundancy

An Ultra 4000/5000 and 6000 have two more CPUs than shown in Table 1-4. You can increase redundancy by adding a second I/O card and use it in conjunction with RAID technology (RAID 0+1:Striped Mirrors). Adding the I/O card reduces the available CPU slots by two.

Large System Configuration Example

An Ultra 5000 can support up to 150 users and 50-500 switches when configured with redundancy. The Ultra 5000 is actually an Ultra 4000 configured within a self contained cabinet. The RSM storage trays fit inside the same cabinet as the module, and the cabinet can contain an additional two trays. If the system supports vital business resources, configure it with more redundancy by using RSM modules with Solstice Disk Suite or Veritas. This combination provides RAID levels of 0, 1, 0+1, and 5. Cascade recommends using RAID 0+1 Striped and Mirrored.

A system configured with two I/O controller cards (Item 5 in Table 1-5) enables mirroring across each I/O card. With only one card, you introduce a single point of failure, that is if the I/O card fails, access to the storage is lost. Differential F/W controllers cannot chain F/W disks together. See item 2 in Table 1-5.

Table 1-5 lists an Ultra 5000 configuration with additional equipment that can support 150 users and 50-500 switches.

Table 1-5. Ultra 5000 Equipment

Qty.	Supplier Part Number	Description
1	E5000	Enterprise 5000 Server Base Package
4	SUNX2600A	CPU/Memory Board
8	SUNX2510A UltraSparc module	167MHz 1MB Cache per processor
4	SUNX7022A	256 MB Memory upgrade
2	SUNX2610A	SBUS I/O Board
2	SUN954A	Power/Cooling Module
1	SUNSOLS	2.5.1 Solaris Server Media
2	SUN6504AR4	7x4.2 GB 5400 RPM SPARCstorage RSM Disk Tray 56 GB total (24 GB Mirrored with 2 hot spares)
2	SUN1062A	SBUS Differential F/W SCSI-2 Host Adapter

Table 1-5. Ultra 5000 Equipment

Qty.	Supplier Part Number	Description
1	SUNX1026A (optional)	SUN FDDI Dual Attach SBUS Adapter 5.0
1	SUN6206AR4 (optional)	Internal 14GB 8mm Tape Drive

SCSI Device Addresses

Verify that the SCSI device addresses (on the back of each device) are set as follows:

Table 1-6. SCSI Device Addresses

SCSI Device	Address
CD-ROM drive	6
Tape drive	4
First hard disk	0
Second hard disk	1

NMS Software Requirements

The NMS requires installations of the following software:

- Solaris Cluster Patches
- Solaris Operating System
- SYBASE 11 SQL Server
- HP OpenView 4.11
- CascadeView

Solaris Cluster Patches

Before you install the NMS software programs, you must obtain Solaris cluster patch files:

- If you are installing Solaris 2.4, obtain the file *2.4_Recommended.tar.Z.*There are several versions of the *2.4_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.
- If you are installing Solaris 2.5, obtain the file *2.5_Recommended.tar.Z.*There are several versions of the *2.5_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.
- If you are installing Solaris 2.5.1, obtain the file *2.5.1_Recommended.tar.Z.*There are several versions of the *2.5.1_Recommended.tar.Z* file (*Patch.0, Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.

To get any of these files, contact **Sun at 1-800-USA-4SUN**, or you can obtain these files from SunSolve's website at **http://sunsolve.sun.com:80/pub-cgi/patchclusters.pl**. Later, the guide prompts you to install these files.

Solaris Operating System

Install either version of Solaris (2.4 or 2.5.1), plus the required additional software:

- **Sun Microsystems SunSoft™ Solaris® 2.4 operating environment** — Includes the following software: SunOS™ 5.4 operating system, ONC+™/NFS® networking software, OpenWindows™ Version 3.4 windows environment

  Motif Window Manager, Version 1.2.5 (Cascade recommends SCO Motif 1.2.5) — Runs client applications, such as electronic mail, and enables you to customize your visual display, such as change the position and size of windows.

  Sun Microsystems SunSoft™ Solaris®2.5.1 operating environment — Includes the following software: SunOS™ 5.5 operating system, ONC+™/NFS® networking software, OpenWindows™ Version 3.4 windows environment

You can install Solaris 2.5.1 with Motif Window Manager, Version 1.2.5.

Common Desktop Environment (CDE) — Provides users with a desktop graphical interface on a Sun workstation running Solaris 2.4 or later. This desktop provides windows, workspaces, controls, menus, and a front panel.

SYBASE 11 SQL Server

SYBASE 11 SQL Server is a relational database software program used to store database information and provide backup and recovery of database files

HP OpenView, Version 4.11

HP OpenView Network Node Manager is a graphical SNMP management application that provides fault, configuration, and performance management for multivendor TCP/IP networks. In addition, HP NNM 4.11:

- Manages custom SNMP devices and objects
- Performs trap formatting and actions
- Performs remote diagnostics and automatic status propagation

HP OpenView Windows is the graphical user interface for Network Node Manager 4.11 which permits extensive customization. This includes the definition of icons, maps, background graphics, symbols, and application representations.

CascadeView

CascadeView provides the Cascade-specific configuration and monitoring tools needed to configure, monitor, and control a Cascade network. CascadeView configuration and monitoring tools are fully integrated within the HP OpenView graphical user interface.

Combined, these software programs present an easy-to-use graphical user interface that enables you to configure and maintain a Cascade network. CascadeView enables you to create several network maps, and configure multiple networks from a single source, the NMS. HP OpenView provides the interface to add, modify, and delete nodes, trunks, and switch configurations from the network map and database.

Installation Scripts

Cascade provides two installation scripts that enable an easy method of installing NMS software.

SYBASE Installation Script (install_sybase)

Run this script to:

- Set up the system for a new SYBASE 11 installation
- Install SYBASE 11 software on the system
- Install and configure a local Backup Server

HP OpenView/CascadeView Installation Script (install_cvux)

Run this script to:

- Set up the system (add semaphores to */etc/systems file*)
- Install HP OpenView 4.11.
- Install CascadeView
- Upgrade CascadeView

Installation Sequence

If you are installing a single-system NMS, follow the recommended installation sequence in Table 1-7 .

If you are installing a two-system configuration, follow the recommended installation sequence in Table 1-8.

Table 1-7. Installing a Single-System NMS

Installation Sequence
Chapter 2, “Installing Solaris 2.4 and Motif 1.2.5” or Chapter 3, “Installing Solaris 2.5.1 and CDE”
Chapter 4, “Preparing for a SYBASE 11 Installation”
Chapter 5, “Installing SYBASE 11”
Chapter 6, “Installing HP OpenView 4.11”
Chapter 7, “Installing CascadeView”

Table 1-8. Installing a Two-System Configuration

Installation Sequence on System 1	Installation Sequence on System 2
Chapter 3, “Installing Solaris 2.5.1 and CDE”	Chapter 3, “Installing Solaris 2.5.1 and CDE”
Chapter 4, “Preparing for a SYBASE 11 Installation”	Chapter 6, “Installing HP OpenView 4.11”
Chapter 5, “Installing SYBASE 11”	Chapter 7, “Installing CascadeView”
Chapter 11, “Installing a Two-System Configuration”	Chapter 11, “Installing a Two-System Configuration”

2

Installing Solaris 2.4 and Motif 1.2.5

This chapter describes installation instructions for the following software:

- Solaris 2.4
- Solaris 2.4 Patches
- Solaris 2.4 Cluster Patch
- Motif Window Manager 1.2.5

Installing Solaris 2.4

Sun Microsystems, Inc. SunSoft Solaris, Version 2.4 (Solaris 2.4) is the operating system software you install on the NMS Sun SPARCstation. Although you can follow the installation instructions provided in the *Solaris System Configuration and Installation Guide*, this chapter provides the *Cascade-recommended settings* for installing and running CascadeView.

Before you install Solaris 2.4, verify that you have completed the following tasks described in Chapter 1:

- ☑ Read the general requirements for network management
- ☑ Read the NMS hardware and software requirements

To install Solaris 2.4:

1. Obtain an IP address and subnet mask from your network administrator. (This IP address must be registered as a valid address on your network.)
2. Verify that the jumper switch located on the back of the CD-ROM drive is set to SCSI ID 6.
3. Power on the Sun SPARCstation.
4. When the system comes up, hold down the Stop key and press the **a** key. The system displays the ok prompt.

   a. Insert the Solaris 2.4 CD into the CD-ROM drive.

   b. At the ok prompt, enter **boot cdrom**.

   The system boots the operating system from the CD-ROM drive. After several minutes, the system displays the following message:

   ```
   Starting open windows...
   ```

   The Solaris logo appears and the system displays the following message:

   ```
   The system is coming up. Please wait.
   ```

5. At the Solaris Installation Program dialog box, choose Continue.

6. At the Identify This System dialog box, choose Continue.
7. At the Host Name dialog box, enter **[*your host name*]** and choose Continue.

   (For example, **nms01**)
8. At the Network Connectivity dialog box, select **Yes** and choose Continue.
9. At the Internet Protocol (IP) Address dialog box, enter **[*the IP address from Step 1 on page 2-2*]** and choose Continue.
10. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The System Identification Status window displays the following message:

    ```
    Just a moment.
    ```

    The Solaris Install Console window displays the following message:

    ```
    starting rpc services: rpcbind sysidnis done.
    ```
11. At the Name Service dialog box, use the mouse to select None and choose Continue.

> *If you are running Network Information Services (NIS) consult your System Administrator.*

12. At the Subnets dialog box, select **Yes** to make this system part of a subnet. Choose Continue.
13. At the Netmask dialog box, enter **[*your subnet mask*]** and choose Continue.
14. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The System Identification Status window displays the following message:

    ```
    Just a moment.
    ```
15. At the Time Zone dialog box, use your mouse to select **Geographic region** and choose Set.

16. At the Geographic Region dialog box, select a region from the list on the left, and a time zone from the list on the right. Choose Continue.

17. At the Date and Time dialog box, accept the default date and time or enter new values. Choose Continue.

18. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The System Identification Status window displays the following message:

    ```
    Please Wait.
    ```

    The Solaris Install Console window displays the following message:

    ```
    System Identification is completed.
    ```

19. At the Install Solaris Software - Initial dialog box, choose Continue.

20. At the Upgrade System dialog box, choose **Initial** to repartition the disk**.**

Do not choose upgrade at the Upgrade System dialog box.

21. At the System Type dialog box, select **Standalone** and choose Continue.

22. At the Software dialog box, select **Developer System Support** and choose Customize.

After selecting a software group, you can add or remove software by selecting Customize. However, this function requires an understanding of software dependencies and how Solaris software is packaged.

23. At the Customize Software dialog box, under the Software Clusters and Packages section, scroll through the list and add the following *required* new features to the Developer System Support. A black square indicates the feature is selected.

    – Automated Security Enhancement Tools. This feature provides options for securing the system.

    – Basic Networking.

- Point-to-Point Protocol. This feature enables you to use an optional dial-up modem.
- System Accounting.

24. Choose OK.
25. At the Software dialog box, choose Continue
26. At the Disks dialog box, highlight *c0t3d0 bootdrive.* Select Add and choose Continue.
27. At the Preserve Data dialog box, choose Continue. This allows the current file systems and unnamed slices to be overwritten.
28. At the Automatically Layout File Systems dialog box, select Manual Layout.
29. At the File System and Disk Layout dialog box, select Customize.

    Edit the default values according to whether you are using *file systems* or *raw partitions*. You must have at least two disk drives to use raw partitions.

If you have a two-drive system, you can use raw partitions to improve database performance.

30. At the Customize Disks dialog box, modify the appropriate fields based on your system configuration. Refer to Table 2-1 through Table 2-4 for the recommended boot drive partition settings. Each table is preceded with a description of the type of NMS configuration you might have.

The recommended partition settings are only a guideline. The examples in the tables assume a 2.1 GB drive using a raw partition, or a file system database. If you are installing the operating system on a different size drive, consult your UNIX System Administrator. Cascade does not recommend partitioning your disks using file systems with two drives.

Use Table 2-1 if you are installing a single-system NMS that has one drive. This drive uses File Systems for the SYBASE database. The partition settings are for lab configurations only.

Table 2-1. Single-System NMS with One Drive

File-System Files Using One Drive (2.1GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	150
Slice 1	swap	(Recommend greater than 300 MB with a maximum of 1 GB
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	300
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 400 MB)
Slice 7	(DO NOT CHANGE)	

Use Table 2-2 if you are installing a single-system NMS that has two drives. The second drive uses raw devices for the SYBASE database.

Table 2-2. Single-System NMS with Two Drives.

File Systems Drive 1 (2.1 GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	150
Slice 1	swap	(3*RAM) (Recommend greater than 300 MB with a maximum of 1 GB)
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	300
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 400 MB)
Slice 7	(DO NOT CHANGE)	

The installation requires you to partition the second disk later in Chapter 4, "Preparing for a SYBASE 11 Installation".

Use Table 2-3 if you are installing the SYBASE Server in a two-system NMS configuration. This system has two drives, and the second drive uses raw devices for the SYBASE database.

Table 2-3. Two-System NMS (SYBASE Server)

File Systems Drive 1(internal) (2.1 GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	150
Slice 1	swap	(3*RAM) (Recommend greater than 300 MB with a maximum of 1 GB)
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	300
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 400 MB)
Slice 7	(DO NOT CHANGE)	

The installation requires you to partition the second disk later in Chapter 4, "Preparing for a SYBASE 11 Installation".

Use Table 2-4 if you are installing the HP Server in a two-system NMS configuration. This system has two drives.

Table 2-4. Two-System NMS (HP Server)

File Systems Drive1(internal)----------Drive2 (2.1 GB Drive, 128 MB memory) (2.1 GB Drive, 128 MB memory)					
Slice	**Mount Point**	**Size**	**Slice**	**Mount Point**	**Size**
Slice 0	/	150	Slice 0		
Slice 1	swap	400 (Recommend a maximum of 1 GB)	Slice 1	swap	400 (Recommend a maximum of 1 GB)
Slice 2	(DO NOT CHANGE)		Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)		Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)		Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	300	Slice 5	/opt	(Remaining unallocated space on drive after all other settings have been configured)
Slice 6	(DO NOT CHANGE)		Slice 6	(DO NOT CHANGE)	
Slice 7	(DO NOT CHANGE)		Slice 7	(DO NOT CHANGE)	

31. At the File System and Disk Layout dialog box, confirm your settings and choose Continue.
32. At the Mount Remote File Systems dialog box, choose Continue.
33. At the Profile dialog box, confirm the information displayed. If it is correct, choose Begin Installation. To change any information, choose Change.

34. At the OK to reboot dialog box, choose No.

    The Solaris Install Console window displays various messages, for example:

```
Preparing system to install Solaris. Please Wait.

Setting up disk c0t3d0:
         -Creating Solaris disk label (VTOC)

Creating and checking UFS file systems:
         -Creating / (c0t3d0s0)
         -Creating /usr (c0t3d0s5)
         -Creating /opt (c0t3d0s6)

Beginning Solaris package installation...
```

Completing the Installation

The Solaris 2.4 software is installed on your system using the profile you created. The Solaris installation process takes approximately 45 minutes, depending on the software selected and the speed of the network or local CD-ROM. After Solaris is completely installed, the Installing Solaris - Progress window displays the following message:

```
Installation successful...
```

35. Proceed to “Installing the Patch Release for Solaris 2.4”.

Installing the Patch Release for Solaris 2.4

Perform the following steps to install Solaris 2.4 patch releases:

1. In the Solaris Install Console window, enter **cmdtool &**.
2. Enter the following commands to install the patches:

If you have a maintenance contract with Sun Microsystems, the patch release may be located on a separate CD. Use the installation instructions with the patch release.

```
cd /
cd /cdrom/Patches
./install_patches -u /a
```

This procedure begins the installation of the patch release and automatically initializes the system. The entire procedure takes approximately 10 minutes.

During the installation, the system displays the following message:

```
Installing Patches (using install_patches 1.25).

Installation will be logged in
/a/var/sadm/install_data/Patches_log
```

When the patch installation completes, the system displays the following message:

```
install_patches completed successfully
```

3. Enter **cd /.**
4. At the root prompt #, enter **eject cdrom**.
5. Remove the cdrom from the cdrom drive.
6. Enter **init 6** to reboot the workstation.

   Upon reboot, the system configures its devices, and prompts you to set your root password.

7. At the root password prompt, enter **[*your root password*]**. Your password does not appear on the screen. When prompted, re-enter your root password. The system completes the boot procedure and displays the console login prompt.

8. At the console login prompt, log in as the root user and enter the root password. The system returns a # prompt (the default shell prompt for the root user).

Installing the Solaris 2.4 Cluster Patch

You must install the Solaris 2.4 cluster patch file *2.4_Recommended.tar.Z* on your system. There are several versions of the *2.4_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version. For more information on obtaining this file, contact Sun at 1-800-USA-4SUN.

Perform the following steps to install the Solaris 2.4 cluster patch:

1. At the # prompt, enter

   zcat /[*path to file*]/2.4_Recommended.tar.Z | (cd /tmp; tar -xvpf -)

   where “path to file” is the cluster patch’s location.

   Volumes of output appear.

2. When the # prompt appears, enter the following commands:

   cd /tmp/2.4_Recommended/
   ./install_cluster

   After several lines of output, the following message appears:

   ```
   Are you ready to continue with install? [y/n]:
   ```

3. Enter **y** to continue.

   The installation takes several minutes to complete.

4. When the # prompt appears, reboot the workstation.

5. Proceed to “Installing Motif Window Manager 1.2.5”

Installing Motif Window Manager 1.2.5

This section describes how to install Motif 1.2.5 purchased from SCO.

Before you install Motif Window Manager 1.2.5, verify that you have completed the following tasks, described earlier in this chapter:

- ☑ Installed Sun Microsystems, Inc. SunSoft Solaris 2.4 operating-system software
- ☑ Customized disk partition settings using file-system files or raw partitions
- ☑ Installed the patch release for Solaris 2.4
- ☑ Installed the Solaris 2.4 cluster patch

To install Motif 1.2.5:

1. Insert the Motif Window Manager 1.2.5 CD into the CD-ROM drive.
2. Verify that you are logged in as the root user. You should see a # prompt.
3. Enter the following commands:

   ```
   cd /opt
   tar -xvf /cdrom/cdrom0/scomd12s.tar
   ```

   The installation process takes approximately five minutes. The installation is complete when you see the # prompt.
4. At the root prompt, enter **eject cdrom**.
5. Remove the cdrom from the cdrom drive.

   The installation of Solaris 2.4 and Motif Window Manager 1.2.5 is complete.
6. Start OpenWindows by entering **/usr/openwin/bin/openwin**.
7. Proceed to Chapter 4, “Preparing for a SYBASE 11 Installation”.

3

Installing Solaris 2.5.1 and CDE

This chapter describes installation instructions for the following software:

- Solaris 2.5.1
- Solaris 2.5.1 Cluster Patch
- Solaris Common Desktop Environment

Installing Solaris 2.5.1

If you are installing Solaris 2.5, use the procedures below. The procedures for installing Solaris 2.5 are the same as Solaris 2.5.1.

Sun Microsystems, Inc. SunSoft Solaris, Version 2.5.1 (Solaris 2.5.1) is the operating system software you install on the NMS Sun SPARCstation. Although you can follow the installation instructions provided in the *Solaris SMCC™ Hardware Platform Guide*, this chapter provides the *Cascade-recommended settings* for installing and running CascadeView.

Before you install Solaris 2.5.1, verify that you have completed the following tasks described in Chapter 1:

- ☑ Read the general requirements for network management
- ☑ Read the NMS hardware and software requirements

To install Solaris 2.5.1:

1. Obtain an IP address and Subnet Mask from your network administrator. (This IP address must be registered as a valid address on your network.)
2. If you have an external CD-ROM drive, verify the jumper switch located on the back of the CD-ROM drive is set to SCSI ID 6.
3. Power on the Sun SPARCstation.
4. When the system comes up, hold down the Stop key and press the **a** key. The system displays the ok prompt.

   a. Insert the Solaris 2.5.1 CD into the CD-ROM drive.

   b. At the ok prompt, enter **boot cdrom**.

   The system boots the operating system from the CD-ROM drive. After several minutes, the system displays the following message:

   ```
   Starting OpenWindows...
   ```

The Solaris logo appears and the Solaris Install Console window displays the following message:

```
The system is coming up. Please wait.
```

5. At the Solaris Installation Program dialog box, choose Continue.
6. At the Identify This System dialog box, choose Continue.
7. At the Host Name dialog box, enter **[*your host name*]** and choose Continue.

   (For example, **nms01**)
8. At the Network Connectivity dialog box, select **Yes** and choose Continue.
9. At the IP Address dialog box, enter **[*your IP address*]** and choose Continue.
10. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The System Identification Status window displays the following message:

    ```
    Just a moment.
    ```

    The Solaris Install Console window displays the following message:

    ```
    Starting remote procedure call (RPC) services: sysidinis
    ```
11. At the Name Service dialog box, use the mouse to select None and choose Continue.

If you are running Network Information Services (NIS), consult your System Administrator.

12. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The System Identification Status window displays the following message:

    ```
    Just a moment.
    ```
13. At the Subnets dialog box, select **Yes** to make this system part of a subnet. Choose Continue.

14. At the Netmask dialog box, enter **[*your subnet mask*]** and choose Continue.
15. At the Time Zone dialog box, use your mouse to select **Geographic region** and choose Set.
16. At the Geographic Region dialog box, select a region from the list on the left, and a time zone from the list on the right. Choose Continue.
17. At the Date and Time dialog box, accept the default date and time or enter new values. Choose Continue.
18. At the Confirm Information dialog box, confirm the information displayed. If it is correct, choose Continue. To change any information, choose Change.

    The Solaris Install Console window displays the following messages:

    ```
    System identification is completed.
    Starting Solaris installation program...
    ```

19. At the Install Solaris Software - Initial dialog box, choose Continue.
20. At the Upgrade System dialog box, choose **Initial** to repartition the disk**.**

Do not choose upgrade at the Upgrade System dialog box.

21. At the System Type dialog box, select **Standalone** and choose Continue.
22. At the Software dialog box, select **Developer System Support** and choose Customize.

After selecting a software group, you can add or remove software by selecting Customize. However, this function requires an understanding of software dependencies and how Solaris software is packaged.

23. At the Customize Software dialog box, under the Software Clusters and Packages section, scroll through the list and add the following *required* new features to the Developer System Support. A black square indicates the feature is selected.

    – Automated Security Enhancement Tools. This feature provides options for securing the system.

    – Basic Networking.

    – Point-to-Point Protocol. This feature enables you to use an optional dial-up modem.

    – System Accounting.

24. Choose OK.

25. At the Software dialog box, choose Continue

26. At the Disks dialog box, highlight the line that has “bootdrive” on it. Select Add and choose Continue.

If you have more than one disk in your system, you may want to add it now so that it can be configured during the installation.

27. At the Preserve Data dialog box, choose Continue. This allows the current file systems and unnamed slices to be overwritten.

28. At the Automatically Layout File Systems dialog box, select Manual Layout.

29. At the File System and Disk Layout dialog box, select Customize.

    Edit the default values according to whether you are using *file systems* or *raw partitions*. You must have at least two disk drives to use raw partitions.

If you have a two-drive system, you can use raw partitions to improve database performance.

30. At the Customize Disks dialog box, modify the appropriate fields based on your system configuration.

    Refer to Table 2-1 through Table 2-4 in Chapter 2 on page 2-5 for the Cascade-recommended partition settings.

31. At the File System and Disk Layout dialog box, confirm your settings and choose Continue.

32. At the Mount Remote File Systems dialog box, choose Continue.

33. At the Profile dialog box, confirm the information displayed. If it is correct, choose Begin Installation. To change any information, choose Change.

34. At the reboot after installing Solaris dialog box, choose Reboot.

    The Solaris Install Console window displays several messages, for example:

```
Creating and checking UFS file systems
      -Creating / (c0t3d0s0)
      -Creating /usr (c0t3d0s5)
      -Creating /opt (c0t3d0s6)

Beginning Solaris software installation
```

Completing the Installation

The Solaris 2.5.1 software is installed on your system using the profile you created. The Solaris installation process takes approximately 45 minutes, depending on the software selected and the speed of the network or local CD-ROM.

When the installation completes, the system automatically reboots. Upon reboot, the system configures its devices and prompts you to set your root password.

1. At the root password prompt, enter **[*your root password*]**. Your password does not appear on the screen. When prompted, re-enter your root password. The system displays the following message:

```
System Identification is completed.
```

   The system completes the boot procedure and displays the console login prompt.

2. At the console login prompt, log in as the root user and enter the root password. The system returns a # prompt (the default shell prompt for the root user).

3. At the # prompt, enter **eject cd rom**.

4. Remove the cdrom from the cdrom drive.

5. If you installed Solaris 2.5, proceed to "Installing the Solaris 2.5 Cluster Patch".
6. If you installed Solaris 2.5.1, proceed to "Installing the Solaris 2.5.1 Cluster Patch".

Installing the Solaris 2.5 Cluster Patch

If you installed Solaris 2.5, you must install the Solaris 2.5 cluster patch file *2.5_Recommended.tar.Z* on your system. There are several versions of the *2.5_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version. For more information on obtaining this file, contact Sun at 1-800-USA-4SUN.

Perform the following steps to install the Solaris 2.5 cluster patch:

1. At the # prompt in a command tool window, enter

   zcat /[*path to file*]/2.5_Recommended.tar.Z | (cd /tmp; tar -xvpf -)

   where "path to file" is the cluster patch's location.

   Volumes of output appear.

2. When the # prompt appears, enter the following commands:

   cd /tmp/2.5_Recommended/
   ./install_cluster

   After several lines of output, the following message appears:

   ```
   Are you ready to continue with install? [y/n]:
   ```

3. Enter **y** to continue.

   The installation takes several minutes to complete.

4. When the # prompt appears, reboot the workstation.
5. Proceed to "Installing the Solaris Common Desktop Environment" on page 3-9.

Installing the Solaris 2.5.1 Cluster Patch

You must install the Solaris 2.5.1 cluster patch file *2.5.1_Recommended.tar.Z* on your system. There are several versions of the *2.5.1_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.For more information on obtaining this file, contact Sun at 1-800-USA-4SUN.

Perform the following steps to install the Solaris 2.5.1 cluster patch:

1. At the # prompt in a command tool window, enter

   zcat /[*path to file*]/2.5.1_Recommended.tar.Z | (cd /tmp; tar -xvpf -)

   where “path to file” is the cluster patch’s location.

   Volumes of output appear.

2. When the # prompt appears, enter the following commands:

   cd /tmp/2.5.1_Recommended/
   ./install_cluster

   After several lines of output, the following message appears:

   ```
   Are you ready to continue with install? [y/n]:
   ```

3. Enter **y** to continue.

   The installation takes several minutes to complete.

4. When the # prompt appears, reboot the workstation.

5. Proceed to “Installing the Solaris Common Desktop Environment” on page 3-9.

Installing the Solaris Common Desktop Environment

The Solaris Common Desktop Environment (CDE) provides users with a desktop graphical interface on a Sun workstation running Solaris 2.4 or later. This desktop provides windows, workspaces, controls, menus, and a front panel.

To install CDE:

1. Insert the CD-ROM that contains the Solaris CDE installation software into the CD-ROM drive.
2. At the console login prompt, enter **root**. When prompted, enter **[*root password*]**.
3. Change to the CDE directory by entering

   ```
   cd /cdrom/cdrom0/CDE/sparc
   ```

4. At the # prompt, enter

   ```
   ./install-cde
   ```

The following menu appears:

```
          Solaris Common Desktop Environment
                Installation Script
                   Main Menu

------------------------------------------------------------

1. Begin Installation (With Default Configuration Settings)

2. Modify Configuration Settings

3. Cancel Installation

   DEFAULT CONFIGURATION SETTINGS

   Installation Location          [/usr/dt]
   End User CDE Packages (28M):   [YES  ]
   Developer CDE Packages (24M): [NO   ]
   Answerbook CDE Package (120M):[NO   ]
   Interactive Installation:      [NO   ]
   Solaris Desktop Login
      at System Boot:             [YES  ]
   Installation Locale:           [EN   ]

------------------------------------------------------------

SELECT A NUMBER [1]
```

5. At the “Select a number [1]” prompt, enter **2.**
6. At the Current Configuration Settings menu, enter **1** to select installation location.
7. At the “Installation Location” prompt, enter the following:

   /opt/cde

8. At the “Current Configuration Settings” prompt, enter **0** to return to the main menu.
9. At the “Select a number” prompt, enter **1** to begin the installation.
10. At the “Begin CDE Installation now” prompt, press Return.

The installation process takes approximately five minutes. After CDE installs completely, the following message appears:

```
Note:    CDE has been installed on this system. Please
         reboot this machine before starting CDE.

The install-cde script has completed
```

11. At the # prompt, enter **cd /.**
12. At the # prompt, enter **eject cdrom**.
13. Remove the cdrom from the cdrom drive.
14. At the # prompt, enter **init 6** to reboot the system.

    Once the system reboots, the CDE login screen appears.
15. At the CDE login, enter **root**. When prompted, enter **[*root password*]**.

    The installation of Solaris 2.5.1 and CDE is complete.
16. Proceed to Chapter 4, “Preparing for a SYBASE 11 Installation”.

4

Preparing for a SYBASE 11 Installation

SYBASE 11 SQL Server is a relational database application that manages backup and recovery of database files. This chapter describes how to prepare for a SYBASE 11 installation which includes the following tasks:

- Review the SYBASE 11 installation worksheet
- Partition the second disk using raw partitions
- Load the Cascade-supplied SYBASE media and extract the scripts
- Set up the system before SYBASE 11 installation

Before you begin, verify:

☑ The Solaris operating system is installed

☑ The appropriate Solaris cluster patch file is installed

Reviewing the SYBASE 11 Installation Worksheet

Review the SYBASE 11 worksheet in Appendix F. In addition, fill out the applicable blank lines. You will need this information during the installation. If you install a Remote Backup Server, you also need to enter remote backup server parameters on the worksheet.

Partitioning the Second Disk Using Raw Partitions

If you have an NMS with two drives and you partitioned the boot drive with file systems, you now need to partition the second disk using raw partitions.

If you have an NMS with one drive and you partitioned that drive using file systems, proceed to "Loading the Cascade-supplied SYBASE Media" on page 4-11.

Table 4-1 lists the recommended partition settings for the second disk.

Table 4-1. Partition Settings

Partition(s)	Function
1 and 3	These partitions are not used
0	Master device for SYBASE
4	System Procs device for SYBASE
5	CascadeView device for SYBASE
6	Log device for SYBASE
7	Partition used for remainder of unallocated space

Before you partition the second disk, make sure the disk you are about to partition is not the same disk you partitioned during the Solaris install.

If you did not use the recommended partition settings in Table 2-2 or Table 2-3, consult your UNIX Administrator before completing this section.

1. Open a window and verify you are logged in as root user. You should see a # prompt.

   If you are not logged in as root, in the window enter **su - root**. When prompted, enter **[*root password*]**.

2. At the # prompt, enter **format**.

3. At the "Specify disk (enter its number)" prompt, enter **[*disk not partitioned during the Solaris installation*]**.

   If you choose the disk that was already partitioned, the system displays the following:

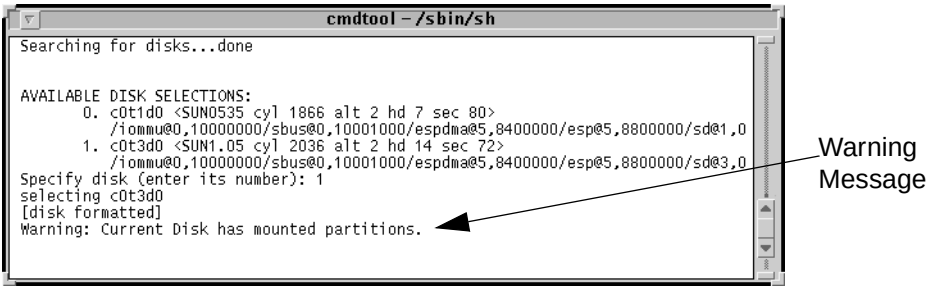


Figure 4-1. Partition Warning Window

At the format prompt, enter **quit**. Go to Step 2 and select the disk that you did not partition.

The Format Menu appears.

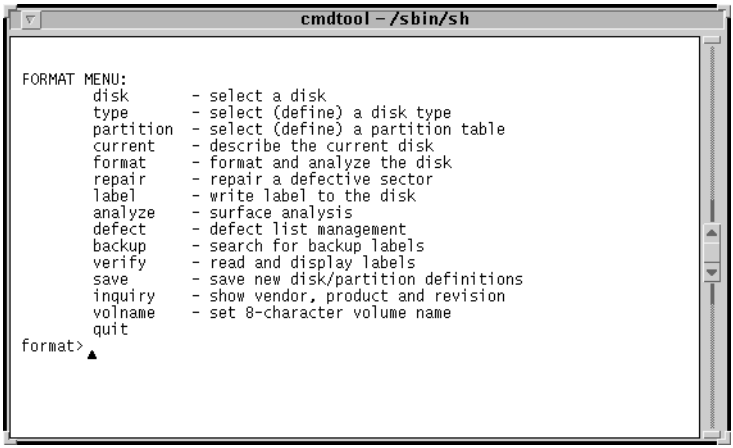


Figure 4-2. Format Menu

4. At the “format” prompt, enter **partition**.

   The Partition menu appears.

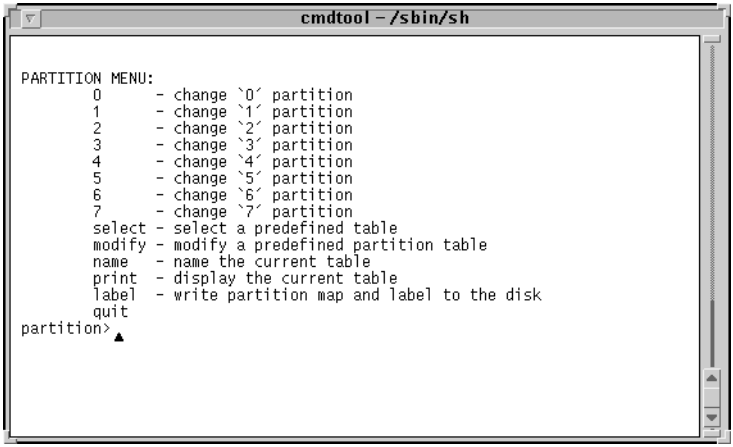


Figure 4-3. Partition Menu

Defining Partitions 1 and 3

Perform the following steps for partition 1. Accept the default settings in brackets [default] by pressing the Return key when indicated. Do not make changes to partition 2.

1. At the “partition” prompt, enter **1**.
2. Press Return to accept the defaults for the following prompts:

```
Enter partition id tag [unassigned]:
Enter partition permission flags [wm]:
Enter new starting cyl [0]:
Enter partition size [0b, 0c, 0.00mb]:
```

Repeat Step 1 through Step 2 for partition 3.

*If you are using a default label and did not re-label the drive, enter **0** at the partition size prompt.*

Partitions 1 and 3 are complete.

3. Proceed to “Creating a Master Device on Partition 0”.

Creating a Master Device on Partition 0

Complete the following steps to create a master device for SYBASE on Partition 0. Accept the default settings in brackets [default] by pressing the Return key when indicated.

1. At the “partition” prompt, enter **0**.
2. Press Return to accept the defaults for the following prompts:

```
Enter partition id tag [unassigned]:
Enter partition permission flags [wm]:
```

3. At the “Enter new starting cy1[1]:” prompt, enter **1**.

Do not accept the default value of zero(0) for the partition size, otherwise the database will become corrupt after installation and reboot.

4. At the “Enter partition size” prompt, enter **40mb**.

5. At the “partition” prompt, enter **print** to view the partition table. Table 4-2 shows an example of a partition table.

Table 4-2. Current Partition Table

Part	Tag	Flag	Cylinders	Size	Blocks
0	unassigned	wm	1 - 54	40.08MB	(54/0/0)
1	unassigned	wm	0	0	(0/0/0)
2	backup	wm	0 - 2732	1.98GB	(2733/0/0)
3	unassigned	wm	0	0	(0/0/0)
4	unassigned	wm	55-88	25	(34/0/0)
5	unassigned	wm	89 - 493	300.23MB	(405/0/0)
6	unassigned	wm	494 - 898	300.23MB	(405/0/0)
7	unassigned	wm	899-2732	1.33GB	(1834/0/0)

Partition 0 is complete.

6. Proceed to “Creating a System Procs Device on Partition 4”.

Creating a System Procs Device on Partition 4

Complete the following steps to create a System Procs device for SYBASE on Partition 4. Accept the default settings in brackets [default] by pressing the Return key when indicated.

1. At the “partition” prompt, enter **4**.
2. Press Return to accept the defaults for the following prompts:

```
Enter partition id tag [unassigned]:
Enter partition permission flags [wm]:
```

3. At the “Enter new starting cy1[1]:” prompt, enter **[*a number equal to the value of the ending cylinder from partition 0 plus 1*]**.
4. At the “Enter partition size” prompt, enter **25mb**.
5. At the “partition” prompt, enter **print** to view the partition table.

   Partition 4 is complete.
6. Proceed to “Creating a CascadeView Device on Partition 5”.

Creating a CascadeView Device on Partition 5

Complete the following steps to create a CascadeView device for SYBASE on Partition 5. Accept the default settings in brackets [default] by pressing the Return key when indicated.

1. At the “partition” prompt, enter **5**.
2. Press Return to accept the defaults for the following prompts:

```
Enter partition id tag [unassigned]:
Enter partition permission flags [wm]:
```

3. At the “Enter new starting cy1[1]:” prompt, enter **[*a number equal to the value of the ending cylinder from partition 4 plus 1*]**.
4. At the “Enter partition size” prompt, enter **300mb**.
5. At the “partition” prompt, enter **print** to view the partition table.

Partition 5 is complete.

6. Proceed to “Creating a Log Device on Partition 6”.

Creating a Log Device on Partition 6

Complete the following steps to create a log device for SYBASE on Partition 6. Accept the default settings in brackets [default] by pressing the Return key when indicated.

1. At the “partition” prompt, enter **6**.
2. Press Return to accept the defaults for the following prompts:

```
Enter partition id tag [unassigned]:
Enter partition permission flags [wm]:
```

3. At the “Enter new starting cy1[1]:” prompt, enter **[*a number equal to the value of the ending cylinder from partition 5 plus 1*]**.
4. At the “Enter partition size” prompt, enter **300mb**.

   Partition 6 is complete.
5. Proceed to “Calculating the Remaining Unallocated Drive Space”.

Calculating the Remaining Unallocated Drive Space

To calculate the remaining space on the drive to partition Partition 7:

1. At the “partition” prompt, enter **print** to view the partition table.
2. Locate the “Total disk cylinders available” line in the partition table. Make a note of the number next to this line. Do not use the reserved cylinders.

   For example.

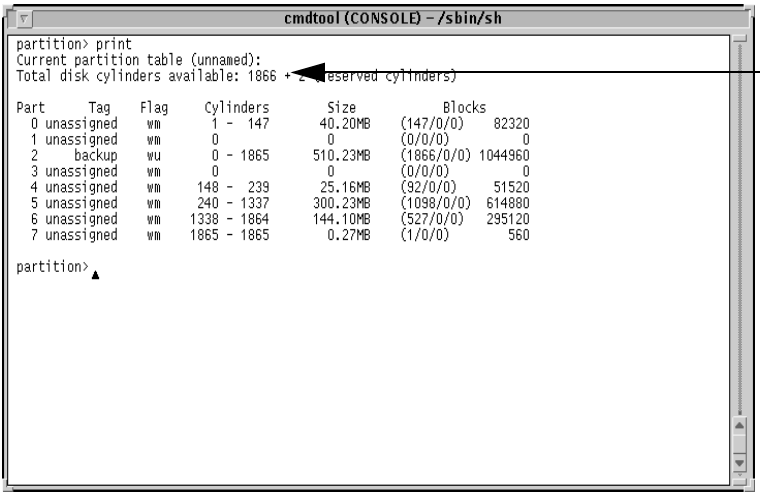


Figure 4-4. Unallocated space window

3. Subtract Partition 6’s ending cylinder number from the total disk cylinders available number.
4. Make a note of this number.
5. Proceed to “Defining Partition 7”.

Defining Partition 7

Perform the following steps for partition 7. Accept the default settings in brackets [default] by pressing the Return key when indicated.

1. At the “partition” prompt, enter **7**.
2. Press Return to accept the defaults for the following prompts:

   ```
   Enter partition id tag [unassigned]:
   Enter partition permission flags [wm]:
   ```

3. At the “Enter new starting cy1[1]:” prompt, enter **[*a number equal to the value of the ending cylinder from partition 6 plus 1*]**.
4. At the “Enter partition size” prompt, enter **[*number from Step 4 on page 4-9*]c**.
5. At the “partition” prompt, enter **quit**.
6. At the “format” prompt, enter **label** to label and save the partitions.
7. At the “Ready to label disk” prompt, enter **y**.
8. At the “format” prompt, enter **quit**.

   The partitioning of the second disk is complete. The next section describes how to load the Cascade-supplied SYBASE media, and extract the scripts from the media.

Loading the Cascade-supplied SYBASE Media

Complete the following steps to load the Cascade-supplied SYBASE media and extract the installation scripts from the media:

1. Verify you are logged in as root user. You should see a # prompt in the window.

   If you are not logged in as root, in the window enter **su - root**. When prompted, enter **[*root password*]**.

If you are logged into the system via a remote connection (rlogin/rsh/telnet), set your DISPLAY variable to the appropriate value. To do this, enter the command:

```
DISPLAY=[enter local hostname]:0.0
export DISPLAY
```

(This example uses the Korn shell syntax.)

*In addition, in a new window on the local system, run "**xhost +**" as the user who controls the system console. Executing this command enables you to display the installation log on the local system.*

2. Insert the Cascade-supplied SYBASE media into the media drive and close the latch.

3. In the window, at the system prompt, enter

   ```
   cd /opt
   ```

4. To extract the scripts from the media device, enter

   ```
   tar -xvf [media device pathname] cv_scripts
   ```

   Refer to the SYBASE 11 worksheet in Appendix F for the name of the media device. This process takes approximately five minutes.

5. Move to the *cv_scripts* directory by entering

   ```
   cd cv_scripts
   ```

6. Enter the following command to run the Cascade-supplied SYBASE script:

   `./install_sybase`

   The following message appears:

   ```
   Verifying super user privileges...

   Would you like to view (tail -f) the install log (default=y)?
   ```

   The Tail Window allows users to view the log of the installation.

7. Press Return to accept the default (yes).

   The Tail Window appears.

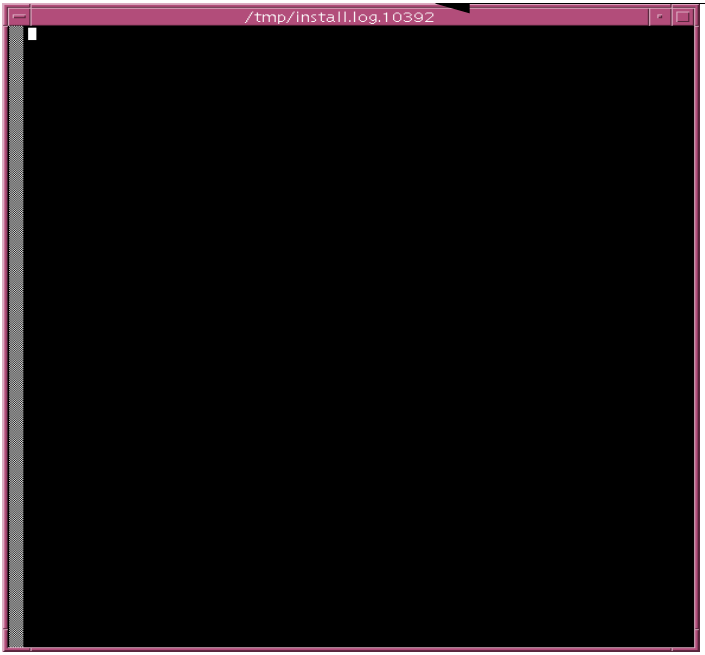


Figure 4-5. Tail Window

The SYBASE Installation Menu appears.

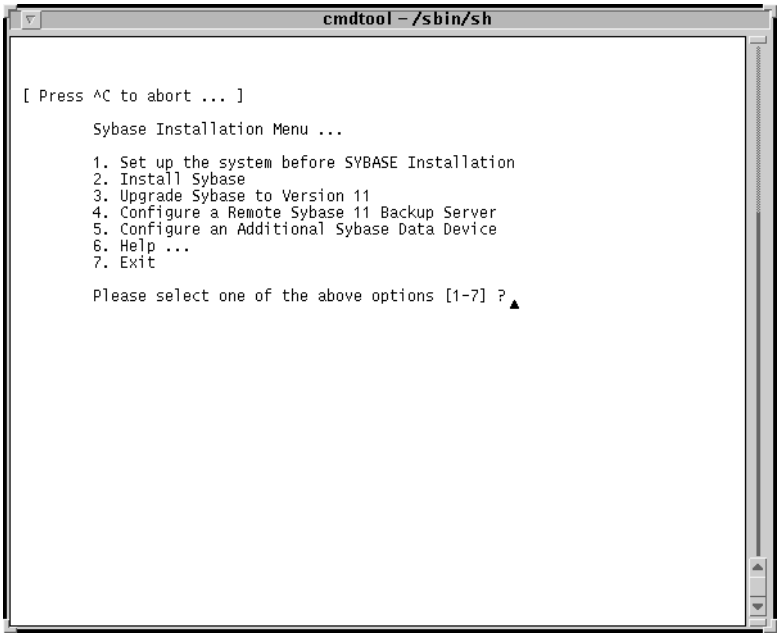


Figure 4-6. SYBASE Installation Menu

The loading of the Cascade-supplied SYBASE installation scripts is complete. The next section describes how to set up your system before installing the SYBASE 11 software.

Setting Up the System

You must set up your system before installing SYBASE 11 by running the SYBASE installation script. The SYBASE installation script:

- Creates the SYBASE and NMS user accounts
- Creates additional user accounts
- Assigns TCP socket numbers to SYBASE and Backup Server
- Sets the CascadeView device name
- Sets the Master, System Procs, and Log devices

To set up your system:

1. At the SYBASE Installation Menu, enter **1** to set up the system.

   The following message appears:

```
Complete all prerequisite tasks before continuing. See
Cascade's installation documentation for more information.

Do you wish to continue? <y|n> [default=y]:
```

2. Press Return to continue.

   The following message appears:

```
Setting up your system for the Sybase Install
-----------------------------------------------

Creating the dba group for database system administrator.
Successfully added group 'dba' with gid 300

Creating a user account for sybase
---------------------------------------

Enter User's home directory [default : /opt/sybase] ?
```

Refer to the SYBASE 11 worksheet in Appendix F to complete the following steps.

3. Press Return to accept the default of */opt/sybase*.

   The following message appears:

```
Adding user sybase. Please wait...

Successfully added user sybase...

Configuring the user account with environment files.
-------------------------------------------------------

Enter the Database Server Name (default=CASCADE) ?
```

4. Press Return to accept the default of CASCADE.
5. At the "Enter the name of the error log" prompt, press Return to accept the default of *CASCADE_err.log*.
6. At the "Enter the Database SA Password" prompt, enter ***[your Database SA password]***. When prompted, re-enter the password.

*Choose a password that you can remember (for example, **superbase**).*

The following message appears:

```
Creating /etc/rc2.d/S97sybase..Done.

Creating /etc/rc0.d/K01sybase..Done.

Creating /etc/rc2.d/S98sybase..Done.
```

The script creates three files (listed above) that activate and deactivate the SYBASE 11 Server and the Backup Server. The script uses these files later in the installation to shut down and start up the SYBASE Server. The following message appears:

```
You must add at least one more user account.

Enter name of the new user [default : nms] ?
```

7. Press Return to accept the default of nms.
8. At the “Enter group to which new user belongs” prompt, press Return to accept the default of staff.

   The following message appears:

```
Creating a user account for nms
---------------------------------------

Enter User’s home directory [default : /opt/nms] ?
```

9. Press Return to accept the default of */opt/nms*.

The following message appears:

```
Adding user nms. Please Wait...

Successfully added user nms...

Configuring the user account with environment files.
-----------------------------------------------------

Setting Shared Memory Allocations
---------------------------------
```

The Cascade script increases SYBASE's shared memory. The script accomplishes this by appending the line ***set shmsys:shminfo_shmmax=131072000*** *to the /etc/system file.*

The system displays the following:

```
Making a backup copy of '/etc/system' in '/etc/system.cv'

Setting TCP Socket device for Sybase
------------------------------------

The Socket Number for SYBASE is 1025
The Socket Number for SYBASE BACKUP is 1026
```

The Cascade script assigns TCP socket numbers to SYBASE and the Backup Server. 1025 is assigned to SYBASE and 1026 is assigned to Backup Server. If these numbers are already in use, the script assigns the next available numbers.

The system displays the following:

```
Do you wish to continue? <y|n> [default=y]:
```

10. Press Return to continue.

The following message appears:

```
Creating Additional User Accounts
-----------------------------------

1. Create User Account.
2. Proceed to the Next Step.

Please select one of the above options [1-2]?
```

- To create additional user accounts, enter **1**.

  The script prompts you for information similar to what you provided for the nms user account. Refer to Step 7 on page 4-16. Once you create the additional user, the Creating Additional User Accounts menu reappears.

- To proceed to the next step, enter **2**.

  The Device Installation menu appears.

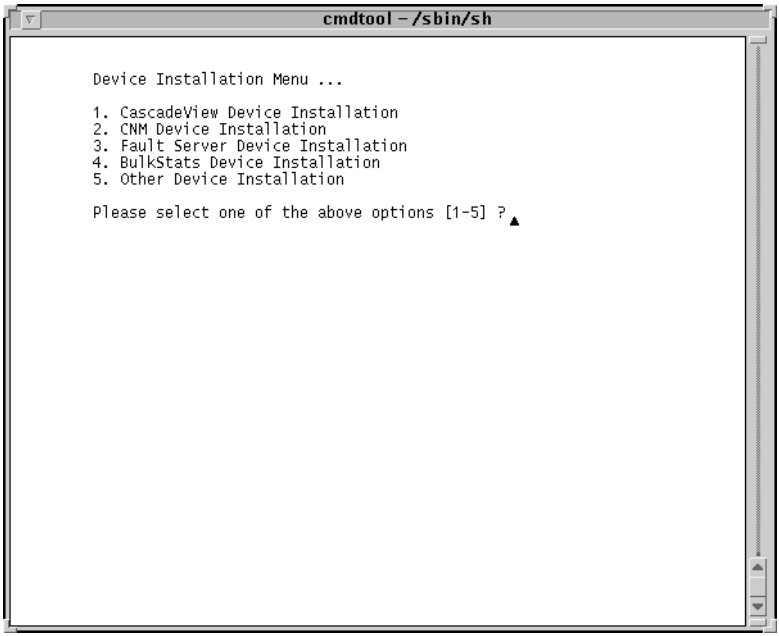


Figure 4-7. Device Installation Menu

11. Enter **1** to set the CascadeView Device name.

    The following message appears:

    ```
    The Cascadeview Device Installation has been selected.
    ```

> *If you use SYBASE in conjunction with other Cascade products (CNM Proxy Agent, Bulk Statistics), you must configure additional devices for these products. Refer to Appendix D for more information.*

The following menu appears:

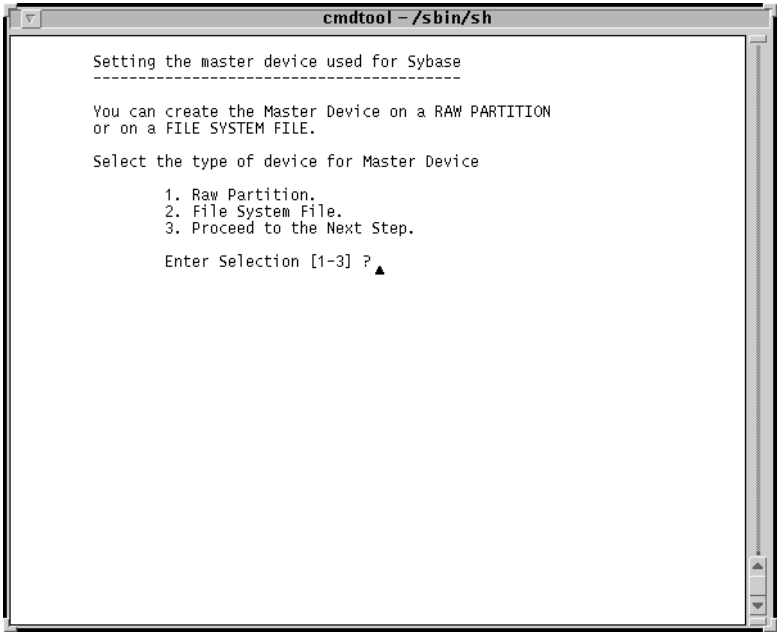


Figure 4-8. SYBASE Master Device Menu

12. Select a Master device:

    - Enter **1** to select Raw Partitions. Proceed to "Using Raw Partitions for the Master Device" on page 4-20.
    - Enter **2** to select File System Files. Proceed to "Using File System Files for the Master Device" on page 4-22.

Using Raw Partitions for the Master Device

The following message appears if you selected Raw Partitions:

```
WARNING: IF YOU INSTALL THE SQL SERVER ON A RAW PARTITION,
ANY EXISTING FILES ON THAT PARTITION WOULD BE OVERWRITTEN.

Do you wish to continue? [default=y]:
```

1. Press Return to continue.

The Cascade script does not provide defaults for the following prompts because customer configurations vary. Refer to the SYBASE 11 worksheet in Appendix F for pathname information.

The following message appears:

```
Setting up Raw Partition Devices
---------------------------------
Enter the Master Device Path Name (e.g. /dev/rdsk/c0t1d0s0):
```

2. Enter **/dev/rdsk/c0t1d0s0.**

   The following message appears:

```
Setting device permissions. Please Wait..

Device /dev/rdsk/c0t1d0s0 has been set.

Enter the Procs Device Path Name (e.g. /dev/rdsk/c0t1d0s4):
```

3. Enter **/dev/rdsk/c0t1d0s4.**

The following message appears:

```
Setting device permissions. Please Wait..

Device /dev/rdsk/c0t1d0s4 has been set

Enter the Cascade Device Path Name (e.g.
/dev/rdsk/c0t1d0s5):
```

4. Enter **/dev/rdsk/c0t1d0s5.**

   The following message appears:

```
Setting device permissions. Please Wait..

Device /dev/rdsk/c0t1d0s5 has been set.

Enter the Log Device Path Name (e.g. /dev/rdsk/c0t1d0s6):
```

5. Enter **/dev/rdsk/c0t1d0s6.**

   The following message appears:

```
Setting device permissions. Please wait..

Device /dev/rdsk/c0t1d0s6 has been set. The maximum value
for your Master Device has been calculated to maximize the
size of your raw partition. By accepting the default you will
be utilizing the whole raw device. A minimum value has been
established at 40 Mbytes. You will not be allowed to go below
that threshold.

NOTE: It is recommended that you accept the maximum value.
Otherwise, the space left over will be wasted.

Enter size of your Master Device in Megabytes:
```

6. Press Return to accept the default of 40.

   The following message appears:

```
Press Enter to return...
```

7. Press Return to continue.

The following message appears:

```
******************************************************
If you have completed the initial SYBASE setup
successfully, please REBOOT the workstation now.
```

8. At the # prompt, enter **init 6** to reboot the system.
9. Proceed to Chapter 5, “Installing SYBASE 11”.

Using File System Files for the Master Device

The following message appears if you selected File system files:

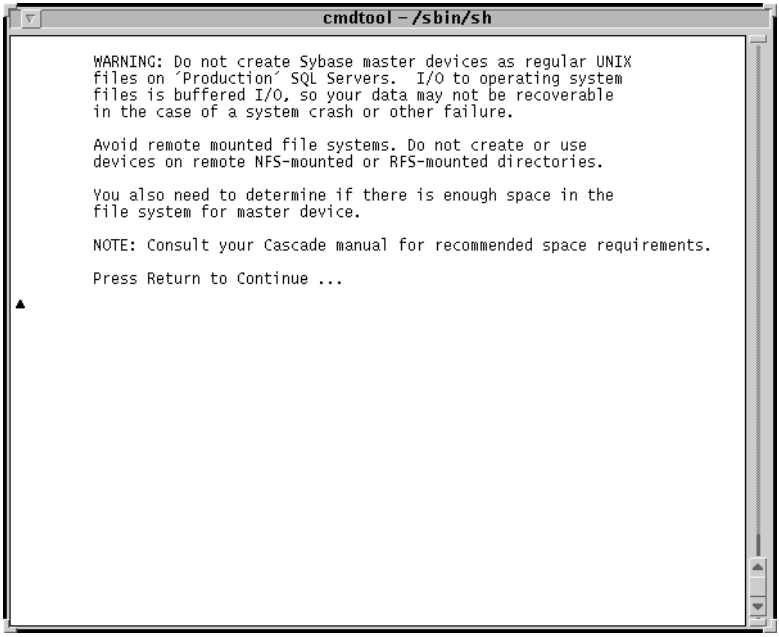


Figure 4-9. Warning Window

1. Press Return to continue.

The following screen appears:

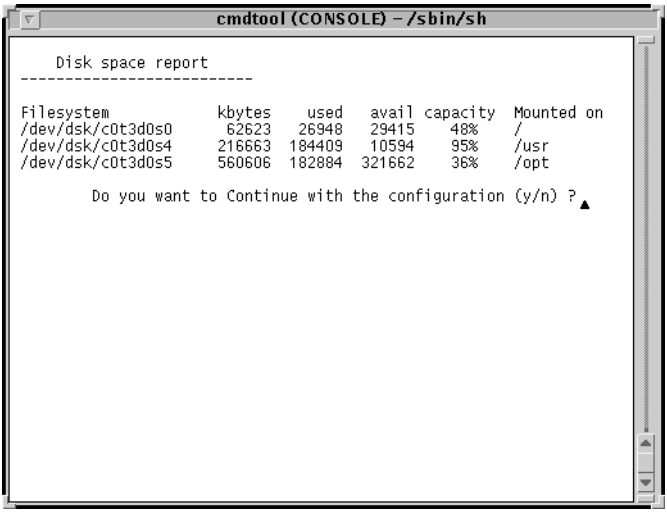


Figure 4-10. Disk Space Report Screen

2. Enter **y** to continue.

Refer the SYBASE 11 worksheet in Appendix F to complete the following steps.

3. At the “Enter name for database device directory” prompt, press Return to accept the default of */opt/databases*.

   The following message appears:

```
The minimum value for your Master Device has been
established at 40 MBytes. By accepting the default you will
be assigning the minimum space allowed for an initial
CascadeView Installation.

NOTE: Consult your Cascade manual for recommended sizes.
Enter the size of the Master Device in Megabytes
[default=40]:

Enter the size of your Master Device in Megabytes:
```

4. Press Return to accept the default of 40.
5. At the “Enter the size of your System Procs Device in Megabytes” prompt, press Return to accept the default of 25.
6. At the “Enter the size of your Data Device in Megabytes” prompt, press Return to accept the default of 50.
7. At the “Enter the size of your Log Device in Megabytes” prompt, press Return to accept the default of 100.

Cascade supports the default device sizes in Step 6 and Step 7 in CascadeView installations only. Other Cascade Server products require larger data and log device sizes.

The following message appears:

```
Creating Master Device file...

Making directory for the master device...

Press Enter to return...
```

8. Press Return to continue.

   The following message appears:

```
******************************************************
If you have completed the initial SYBASE setup
successfully, please REBOOT the workstation now.
```

9. At the # prompt, enter **init 6** to reboot the system.

   The SYBASE prerequisite tasks are complete.

10. Proceed to Chapter 5, “Installing SYBASE 11”.

5

Installing SYBASE 11

This chapter provides instructions for installing SYBASE 11 and configuring the local Backup server. Before installing SYBASE 11, verify that you have completed the following tasks described in Chapter 4:

- ☑ Reviewed the SYBASE 11 installation worksheet
- ☑ Loaded the Cascade-supplied SYBASE media
- ☑ Prepared the system for SYBASE installation

Installing SYBASE 11

To run the installation script:

1. At the console login:

   - If you installed Solaris 2.4 and Motif 1.2.5, enter **root**. When prompted, enter **[*root password*]**.

     Start OpenWindows by entering **/usr/openwin/bin/openwin**.

   - If you installed Solaris 2.5.1 and CDE, enter **root.** When prompted, enter **[*root password*]**..

If you are logged into the system via a remote connection (rlogin/rsh/telnet), set your DISPLAY variable to the appropriate value. To do this, in a window enter

```
DISPLAY=[enter local hostname]:0.0
export DISPLAY
```

(This example uses the Korn shell syntax.)

*In addition, in a new window on the local system, run **"xhost +**" as the user who controls the system console. Executing this command enables you to display the installation log on the local system.*

2. Open a window and change to the scripts directory by entering

   ```
   cd /opt/cv_scripts
   ```

3. Enter the following command to run the Cascade script:

   ```
   ./install_sybase
   ```

The following message appears:

```
Verifying super user privileges...

Would you like to view (tail -f) the install log (default=y)?
```

The Tail window allows users to view a log of the installation process. To view an example of the Tail window, refer to Figure 4-5 on page 4-12

4. Press Return to accept the default (yes).

   The SYBASE Installation menu appears.

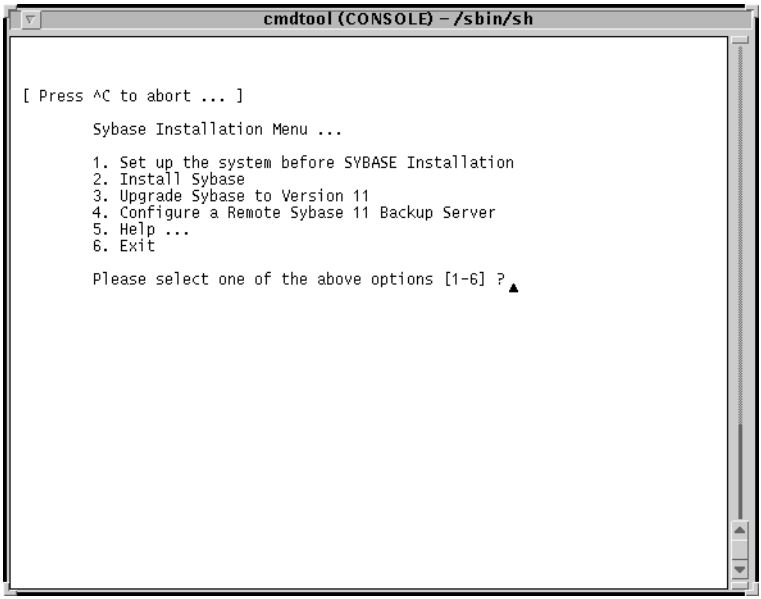


Figure 5-1. SYBASE Installation Menu

5. At the SYBASE Installation Menu, enter **2**.

The following message appears:

```
The following items are required to be completed before
performing this step.

1. Space requirements must be clarified.
2. Step 1 from the Sybase menu must be completed.

Do you wish to continue? <y|n> [default=y]:
```

6. Press Return to continue.

   The system displays the parameters you entered and prompts you to make any necessary changes. The window below shows an example of raw partition parameters.

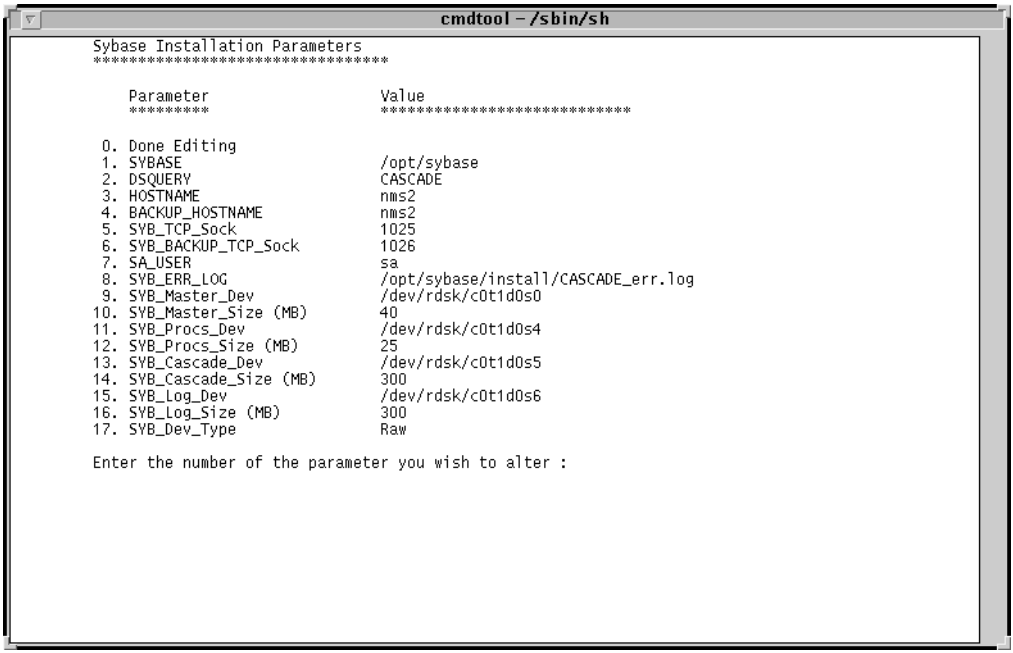


Figure 5-2. Raw Partition Parameters Window

7. To change any device parameters, enter the parameter number and make the appropriate changes.

   - If you change parameters 11-17, the SYBASE Master Device Menu reappears. Refer to Figure 4-8 on page 4-19.
   - If you change parameter 1, the script prompts you to change 8.

8. Once you have finished making your changes, enter **0** to continue.

   The following message appears:

```
Install the media in your local device now.
***********************************************

Enter the full path of the media device:
```

9. Enter **[*media device pathname*]**.

   Refer to the SYBASE 11 Worksheet in Appendix F for this information.

   The following messages appear:

```
The device was found and is ready for extraction.
Press Return to Continue...
```

10. Press Return to continue.

The following messages appear:

```
Extracting Sybase Media from the device...Done.

Running ‘sybinit’ and creating the sybase server...Done
Successfully.
```

Running the sybinit utility takes approximately 15 minutes.

```
Running ‘alter’ commands to expand the master device and the
tempdb file. This may take a few moments.
Please Wait...Done Successfully.

Increasing the Memory allocations to 20480 for improved
performance...
```

The Cascade script increases memory allocation to allow basic SYBASE commands to execute. The script does so because the system has insufficient byte memory for SYBASE commands. For more information, refer to the SYBASE SQL Server Installation and Configuration Guide*.*

The screen displays the following:

```
Increasing the Number of Remote Users
-------------------------------------

By Default, the Sybase installation sets the number of user
connections to 25. If you need to increase the total
connections above 25 then enter the number of connections
you require.

Enter the number of user connections [default=25] ?
```

11. Do one of the following:

    - Press Return to accept the default of 25.
    - Enter ***[Number of remote users].***

    The following message appears:

    ```
    Press Enter to Continue...
    ```

12. Press Return to continue.

    ```
    Restarting Server with increased options
    ```

    The script shuts down and restarts the SYBASE Server, enabling the new configuration parameters to take effect.

If you encounter errors during the SYBASE Server startup, call the Technical Response Center at **1-800-DIAL-WAN**.

Configuring a Local Backup Server

The script automatically configures a local Backup Server and displays the message:

```
Configuring Local Backup Server
*******************************

Running ‘sybinit’ and creating the sybase server...Backup
Server Install Successful....
```

The SYBASE Installation Menu appears.

13. At the SYBASE Installation Menu, enter **7** to exit.

    The following message appears:

    ```
    Cleaning up temporary files......Done.

    Exiting Installation script.
    ```

14. Remove the media from the media device.

15. Close the Tail window by placing the mouse pointer in the window and typing **<Ctrl> c**.

    The SYBASE installation is complete.

16. If you are configuring a remote Backup Server, proceed to Appendix A. If not, proceed to Chapter 6, “Installing HP OpenView 4.11”.

6

Installing HP OpenView 4.11

HP OpenView for Sun SPARCstation, Version 4.11 is the network management software application that runs in conjunction with CascadeView on the NMS. This chapter describes how to:

- Set up the system
- Install HP OpenView 4.11 software on the system
- Disable IP Discovery
- Verify the installation

Before you install HP OpenView 4.11, verify that you have completed the following tasks described, in Chapter 5:

- ☑ Installed SYBASE 11
- ☑ Installed the Backup Server

Setting Up the System

This section describes how to:

- Load the Cascade-supplied HP OpenView media
- Extract the installation script from the media
- Run the installation script
- Set up the system

When you run the installation script the first time, the script sets up the system by adding semaphores to the */etc/system* file. A semaphore is an interprocess communication signal that indicates the status of a shared system resource, such as shared memory. The installation encounters problems if you do not add semaphores to the */etc/system* file. After the script updates this file, reboot the workstation.

To set up the system:

1. Verify you are logged in as root user. You should see a # prompt in the window.

   If you are not logged in as root, in the window enter **su - root**. When prompted, enter **[*root password*]**.

If you are logged into the system via a remote connection (rlogin/rsh/telnet), set your DISPLAY variable to the appropriate value. To do this, enter the command:

```
DISPLAY=[enter local hostname]:0.0
export DISPLAY
```

(This example uses the Korn shell syntax.)

*In addition, in a new window on the local system, run "**xhost +**" as the user who controls the system console. Executing this command enables you to display the installation log on the local system.*

2. Insert the Cascade-supplied media into the media drive and close the latch.
3. In the window, enter

   ```
   cd /opt
   ```

4. To extract the scripts from the media device, enter

   ```
   tar -xvf [media device pathname] cv_scripts
   ```

5. Change to the *cv_scripts* directory by entering

   ```
   cd cv_scripts
   ```

6. Run the HP OpenView installation script by entering

   ```
   ./install_cvux
   ```

   The following message appears:

   ```
   Verifying superuser privileges.....
   ```

The CascadeView/UX Installation Menu appears.

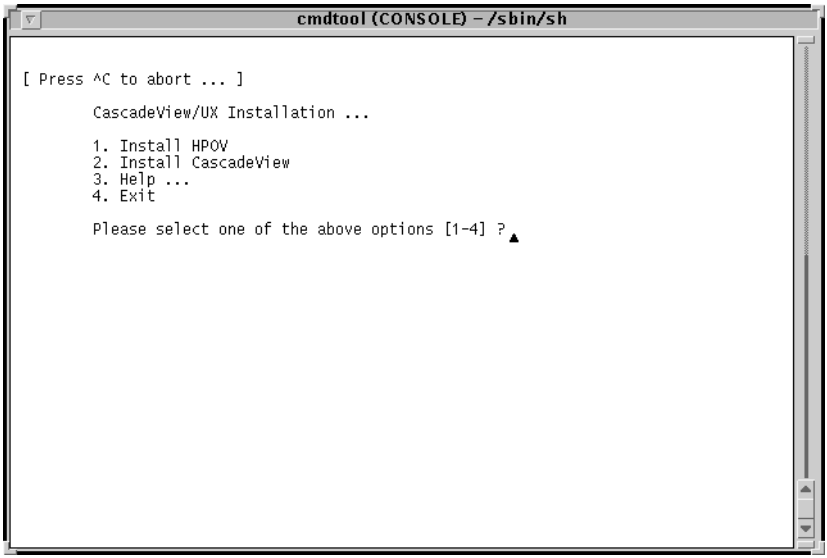


Figure 6-1. CascadeView/UX Installation Menu

Once the install_cvux script runs, you can exit the script at any time by typing <Ctrl> C. The script cleans any "work in progress."

7. At the CascadeView/UX Installation Menu, enter **1** to view the HP OpenView installation menu.

The HP OpenView Installation Menu appears.

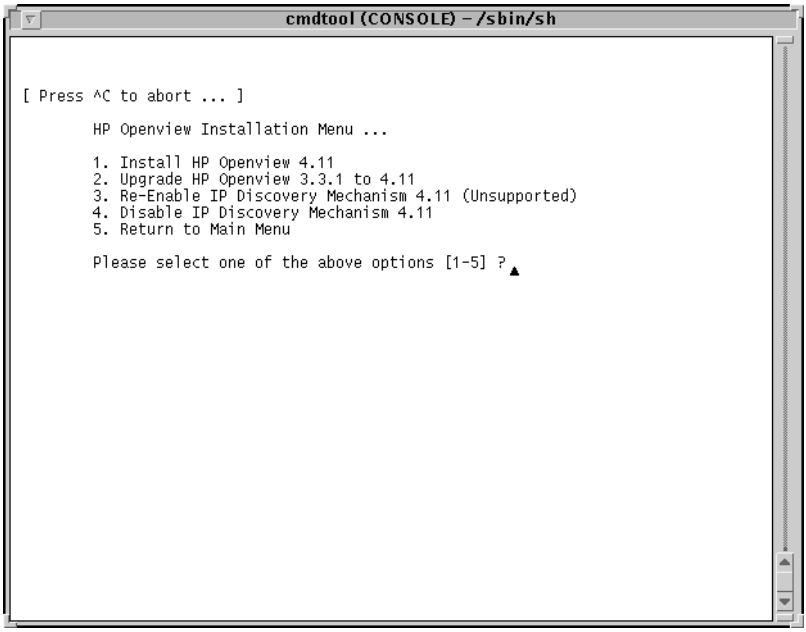


Figure 6-2. HP OpenView Installation Menu

8. At the HP OpenView Installation Menu, enter **1** to set up the system.

   When you select option 1 the first time, the script modifies the */etc/system* file. These modifications take effect once you reboot the system. However, when you select option 1 again, the script installs HP OpenView 4.11.

The following message appears:

```
Would you like to view (tail -f) the install log (default=y)?
```

The Tail window allows users to view a log of the installation process. To view an example of the Tail window, refer to Figure 4-5 on page 4-12

9. Press Return.

   The Tail Window appears.

   The following message appears:

```
Note: In order to restore back to the original state of your
HP OpenView installation, it is recommended that you back
your system up before continuing with this procedure.

Complete all prerequisites before continuing.

Do you wish to continue? <y|n> [default=y]:
```

10. Press Return to continue.

The following message appears:

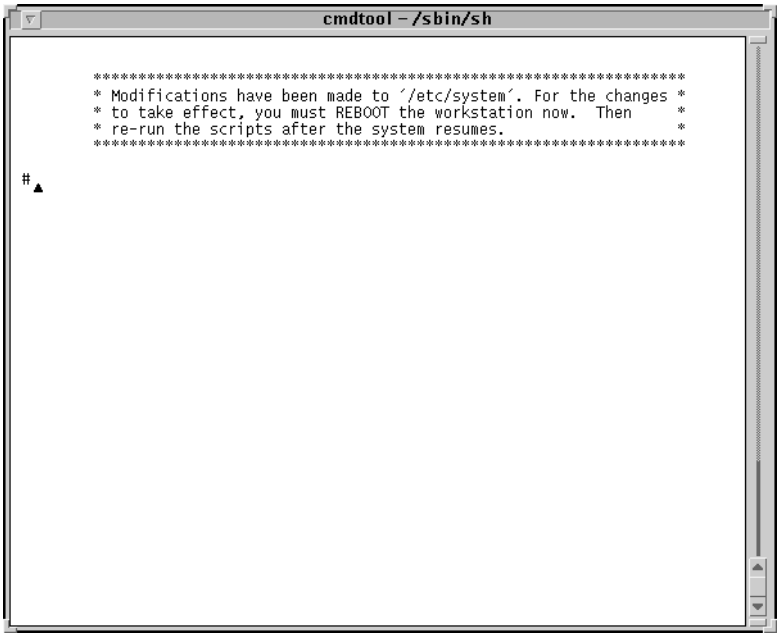


Figure 6-3. Modifications Window

11. Enter **init 6** to reboot the system.

    When the system reboots, the SYBASE Server automatically shuts down and restarts. If you installed a two-system configuration, the SYBASE Server is not shut down because SYBASE resides on another system.

    The set up of the system is complete.

12. Remove the media from the media device drive.

13. Proceed to the section “Installing HP OpenView 4.11”.

Installing HP OpenView 4.11

The installation script:

- Installs HP OpenView 4.11 software on the system
- Disables IP map discovery
- Verifies the installation

To install HP OpenView 4.11

1. At the console login:
   - If you installed Solaris 2.4 and Motif 1.2.5, enter **root**. When prompted, enter **[*root password*]**.

     Start OpenWindows by entering **/usr/openwin/bin/openwin**.
   - If you installed Solaris 2.5.1 and CDE, enter **root.** When prompted, enter **[*root password*]**.

If you are logged into the system via a remote connection (rlogin/rsh/telnet), set your DISPLAY variable to the appropriate value. To do this, in a window enter

```
DISPLAY=[enter local hostname]:0.0
export DISPLAY
```

(This example uses the Korn shell syntax.)

*In addition, in a new window on the local system, run **"xhost +**" as the user who controls the system console. Executing this command enables you to display the installation log on the local system.*

2. Open a window and change to the scripts directory by entering

   ```
   cd /opt/cv_scripts
   ```

3. Run the HP OpenView installation script by entering

   ```
   ./install_cvux
   ```

The following message appears:

```
Verifying superuser privileges.....
```

The CascadeView/UX Installation Menu appears.

4. At the CascadeView/UX Installation Menu, enter **1** to view the HP OpenView installation menu.

   The HP OpenView Installation Menu appears.

5. At the HP OpenView Installation Menu, enter **1** to install HP OpenView 4.11.

   The following message appears:

   ```
   Would you like to view (tail -f) the install log (default=y)?
   ```

   The Tail window allows users to view the log of the installation.To view an example of the Tail window, refer to Figure 4-5 on page 4-12.

6. Press Return.

   The following message appears:

   ```
   Note: In order to restore back to the original state of your
   HP OpenView installation, it is recommended that you backup
   your system up before continuing with this procedure.

   Complete all prerequisites before continuing.

   Do you wish to continue? <y|n> [default=y]:
   ```

7. Press Return to continue.

   The script creates the SYBASE and NMS user accounts. The script does this to provide user accounts on the HP Server if you install a two-system configuration (SYBASE on one system, HP OpenView and CascadeView on another). If you are installing a single-system configuration, the user accounts have been created already by the SYBASE installation script.

The following messages assume a single-system configuration:

```
Creating Group Account for 'dba'
--------------------------------

The group, 'dba', already exists.

Creating a user account for sybase
--------------------------------------

The user, sybase, already exists.

Enter the Sybase environment path [default : /opt/sybase] ?
```

8. Press Return to accept the default of */opt/sybase*.

```
You must add at least one more user account.

Enter the name of the user [default = nms]?
```

9. Press Return to accept the default.

10. At the "Enter group to which the new user belongs " prompt, press Return to accept the default of staff.

```
Creating a user account for nms
---------------------------------------

The user, nms, already exists.

Do you wish to continue? <y|n> [default=y]:
```

11. Press Return to continue.

The following message appears:

```
Creating Additional User Accounts
---------------------------------

1. Create User Account.
2. Proceed to the Next Step.

Please select one of the above options [1 or 2] ?
```

12. Do one of the following:

    - To create additional user accounts, enter **1**.

      The script prompts you for information similar to that provided for the nms user account. Refer to Step 11 on page 6-10. Once you create the additional user, the Creating Additional User Accounts menu reappears.

    - To proceed to the next step, enter **2**.

    The following message appears:

    ```
    Install the media in your device now.
    ****************************************

    What is the path on the Local Host :
    ```

13. Insert the HP OpenView 4.11 media into the media device.

14. At the "What is the path on the Local Host" prompt, enter ***[media pathname]***.

    For example, */cdrom/cdrom0* or */cdrom/J1170-10804*.

    The following message appears:

    ```
    The CD Installation media was found!

    [Hit Return to continue with the installation.]
    ```

15. Press Return to continue.

    The following message appears:

    ```
    The following languages are supported by software in this
    depot:
    1) English
    2) Japanese
    Enter the number corresponding to the preferred language:
    ```

16. Enter ***[1 or 2]***.

The following message appears:

```
You could have purchased either the full or entry NNM
product. Look at the product name on the Entitlement
Certificate or the Update Letter that was shipped to you with
NNM to determine which of the products to choose.

1) Network Node Manager Full product
2) Network Node Manager Entry product

Enter the number corresponding to the product you purchased:
```

17. Enter **[*1 or 2*]**.

    The following message appears:

    ```
    Do you want to install the manpages? (y|n):
    ```

18. Enter **y**.

    The following messages appear:

    ```
    This installation will put the following software on your
    system:

    HP OpenView Network Node Manager entry product for Solaris
    2.x
    ```

    If you bought HP OpenView Network Node Manager Full product, substitute *entry product* with *full product* in the screen display.

    The following messages appear:

    ```
    HP OpenView Network Node Manager man pages

    There are many factors that can affect the amount of time
    this installation could take. However, it averages around 30
    to 45 minutes.

    Do you want to continue with this installation? (y|n) :
    ```

19. Enter **y** to continue. The installation takes approximately 30 to 45 minutes.

The following messages appear during the installation:

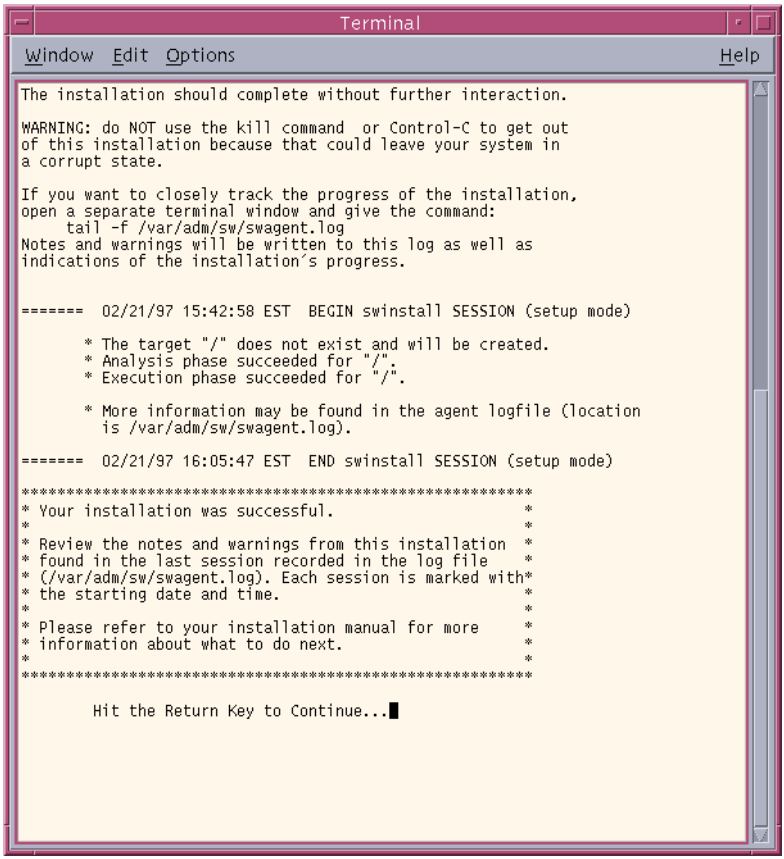


Figure 6-4. HP OpenView Installation Messages

20. Review the log file for details on the installation.

21. At the “Hit the Return Key to Continue” prompt, press Return to continue.

The following messages appears:

```
HP OpenView Network Node Manager Configuration
**********************************************

Setting up Symbolic Links.............Done.
```

Disabling IP Discovery

IP Discovery finds all IP-addressable nodes on your network and creates an object for each discovered node. Cascade switches do not respond to IP Discovery. Therefore the script disables it. Refer to Appendix C, “IP Discovery” to re-enable IP Discovery.

Cascade does not support IP Discovery. Enabling this feature severely affects the performance of your NMS Server.

The screen displays the following:

```
Disabling HP OpenView IP Configuration
**************************************

Stopping the OV Platform...Done.
Removing netmon...Done.
Removing ovrepld...Done.
Removing ovtopmd...Done.
Removing snmpcollect...Done.
Removing ipmap...Done.
Disabling XNmevents for netmon and snmpCollect...Done.

The disabling of IP Map discovery is complete.
Starting the HP OpenView object database...Done.
Processing field registration entries...Done.

Do you wish to continue? <y|n> [default=y]:
```

22. Press Return to continue.

The following message appears:

```
Verifying the HPOV installation
-----------------------------------

The HP OpenView Window and the Events Category dialog box
will appear. Choose Map => Exit from HP OpenView to end the
verification.
```

Verifying the HP OpenView Installation

The HP OpenView 4.11 installation successfully completes when you see the HP OpenView Window and Events Category dialog box.

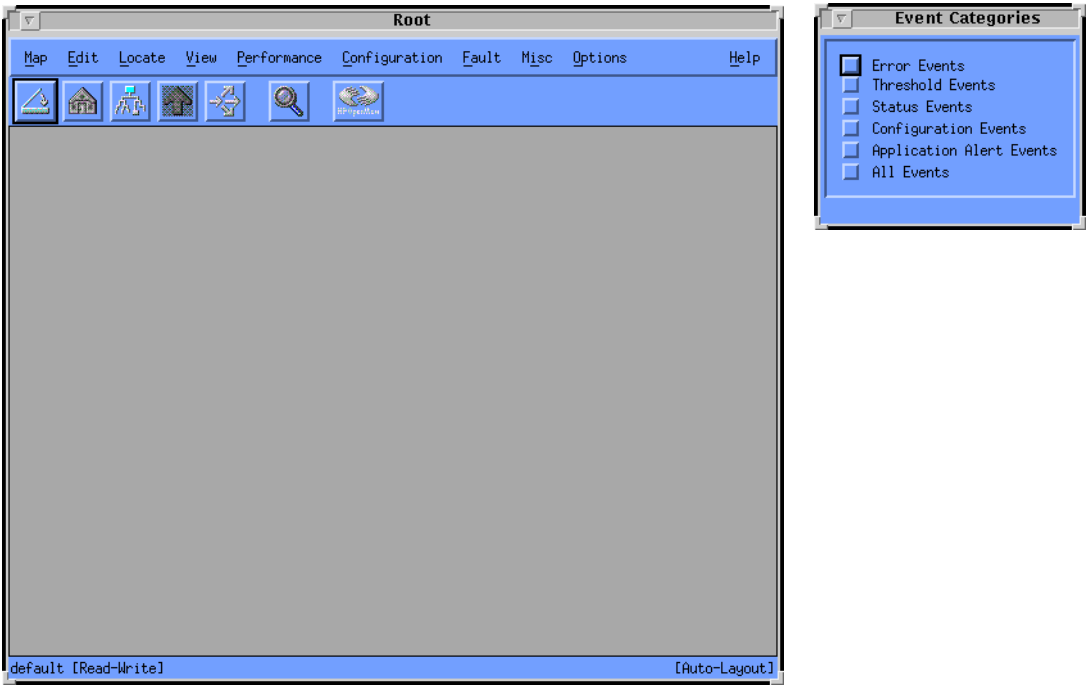


Figure 6-5. HP OpenView 4.11 Window and Events Categories Window

HP OpenView uses certain colors to display windows. If other applications on your system use these colors (e.g. Netscape), the following messages appear:

```
ovw: Xt Warning: Cannot allocate colormap entry for
“#aaaaa6d6d5555”
ovw: Xt Warning: Cannot allocate colormap entry for
“#8d6057”
```

These messages can be safely ignored.

To complete the installation:

1. Exit the HP OpenView window and Events Category window by selecting Map ⇒ Exit.
2. At the OpenView Windows WARNING dialog box, choose OK.

   The HP OpenView window and Events Category window disappears.
3. At the HP OpenView Installation Menu, enter **5** to exit.
4. At the CascadeView/UX Installation Menu, enter **4** to exit

   The following message appears:

   ```
   Cleaning up temporary files......Done.

   Exiting Installation script.
   ```
5. In the window, enter **eject cdrom**.
6. Remove the media from the media device.
7. Close the Tail window by placing the mouse pointer in the window and typing **<Ctrl> c**.

   The installation of HP OpenView 4.11 is complete.
8. Proceed to Chapter 7, “Installing CascadeView”.

7

Installing CascadeView

CascadeView is an integrated network-management software application that incorporates HP OpenView to

- Create and edit network maps
- Configure Cascade switches
- Create and edit nodes, trunks
- Monitor network activity

This chapter requires you to install CascadeView, and add a static route to the NMS.

Before you install CascadeView, verify:

- ☑ SYBASE 11 is installed.
- ☑ HP OpenView 4.11 is installed.

Installing CascadeView

To install CascadeView:

1. Verify you are logged in as root. You should see a # prompt.

   If you are not logged in as root, enter **su - root.** When prompted, enter **[*root password*]**.

2. At the # prompt, verify SYBASE is running by entering

   `ps -aef | grep data`

   The following message appears:

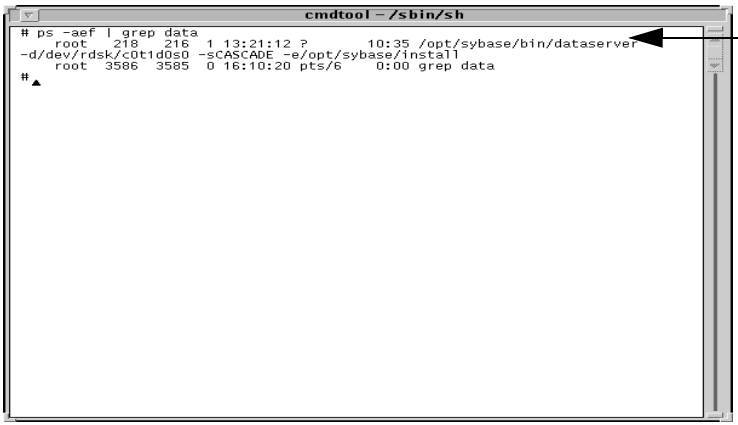


Figure 7-1. Running SYBASE Server

3. If SYBASE is not running, enter

   `/etc/rc2.d/S97sybase`

4. Verify HP OpenView Services is running by entering

   `/opt/OV/bin/ovstatus`

   The following message appears if HP OpenView Services is running:

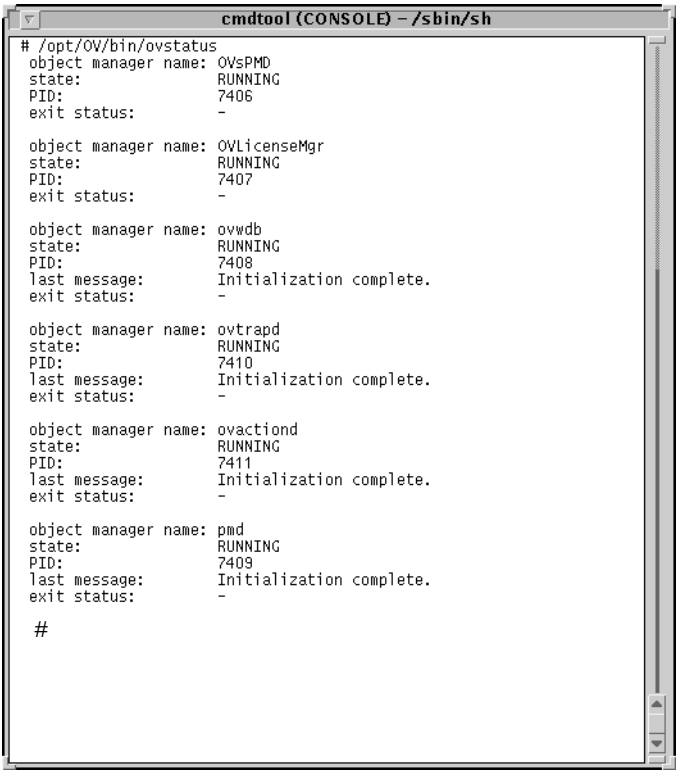


Figure 7-2. HP OpenView Services window

5. If HP OpenView Services is not running, enter

   `/opt/OV/bin/ovstart`

6. Change to the scripts directory by entering

   `cd /opt/cv_scripts`

This chapter assumes you extracted the installation scripts during the HP OpenView 4.11 installation. If you didn't, refer to "Setting Up the System" on page 6-2.

7. Run the Cascade script by entering

   `./install_cvux`

   The CascadeView/UX Installation menu appears.

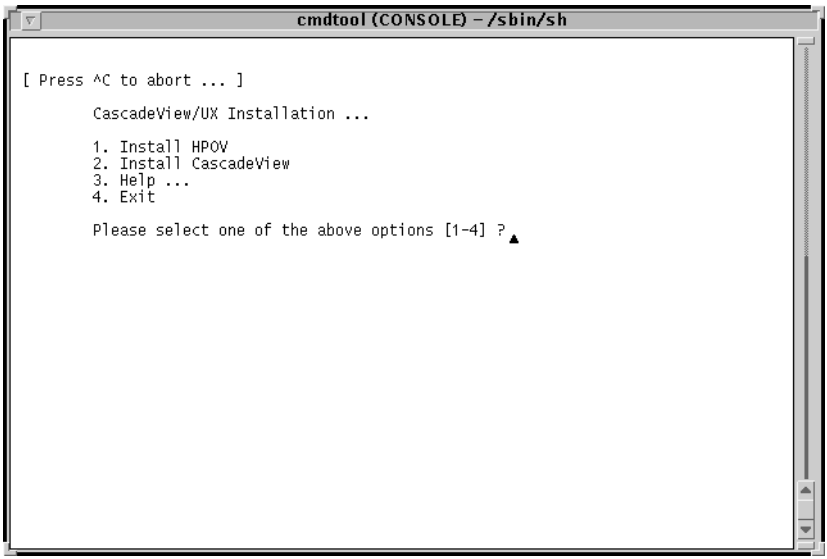


Figure 7-3. CascadeView/UX Installation Menu

*Once the install_cvux script runs, you can exit the script at any time by typing **<Ctrl> C**. The script cleans any "work in progress."*

8. At the CascadeView/UX Installation menu, enter **2**.

   The following message appears:

   ```
   Would you like to view (tail -f) the install log (default=y)?
   ```

   The Tail window allows users to view the log of the installation process. To view an example of the Tail window, refer to Figure 4-5 on page 4-12

9. Press Return to view the Tail log.

   The Tail window and the CascadeView Installation menu appear.

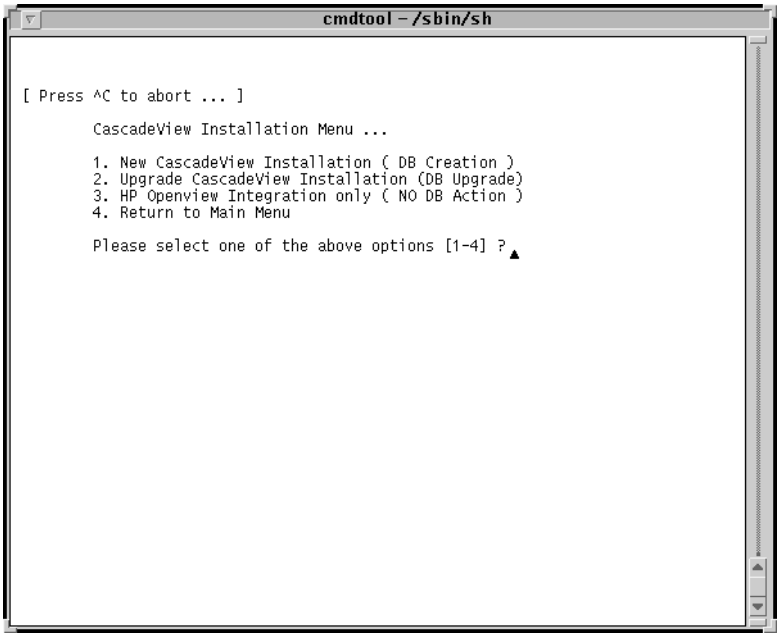


Figure 7-4. CascadeView Installation Menu

10. Enter **1** to select new CascadeView installation.

The following message appears:

```
Complete all prerequisite tasks before continuing. See the
CV/UX Installation documentation for more information.

Do you wish to continue? <y|n> [default=y]:
```

11. Press Return to continue.

> *Refer to the SYBASE 11 worksheet in Appendix F for Step 12 through Step 16.*

The following message appears:

```
Sybase Information Request
**************************

Enter the Sybase install path (default=/opt/sybase) ?
```

12. Press Return to accept the default of */opt/sybase*.
13. At the “Enter Database Server Name” prompt, press Return to accept the default of CASCADE.
14. At the “Enter the Sybase system administrator user name” prompt, press Return to accept the default of sa.
15. At the “Enter the CascadeView database name” prompt, press Return to accept the default of cascview.
16. At the “Enter Database SA Password” prompt, enter **[*SA password*]**. When prompted, re-enter SA password.

    The following message appears:

```
Do you wish to extract CV/UX Installation media ‘y|n’
(default = ‘n’) ?
```

17. Enter **y**.

The following message appears:

```
Install the media in your local device now.
*******************************************

Enter the full path of media device:
```

18. Insert the CascadeView media into the media device.
19. Enter ***[media device pathname]***.

    The following message appears:

    ```
    The device was found and is ready for extraction.
    Press Return to Continue...
    ```

20. Press Return to continue.

    The extraction takes several minutes. The following message appears after the extraction:

    ```
    Extracting CV/UX Installation Media from the device...Done.

    Do you with to continue? <y|n> [default=y]:
    ```

21. Press Return to continue.

    The following message appears:

    ```
    Checking for pre-existing CascadeView Installations
    ***************************************************

    Creating a New CascadeView database
    ***********************************

    Enter the CascadeView database size (default: 25):
    ```

22. Press Return to accept the default of 25.
23. At the “Enter the CascadeView database Log size” prompt, press Return to accept the default of 50.

The installation takes several minutes and displays many lines of output. The installation completes when the following message appears:

```
************************************
Install CascadeView Successful...
```

The CascadeView Installation menu appears.

24. At the CascadeView Installation menu, enter **4** to exit.
25. At the CascadeView/UX Installation menu, enter **4** to exit.
26. Remove the CascadeView media from the media device.
27. Close the Tail window by placing the mouse pointer in the window and typing **<Ctrl> c**.

    The installation of CascadeView is complete.
28. Proceed to "Adding a Static Route to the NMS".

Adding a Static Route to the NMS

To communicate with your network and manage your switches, you must add a static route from your NMS to your gateway switch. Figure 7-2 shows a sample static route connection. When you first create the Map, the default internal network address (152.148.0.0) is displayed.

If you use Routing Information Protocol (RIP) to communicate with your network, you do not have to add a Static Route to the NMS. For more information on RIP, refer to the Network Configuration Guide for B-STDX/STDX.

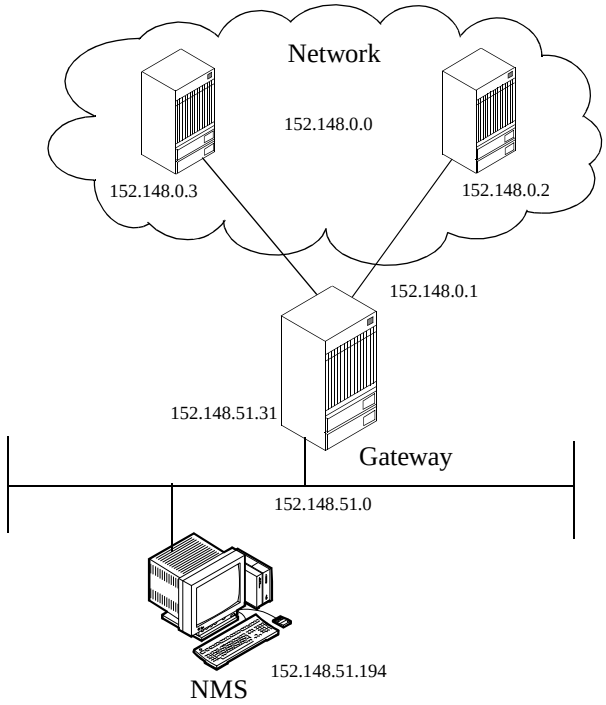


Figure 7-5. Static Route Connection Example

1. Verify that you are logged in as the root user. You should see a # prompt.

2. Create the *S98netmgt* file by entering the following command:

   `vi /etc/rc2.d/S98netmgt`

   The script */etc/rc2.d/S98netmgt* adds the static route automatically during reboots.

3. While holding down the Shift key, type **i** and press Return.

4. Add the following lines to the end of the file:

   `/usr/sbin/route add net [`*`switch network number`*`] [`*`gateway IP address`*`] 1`

   For example, if you have an internal network ID of 152.148.0.0, and a switch Ethernet port of 152.148.51.31, enter:

   `/usr/sbin/route add net 152.148.0.0 152.148.51.31 1`

The internal network address 152.148.0.0 is a valid address that Cascade uses to communicate with OSPF. Cascade recommends using the default address.

5. Press the Escape key.

6. Type **:wq! and press Return.**

7. Log in as root user. Enter in the password when prompted.

8. Enter the following command to add the static route:

   `route add net [`*`switch network number`*`] [`*`gateway IP address`*`] 1`

9. Refer to Appendix E, “Integrating CascadeView with HP OpenView” to integrate CascadeView with HP OpenView.

8

Upgrading to CascadeView XX

This chapter describes how to upgrade your CascadeView installation using the install_cvux script.

Upgrading to CascadeView XX

Before you upgrade to CascadeView XX, perform a backup of the SYBASE 11 database. Refer to Chapter 9, “Backup Procedures” for this information.

To upgrade to CascadeView XX:

1. Verify you are logged in as root. You should see a # prompt.

   If you are not logged in as root, in the window enter **su - root**. When prompted, enter **[*root password*]**.

2. Verify SYBASE is running by entering

   ```
   ps -aef | grep data
   ```

   The following message appears:

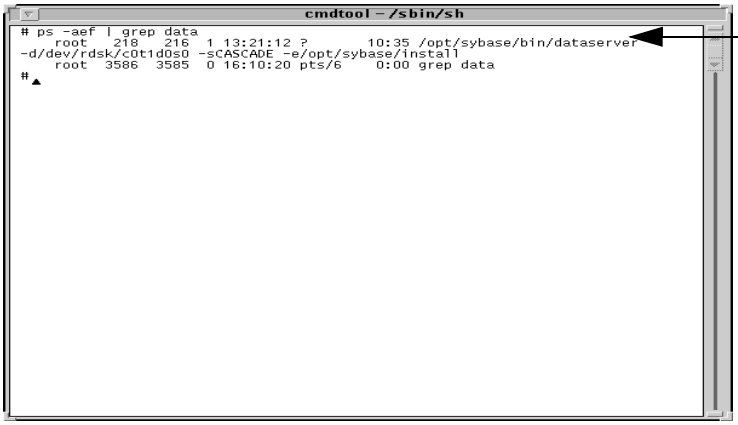


Figure 8-1. Running SYBASE Server

3. If SYBASE is not running, enter

   ```
   /etc/rc2.d/S97sybase
   ```

4. Verify HP OpenView Services is running by entering

   ```
   /opt/OV/bin/ovstatus
   ```

To see the HP OpenView Services status window, refer to Figure 7-2 on page 7-3.

5. If HP OpenView Services is not running, enter

   `/opt/OV/bin/ovstart`

6. At the # prompt, enter

   `cd /opt`

7. Insert the CascadeView media into the media drive.

8. To extract the files from the Cascade media, enter

   `/bin/tar xvpf [`*`media device`*`]`

   This process takes several minutes to complete. The extraction completes when you see a # prompt.

9. At the # prompt, enter

   `/opt/CascadeView/bin/cv-install.sh`

   The following message appears:

   ```
   Verifying super user privileges...

   Would you like to view (tail -f) the install log (default=y)?
   ```

   The Tail window allows users to view the log of the installation process. To view an example of the Tail window, refer to Figure 4-5 on page 4-12.

10. Press Return to view the log.

The Tail window and CascadeView Installation menu appear.

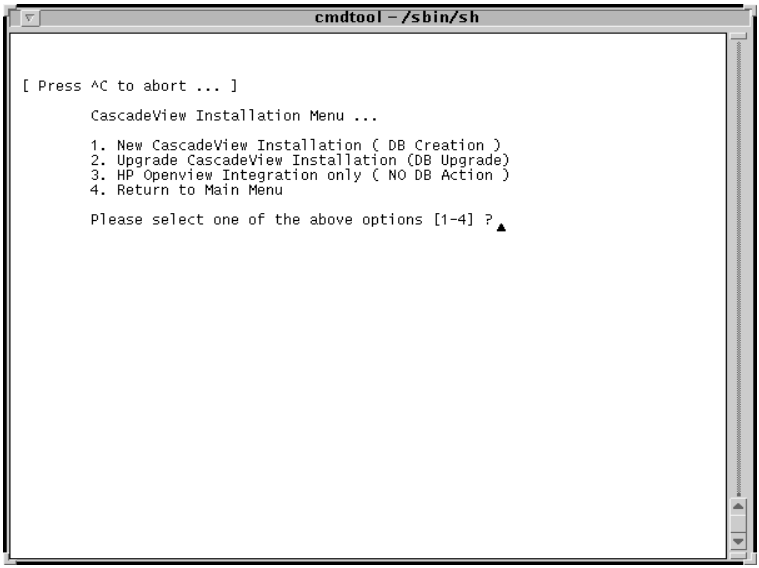


Figure 8-2. CascadeView Installation Menu

*Once the script runs, you can exit at any time by typing **<Ctrl> c**. The script cleans any "work in progress."*

11. At the CascadeView Installation menu, enter **2**.

    The following message appears:

```
Complete all prerequisite tasks before continuing. See the
CV/UX Installation documentation for more information.

Do you wish to continue? <y|n> [default=y]:
```

12. Press Return to continue.

Refer to Appendix F, "SYBASE 11 Worksheet" to complete Step 13 through Step 17.

The following message appears:

```
Sybase Information Request
**************************

Enter the Sybase install path (default=/opt/sybase) ?
```

13. Press Return to accept the default, */opt/sybase*.
14. At the "Enter Database Server Name" prompt, press Return to accept the default, CASCADE.
15. At the "Enter Sybase system administrator user name" prompt, press Return to accept the default, sa.
16. At the "Enter the CascadeView database name" prompt, press Return to accept the default, cascview.
17. At the "Enter the Database SA Password" prompt, enter **[*SA password*]**. When prompted, re-enter the SA password.

    The following message appears:

    ```
    Do you wish to extract CV/UX Installation media 'y|n'
    (default = 'n') ?
    ```

18. Press Return.

    The following message appears:

    ```
    Do you wish to continue? <y|n> [default=y]:
    ```

19. Press Return to continue.

The system displays the following message:

```
Checking for pre-existing CascadeView Installations
************************************************************

Stopping cvtraplogd daemon...Done.
```

The Upgrade CascadeView Database ‘cascview’ menu appears.

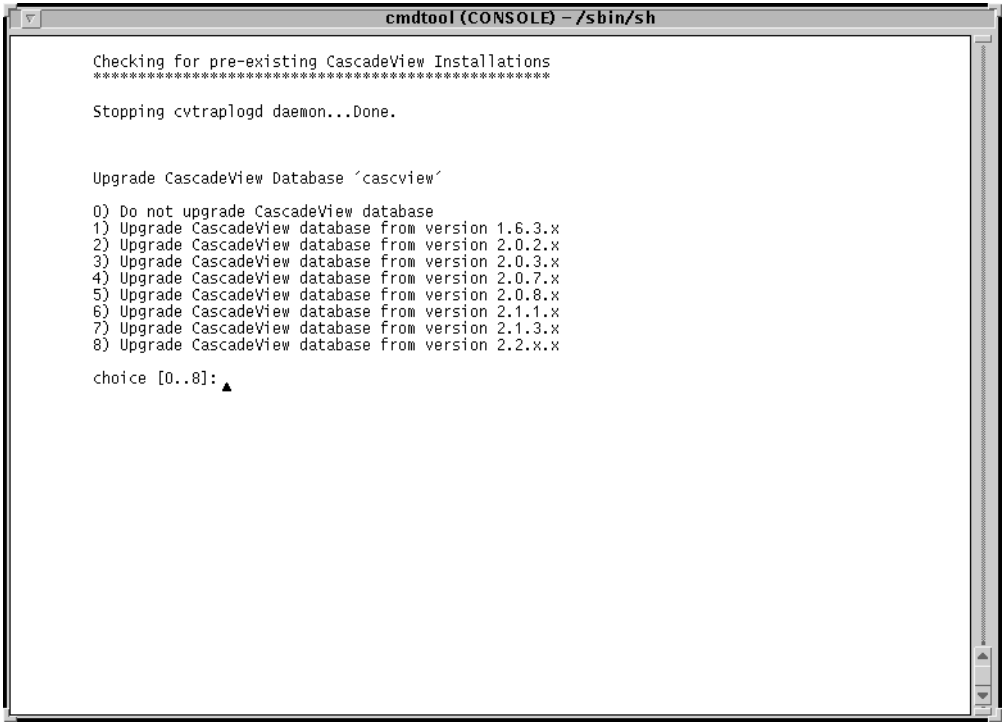


Figure 8-3. Upgrade cascview Database Menu

20. Enter **[*selection*]** to continue.

    The installation takes several minutes and displays many lines of output. The installation completes when the following message appears:

```
************************************
Install CascadeView Successful...
```

The CascadeView Installation menu appears.

21. At the CascadeView Installation menu, enter **4** to exit.

    The installation of CascadeView is complete.

22. Remove the Cascade media from the media device.

23. Close the Tail window by making the window active and typing **<Ctrl> c**.

24. Refer to Appendix E, “Integrating CascadeView with HP OpenView” for further information on integrating CascadeView with HP OpenView 4.11.

9

Backup Procedures

This section describes how to

- Back up the SYBASE 11 Server to the Local Backup Server the first time
- Perform subsequent SYBASE 11 backups to the Local Backup Server
- Back up HP OpenView 4.11 databases

If you are backing up the SYBASE 11 Server to a Remote Backup Server, refer to Appendix B, "Backing up to the Remote Backup Server".

The Cascade Technical Response Center recommends that you perform daily backups of the SYBASE 11 Server. For more information on SYBASE 11 backup procedures, refer to the SYBASE SQL Server System Administrator's Guide and the SYBASE SQL Reference manual, Volumes 1 and 2.

If you need to recover switch data in the cascview database, contact the Technical Response Center for specific instuctions. Do not attempt to restore this database without Cascade's help. You can contact the Technical Response Center at one of the following numbers:

1-800-DIAL-WAN (1-800-342-5296) or 1-508-692-2600 (in the United States and Canada)

1-508-952-1299 (outside the U.S., Canada, and the United Kingdom)

0-800-96-2229 (in the United Kingdom)

Backing Up to the Local Backup Server the First Time

To back up the SYBASE 11 Server to the Local Backup Server the *first* time:

1. Log in as the SYBASE user by entering

   ```
   su - sybase
   ```

2. Create a backup directory by entering

   ```
   mkdir backup
   ```

3. Log into isql by entering

   ```
   isql -U sa -P superbase
   ```

   The system displays the 1> prompt.

4. Enter the following commands:

```
1> sp_addumpdevice “disk”, “masterbackup”,
“/opt/sybase/backup/masterbackup”
2> go

1> sp_addumpdevice “disk”, “cascbackup”,
“/opt/sybase/backup/cascbackup”
2> go
```

5. Check the consistency of the database by entering

```
1> dbcc checkdb(master)
2> go

1> dbcc checkdb(cascview)
2> go
```

The system displays several screens of information including the size of each table and additional information. This information indicates the databases are in good condition. However, if any database is marked “suspect” or “read only,” its integrity is not good.

The dbcc command must run without errors. If you receive any errors, call the Technical Response Center at **1-800-DIAL-WAN**. *Do not proceed any further.*

6. To back up your databases, do the following:

```
1> dump database master to masterbackup
2> go

1> dump database cascview to cascbackup
2> go

1> quit
```

If you received errors backing up the databases, call the Technical Response Center at **1-800-DIAL-WAN**.

Subsequent Backups to the Local Backup Server

Use these steps to back up the SYBASE 11 Server to the Local Backup Server on a regular basis. Make sure to rotate your tapes. Each time you use a tape, the system deletes the previous backup.

The Cascade Technical Response Center strongly recommends that you back up the SYBASE Server daily.

1. Log in as the SYBASE user by entering

   su - sybase

2. Log into isql by entering

   isql -U sa -P superbase

   The system displays a 1> prompt.

3. Enter the following commands:

   ```
   1> dump transaction cascview to cascbackup
   2> go
   ```

4. Exit isql by entering

   ```
   1> quit
   ```

   The system displays the $ prompt.

5. To make a backup copy of the file, enter

   cp backup/cascbackup backup/tempcascbackup

6. Re-enter isql by entering

   isql -U sa -P superbase

   The system displays the 1> prompt.

7. To check the consistency of the database, enter

```
1> dbcc checkdb(master)
2> go

1> dbcc checkdb(cascview)
2> go
```

8. If you complete Step 1 through Step 7 without errors, proceed to Step 9. If you receive errors, call the Technical Response Center.

9. To back up your databases, do the following:

```
1> dump database master to masterbackup
2> go

1> dump database cascview to cascbackup
2> go

1> quit
```

10. If you complete Step 1 through Step 9 without errors, proceed to Step 11. If you receive errors, call the Technical Response Center.

11. To back the files to tape, insert the tape in the tape drive and close the latch. At the $ prompt, enter

```
cd
tar -cvf [tape device] backup/*
```

The system changes directories, creates an archive of the files in backup and stores them on tape.

Backing Up HP OpenView Databases

Use the following procedures to back up HP OpenView databases. You must back up the */opt/OV/databases/openview* directory.

1. Load a tape into the tape drive.
2. Log in as the root user by entering:

   ```
   su - root
   ```

   If you have a two-system configuration, make sure that you are logged on to the HP OpenView server.

   The system prompts you for the root password.
3. Enter the appropriate password.
4. Shut down HP OpenView services by entering:

   ```
   /opt/OV/bin/ovstop
   ```
5. Access the databases directory by entering:

   ```
   cd /opt/OV/databases
   ```
6. Enter the following command to create an archive of the necessary files in OpenView and store them on the tape in /dev/rmt/0m:

   ```
   tar -cvf /dev/rmt/0m openview/*
   ```
7. Access the HP OpenView Services directory by entering:

   ```
   /opt/OV/bin/ovstart
   ```

The system then completes the backup procedure.

10

NMS Start Up and Shut Down Procedures

Starting Up the NMS

Perform the following steps to start the NMS:

1. Log in as root user by entering **su - root.** When prompted, enter **[*root password*].**
2. Start the SYBASE Server by entering

   `/etc/rc2.d/S97sybase`

   You do not have to start the local Backup Server because it was never shut down. If you need to start it, enter

   `/etc/rc2.d/S98sybase`
3. When the system displays the last line of text, `'iso)_1' (ID = 1).`, press Return.
4. Start HP OpenView Services by entering **/opt/OV/bin/ovstart**.

5. Log in as the nms user by entering **su - nms**.

6. To execute HP OpenView and CascadeView, enter

   `/opt/OV/bin/ovw &`

   The system displays the HP OpenView root window, Event Categories window, and CascadeView Icon.

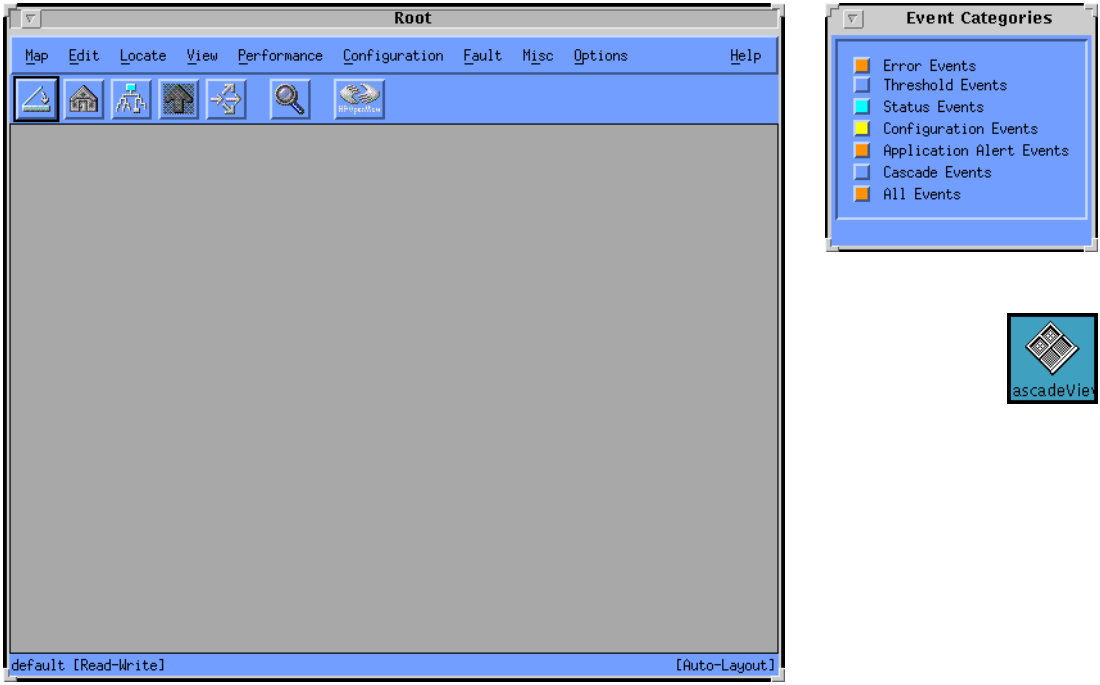


Figure 10-1. HP OpenView 4.11 Window and Events Categories Window

HP OpenView uses certain colors to display windows. If other applications on your system use these colors (e.g. Netscape), the following messages appear:

```
ovw: Xt Warning: Cannot allocate colormap entry for
“#aaaaa6d6d5555”
ovw: Xt Warning: Cannot allocate colormap entry for
“#8d6057”
```

These messages can be safely ignored.

Shutting Down the NMS

Perform the following steps to shut down the NMS:

1. To exit CascadeView, select Map ⇒ Exit from the HP OpenView File menu.
2. At the OpenView Windows Warning dialog box, select OK.
3. Log in as root by entering **su - root.** When prompted, enter **[*root password*].**
4. Shut down HP OpenView Services by entering

   ```
   /opt/OV/bin/ovstop
   ```

5. Shut down the SYBASE server by entering

   ```
   /etc/rc0.d/K01sybase
   ```

   You do not have to shut down the local Backup Server.

6. At the # prompt, enter **init 0** to halt the system. Shut down time varies according to site.
7. At the ok prompt, power off the system.

11

Installing a Two-System Configuration

A two-system NMS configuration requires Solaris and SYBASE installed on one workstation, and Solaris, HP OpenView, and CascadeView installed on another workstation. Figure 11-1 shows a two-system configuration.

Figure 11-1. Two-System Configuration

To install a two-system configuration, refer to Table 11-1 for the proper installation sequence.

Table 11-1. Installing a Two-System Configuration

Installation Sequence on System 1	Installation Sequence on System 2
Chapter 3, “Installing Solaris 2.5.1 and CDE”	Chapter 3, “Installing Solaris 2.5.1 and CDE”
Chapter 4, “Preparing for a SYBASE 11 Installation”	Chapter 6, “Installing HP OpenView 4.11”
Chapter 5, “Installing SYBASE 11”	Chapter 7, “Installing CascadeView”

After you install the NMS software on both workstations, you must perform the following tasks:

- Verify SYBASE is running (System 1)
- Verify HP OpenView Services is running (System 2)
- Add SYBASE Server hostname and IP address to HP OpenView Server’s */etc/hosts* file (System 2)
- Create an interfaces file and add SYBASE Server information to HP OpenView Server’s interfaces file (System 2)

On the SYBASE Server (System 1)

To verify the SYBASE and local Backup server are running:

1. Log in as sybase by entering **su - sybase**.
2. Change to the install directory by entering **cd install**.
3. Verify SYBASE is running by entering **showserver**.

If SYBASE and local Backup Server are running, the following message appears:

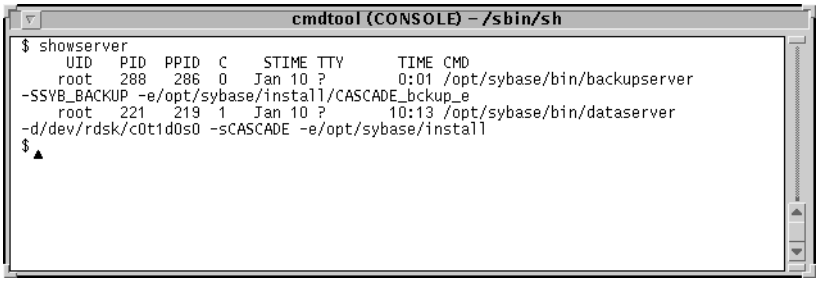


Figure 11-2. Showserver Window

If SYBASE and local Backup Server are not running, do the following:

a. At the $ prompt, enter **exit.**

b. At the # prompt, start the SYBASE Server by entering **/etc/rc2.d/S97sybase**.

c. Start the local Backup Server by entering **/etc/rc2.d/S98sybase**.

4. Proceed to “Verifying HP OpenView Services are running (System 2)”.

On the HP OpenView Server (System 2)

This section requires you to:

- Verify HP OpenView Services are running
- Add SYBASE Server hostname and IP address to HP OpenView Server’s */etc/hosts* file
- Create an interfaces file and add SYBASE Server information to HP OpenView Server’s interfaces file

Verifying HP OpenView Services are running (System 2)

To verify HP OpenView Services are running:

1. Verify that you are logged in as root user. You should see a # prompt.

   If you are not logged in as root, enter **su - root**. When prompted, enter **[*root password*]**.

2. Enter the following command to verify that HP OpenView Services are running:

   `/opt/OV/bin/ovstatus`

   The following messages appear if HP OpenView Services are running:

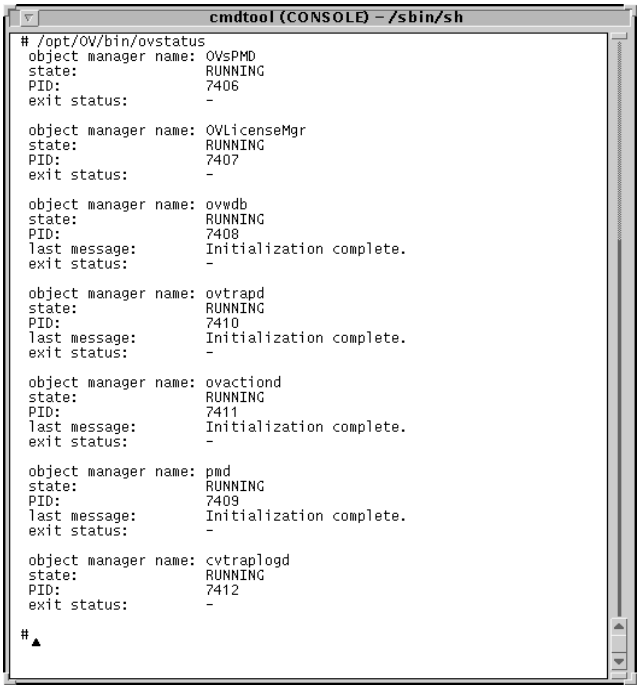


Figure 11-3. HP OpenView Services Window

3. If HP OpenView Services are not running, enter

   `/opt/OV/bin/ovstart`

4. Proceed to “Adding the SYBASE Server Hostname (System 2)”.

Adding the SYBASE Server Hostname (System 2)

You must add the SYBASE Server hostname and IP address to HP OpenView’s */etc/hosts* file. To add the hostname and IP address:

1. Verify you are logged in as root. You should see a # prompt.
2. In the window, enter **admintool &**.

   The Admintool window appears.

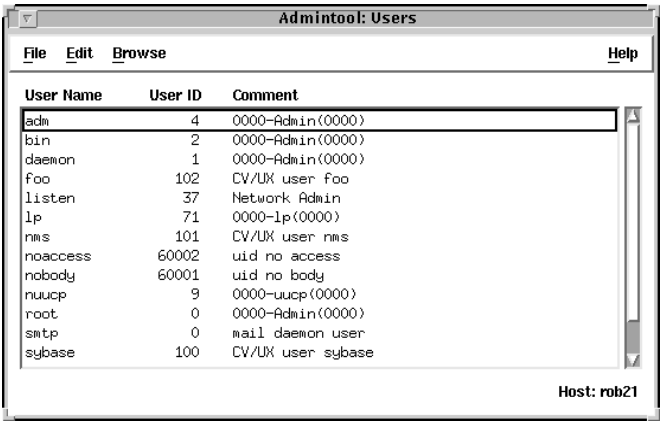


Figure 11-4. Admintool Window

3. Select Browse ⇒ Hosts. The Admintool: Hosts window appears.
4. At the Admintool: Hosts window, Select Edit ⇒ Add.

The Admintool: Add Host dialog box appears.

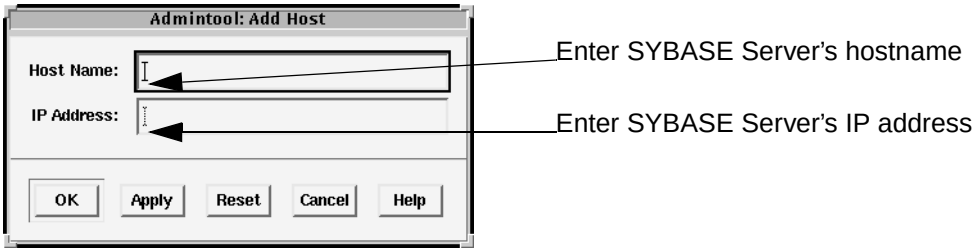


Figure 11-5. Admintool: Add Host Dialog Box

5. Complete the fields in the Admintool: Add Host dialog box as described in Table 11-2:

Table 11-2. Admintool: Add Host Dialog Box Fields (SYBASE Server)

Field	Action/Description
Host Name	Enter SYBASE Server's hostname
IP Address	Enter SYBASE Server's IP address

6. Choose Apply.

   The system adds the SYBASE Server's hostname and IP address to the HP OpenView Server's host table.

7. Choose OK.

8. At the Admintool:Hosts dialog box, select File ⇒ Exit.

9. Proceed to "Creating an Interfaces File (System 2)".

Creating an Interfaces File (System 2)

To enable communication between the HP OpenView Server and the SYBASE Server, you must:

- Extract the SYBASE media onto the HP OpenView Server

- Create an interfaces file for the HP OpenView Server
- Add the SYBASE Server interfaces file contents to the HP OpenView Server interfaces file

To create an interfaces file:

1. Verify you are logged in as root. You should see a # prompt.
2. Insert the Cascade-supplied SYBASE media into the media drive and close the latch.
3. In the window, enter **cd /opt/sybase** at the system prompt.
4. To extract the SYBASE media, enter

   tar -xvf *[media device pathname]* bin

5. Change to the */opt* directory by entering

   cd /opt

6. Enter the following command:

   chown -R sybase sybase

7. Change to the */opt/sybase/bin* directory by entering

   cd /opt/sybase/bin

8. Log in as sybase by entering **su - sybase**.
9. Enter the following commands to export SYBASE user's DSQUERY and home directory into SYBASE user's *.profile* file:

   export DSQUERY=CASCADE <Return>
   export SYBASE=/opt/sybase <Return>
   export SYBASE DSQUERY <Return>

   These commands are examples of the Korn and Bourne shell.

10. At the $ prompt, enter **sybtli**.

    The Interface Tool Main menu appears.

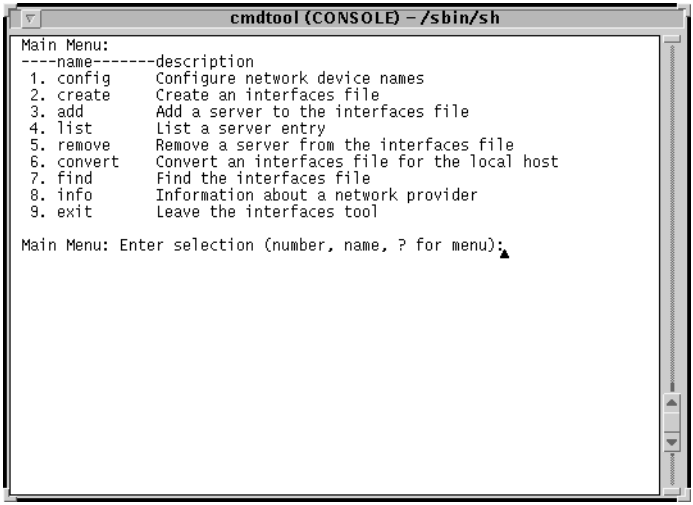


Figure 11-6. Interface Tool Main Menu

11. At the “Main Menu: Enter selection” prompt, enter **2** to create an interfaces file.
12. At the “Create interfaces file” prompt, press Return to accept the default.
13. At the “Main Menu: Enter selection” prompt, enter **3** to add an interfaces file.
14. At the “Add to interfaces file” prompt, press Return to accept the default.
15. At the “Server Name” prompt, enter **[*SYBASE Server’s Name*]**.
16. At the “Number of networks to support” prompt, press Return to accept the default (1).
17. At the “Network Type for network 1” prompt, enter **tcp.**
18. At the “Host Name” prompt, enter **[*SYBASE Server’s hostname*]**.
19. At the “Port Number for network 1” prompt, enter **[*TCP Socket Number of SYBASE Server*]**.

    (Use the port number of the SYBASE Server you are connecting to.)
20. At the “Comments” prompt, press Return.
21. At the “Continue” prompt, press Return.

22. At the “Main Menu: Enter Selection” prompt, enter **9** to exit.
23. Verify you completed the task successfully by logging into isql. Enter

    ```
    isql -U sa -P superbase
    ```

    The 1> prompt appears.
24. At the 1> prompt, enter **quit.**
25. Add a static route to the NMS. (Refer to “Adding a Static Route to the NMS” on page 7-9).

A

Configuring a Remote Backup Server

This appendix describes the tasks required to configure a Remote Backup Server.

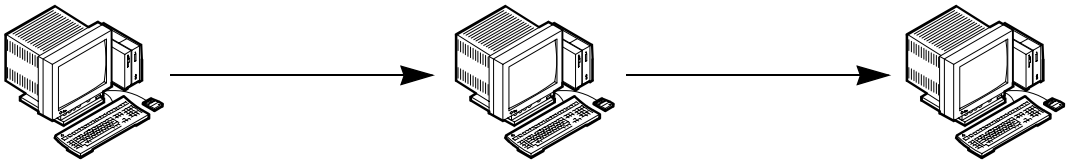


Figure A-1. Remote Backup Server Configuration Sequence

Figure A-1 shows the sequence in which you perform the following tasks to configure a remote Backup Server:

1. On the SYBASE Server workstation, add remote Backup Server's hostname and IP address to SYBASE Server's host table.
2. On the Remote Backup Server workstation, install Backup Server.
3. On the SYBASE Server workstation, add remote Backup Server's interfaces file to SYBASE Server's interfaces file.

Adding the Remote Backup Server Hostname

Before you configure a remote Backup Server, you must add Backup Server's hostname to SYBASE Server's host table.

On the SYBASE Server Workstation:

1. Log in as the root user by entering **su - root**.
2. At the prompt, enter **[*root password*]**.
3. In the window, enter **admintool &**.

   The Admintool window appears (Table A-2).

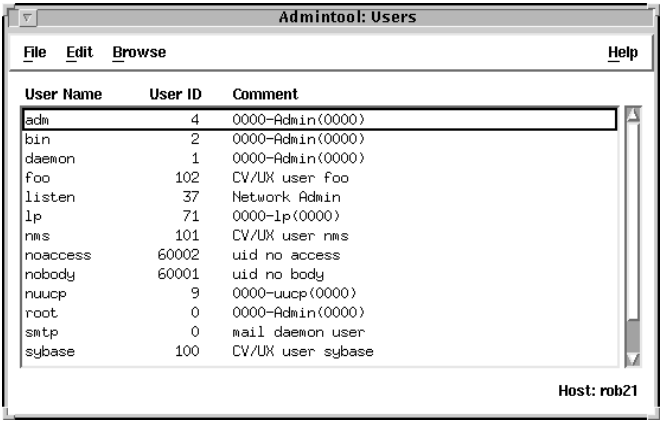


Figure A-2. Admintool Window

4. Select Browse ⇒ Hosts.

   The Admintool: Hosts window appears.
5. At the Admintool: Hosts window, Select Edit ⇒ Add.

The Admintool: Add Host dialog box appears.

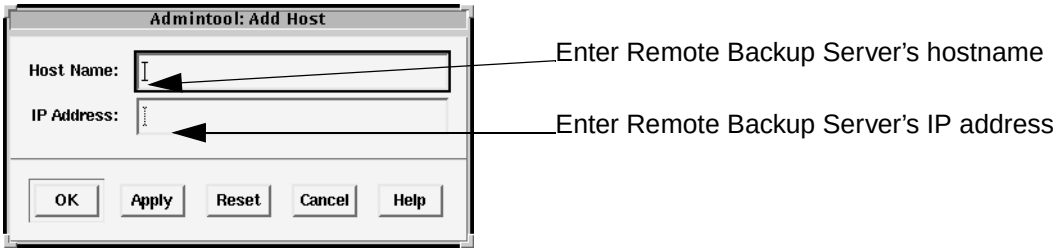


Figure A-3. Admintool: Add Host Dialog Box

6. Complete the fields in the Admintool: Add Host dialog box as described in Table A-1:

> *Refer to the section, "Remote Backup Server Parameters" in Appendix F to complete the following fields.*

Table A-1. Admintool: Add Host Dialog Box Fields (Remote Backup Server)

Field	Action/Description
Host Name	Enter Remote Backup Server's hostname
IP Address	Enter Remote Backup Server's IP address

7. Choose Apply.

   The system adds the remote Backup Server's hostname to SYBASE Server's host table.

8. Choose OK.

9. At the Admintool:Hosts dialog box, select File ⇒ Exit.

Installing a Remote Backup Server

A Remote Backup Server requires 50 MB available space. This section describes how to:

- Install backup server on the remote workstation
- Create a backup directory on the remote workstation

On the Remote Backup Server Workstation:

1. Log in as the root user by entering

   ```
   su - root
   ```

If you are logged into the system via a remote connection (rlogin/rsh/telnet), set your DISPLAY variable to the appropriate value. To do this, enter the command:

```
DISPLAY=[enter local hostname]:0.0
export DISPLAY
```

(This example uses the Korn shell syntax.)

*In addition, in a new window on the local system, run **"xhost +**" as the user who controls the system console. Executing this command enables you to display the installation log on the local system.*

2. Insert the SYBASE media into the media drive and close the latch.
3. In the window, enter **cd /opt** at the system prompt.
4. To extract the scripts from the media device, enter

   ```
   tar -xvf [media device pathname] cv_scripts
   ```

   Refer to Appendix F, "SYBASE 11 Worksheet"for the media device name. The extraction takes approximately five minutes.

5. Change to the *cv_scripts* directory by entering

   ```
   cd cv_scripts
   ```

6. To begin the SYBASE installation, enter

   `./install_sybase`

7. At the “Would you like to view (tail -f) the install log (default=y)” prompt, press Return to accept the default (yes).

8. At the SYBASE Installation menu, enter **4** to configure a Remote Sybase 11 Backup Server.

   The following message appears:

```
Complete all upgrade prerequisites before continuing. See
Sybase 11 Upgrade Documentation.

Do you wish to continue? , <y|n> [default=y]:
```

9. Press Return to continue.

   The following message appears:

```
Setting up your system for the Sybase Install
-------------------------------------------------

Creating the dba group for database system administrator.
Successfully added group ‘dba’ with gid 300

Creating a user account for sybase
------------------------------------

Enter User’s home directory [default : /opt/sybase] ?
```

10. Press Return to accept the default of */opt/sybase*.

The following message appears:

```
Adding user sybase. Please Wait...
Successfully added user sybase...

Configuring the user account with environment files.
------------------------------------------------------------

Creating /etc/rc2.d/S98sybase..Done.

Do you wish to continue? <y|n> [default=y]:
```

11. Press Return to continue.

    The system displays the configured Backup Server parameters in a window similar to the following:

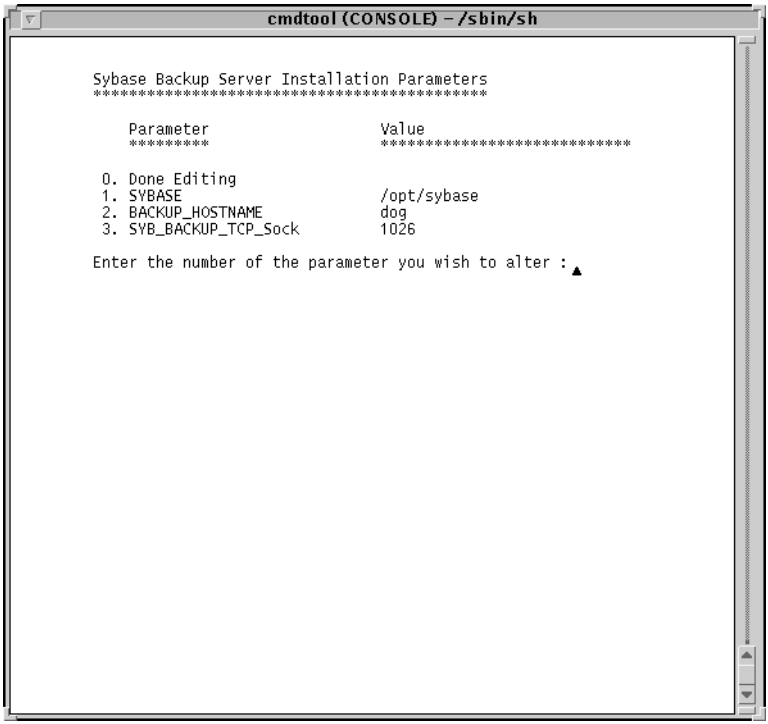


Figure A-4. SYBASE Backup Server Installation Parameters Window

12. To change any parameters, enter the number of the parameter and make the appropriate changes.

13. When you have made your changes, enter **0** (Done Editing) to continue.

    The following message appears:

```
Backup Server Configuration
*******************************************

Backup Server requires the same utilities loaded as the
Sybase Server. You will need to load the sybase media in the
device now.

Do you wish to continue? <y|n> [default=y]:
```

14. Press Return to continue.

```
Install the media in your local device now.
*******************************************
```

15. At the “Enter the full path of media device” prompt, enter **[*media device pathname*].**

    The system displays the message:

```
The device was found and is ready for extraction.
Press Return to Continue...

Extracting Sybase Media from media device...Done.

Running ‘sybinit’ and creating the sybase server...Backup
Sybase Server Install Successful...
```

    Running the sybinit utility takes approximately 5 minutes.

```
Do you wish to continue? <y|n> [default=y]:
```

16. Press Return.

    The SYBASE Installation menu appears.

17. At the SYBASE Installation menu, enter **7** to exit.

18. Remove the media from the media device drive.
19. Open a window and log in as the sybase user by entering

    ```
    su - sybase
    ```

20. Create a backup directory by entering

    ```
    mkdir backup
    ```

Adding Remote Backup Server's Interfaces File Contents to SYBASE Server's Interfaces File

To enable communication between the remote Backup Server and SYBASE 11 Server, you must add the contents of the remote Backup Server interfaces file to the SYBASE Server interfaces file.

On the SYBASE Server Workstation:

1. Open a window and enter **su - sybase**.
2. At the $ prompt, run sybtli by entering **sybtli**.

   The Interface Tool Main menu appears (Table A-5).

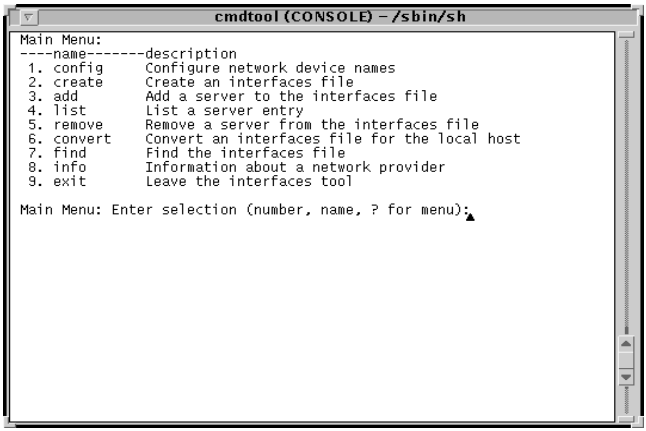


Figure A-5. Interface Tool Main Menu

3. At the "Main Menu: Enter selection" prompt, enter **3** to add a server to the interfaces file.
4. At the "Add to interfaces file" prompt, press Return to accept the default */opt/sybase/interfaces*.
5. At the "Server Name" prompt, enter **REMOTE_SYB_BACKUP**.
6. At the "Number of networks to support" prompt, press Return to accept the default (1).
7. At the "Network Type for network 1" prompt, enter **tcp.**

Refer to the section, "SYBASE 11 Worksheet" in Appendix F to complete Step 8 and Step 9.

8. At the "Host Name" prompt, enter **[*Remote Backup Server's hostname*].**
9. At the "Port Number for network 1" prompt, enter **[*TCP socket number of Remote Backup Server*].**
10. At the "Comments" prompt, press Return.
11. At the "Continue" prompt, press Return.
12. At the "Main Menu: Enter Selection" prompt, enter **9** to exit.
13. At the $ prompt, enter **cat interfaces** to view the updated interfaces file.

Table A-6 shows an example of an interfaces file.

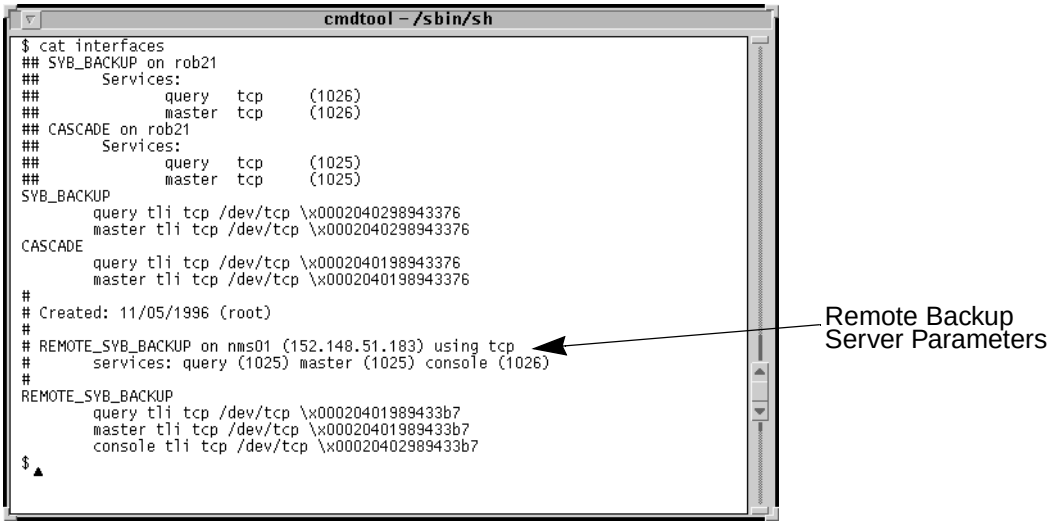


Figure A-6. Interfaces File window

B

Backing up to the Remote Backup Server

This appendix describes how to

- Back up the SYBASE 11 Server to the Remote Backup Server the first time
- Perform subsequent SYBASE 11 backups to the Remote Backup Server

The Cascade Technical Response Center recommends that you perform daily backups of the SYBASE 11 Server. For more information on SYBASE 11 backup procedures, refer to the SYBASE SQL Server System Administrator's Guide and the SYBASE SQL Reference manual, Volumes 1 and 2.

If you need to recover switch data in the cascview database, contact the Technical Response Center for specific instuctions. Do not attempt to restore this database without Cascade's help. You can contact the Technical Response Center at one of the following numbers:

1-800-DIAL-WAN (1-800-342-5296) or 1-508-692-2600 (in the United States and Canada)

1-508-952-1299 (outside the U.S., Canada, and the United Kingdom)

0-800-96-2229 (in the United Kingdom)

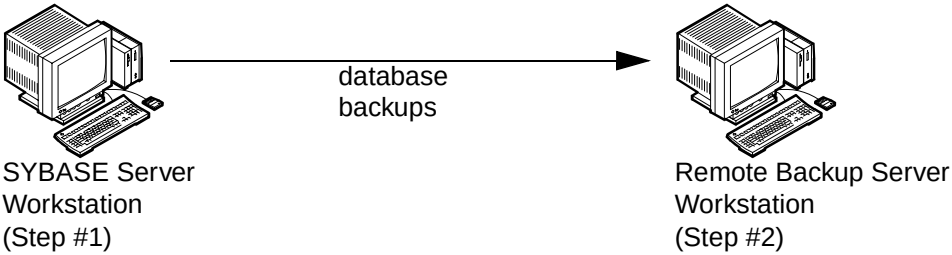


Figure B-1. Remote Backups

Figure B-1 shows the sequence in which you perform the following backup procedures:

1. On the SYBASE Server workstation, back up your databases to the Remote Backup Server workstation.
2. On the Remote Backup Server workstation, back up the files to tape.

Backing Up to the Remote Backup Server the First Time

To back up the SYBASE 11 Server to the Remote Backup Server the *first* time:

On the SYBASE Server Workstation:

1. Log in as the SYBASE user by entering

   ```
   su - sybase
   ```

2. Log into isql by entering

   ```
   isql -U sa -P superbase
   ```

   The system displays the 1> prompt.

3. Check the consistency of the database by entering

   ```
   1> dbcc checkdb(master)
   2> go

   1> dbcc checkdb(cascview)
   2> go
   ```

   The system displays several screens of information including the size of each table and additional information. This information indicates the databases are in good condition. However, if any database is marked “suspect” or “read only,” its integrity is not good.

The dbcc command must run without errors. If you receive any errors, call the Technical Response Center at **1-800-DIAL-WAN**. *Do not proceed any further.*

4. To back up your databases, do the following:

```
1> dump database master to "/opt/sybase/backup/masterbackup"
at REMOTE_SYB_BACKUP
2> go

1> dump database cascview to "/opt/sybase/backup/cascbackup"
at REMOTE_SYB_BACKUP
2> go

1> quit
```

5. If you complete Step 1 through Step 4 without errors, proceed to Step 6. If you receive errors, call the Technical Response Center.

On the Remote Backup Server Workstation:

6. Back up the files to tape. Perform the following steps to do this:

   a. Insert the tape in the tape drive and close the latch.

   b. Log in as the SYBASE user by entering **su - sybase**. When prompted, enter the appropriate password.

   c. Enter:

```
cd
tar -cvf [tape device] /opt/sybase/backup/*
```

   The system changes directories, creates an archive of the files in backup and stores them on tape.

Subsequent Backups to the Remote Backup Server

Use these steps to back up the SYBASE 11 Server to the Remote Backup Server on a regular basis. Make sure to rotate your tapes. Each time you use a tape, the system deletes the previous backup.

The Cascade Technical Response Center strongly recommends that you back up the SYBASE Server daily.

On the SYBASE Server Workstation:

1. Log in as the SYBASE user by entering

   ```
   su - sybase
   ```

2. Log into isql by entering

   ```
   isql -U sa -P superbase
   ```

   The system displays a 1> prompt.

3. Enter the following commands:

   ```
   1> dump transaction cascview to
   "/opt/sybase/backup/cascbackup" at REMOTE_SYB_BACKUP
   2> go
   ```

4. Exit isql by entering

   ```
   1> quit
   ```

   The system displays the $ prompt.

5. **On the Remote Backup Server workstation**, make a backup copy of the file by entering

   ```
   cp backup/cascbackup backup/tempcascbackup
   ```

6. **On the SYBASE Server Workstation**, re-enter isql by entering

   ```
   isql -U sa -P superbase
   ```

   The system displays the 1> prompt.

7. To check the consistency of the database, enter

   ```
   1> dbcc checkdb(master)
   2> go

   1> dbcc checkdb(cascview)
   2> go
   ```

8. If you complete Step 1 through Step 7 without errors, proceed to Step 9. If you receive errors, call the Technical Response Center.

9. To back up your databases, do the following:

   ```
   1> dump database master to "/opt/sybase/backup/masterbackup"
   at REMOTE_SYB_BACKUP
   2> go

   1> dump database cascview to "/opt/sybase/backup/cascbackup"
   at REMOTE_SYB_BACKUP
   2> go

   1> quit
   ```

10. If you complete Steps 1 through 9 without errors, proceed to Step 11. If you receive errors, call the Technical Response Center.

On the Remote Backup Server Workstation:

11. Back up the files to tape. Perform the following steps to do this:

    a. Insert the tape in the tape drive and close the latch.

    b. Log in as the SYBASE user by entering **su - sybase**. When prompted, enter the appropriate password.

    c. Enter:

    ```
    cd
    tar -cvf [tape device] /opt/sybase/backup/*
    ```

    The system changes directories, creates an archive of the files in backup and stores them on tape.

C

IP Discovery

IP Discovery finds all IP-addressable nodes on your network and creates an object for each discovered node.

This appendix describes how to:

- Enable IP Discovery
- Disable IP Discovery

Enabling IP Discovery

The Cascade script automatically disables IP Discovery during the installation of HP OpenView 4.11. However, if you use HP OpenView to manage an IP network, you can re-enable it by performing the following steps:

Cascade does not support IP Discovery. Re-enabling this feature severely affects the performance of your NMS Server.

1. Log in as root user by entering **su - root**. When prompted, enter **[*root password*].**
2. Change to the */opt/cv_scripts* directory by entering

   ```
   cd /opt/cv_scripts
   ```

   This appendix assumes you extracted the installation scripts during the HP OpenView 4.11 installation. If you didn't, refer to "Setting Up the System" on page 6-2.
3. Start the Cascade Installation script by entering./**install_cvux**.
4. At the CascadeView/UX Installation menu, enter **1** to view the HP OpenView Installation menu.
5. At the HP OpenView Installation menu, enter **3** to re-enable IP discovery.
6. Press Return to view the tail window.

   The following message appears:

   ```
   Cascade does not support the IP discovery mechanism.
   Enabling this feature will severely impact the performance
   of your NMS Server.

   Do you wish to continue? <y|n> [default=y]
   ```
7. Press Return to continue.

The following message appears:

```
Enabling IP Configuration
*************************

Adding netmon...Done.
Adding ovrepld...Done.
Adding ovtopmd...Done.
Adding snmpcollect...Done.
Adding ipmap...Done.
Enabling XNmevents for netmon and snmp collect...Done.
Starting IP Discovery daemons...Done.

The enabling of IP Map discovery is complete.
[Hit return to continue.]
```

8. Press Return to continue.
9. At the HP OpenView Installation Menu, enter **5** to go to the CascadeView/UX Installation Menu.
10. At the CascadeView/UX Installation Menu, enter **4** to exit.

    The following message appears:

    ```
    Cleaning up temporary files. Done.

    Exiting Installation script.
    ```

11. Close the tail window by placing the mouse pointer in the window and entering **<Control> c**.

Disabling IP Discovery Mechanism

To disable IP Discovery:

1. Log in as root user by entering **su - root**. When prompted, enter **[*root password*].**
2. Change to the */opt/cv_scripts* directory by entering

   ```
   cd /opt/cv_scripts
   ```

   This appendix assumes you extracted the installation scripts during the HP OpenView 4.11 installation. If you didn't, refer to "Setting Up the System" on page 6-2.
3. Start the Cascade Installation script by entering./**install_cvux**.
4. At the CascadeView/UX Installation menu, enter **1** to view the HP OpenView Installation menu.
5. At the HP OpenView Installation menu, enter **4** to disable IP discovery.
6. Press Return to view the tail window.

   The following message appears:

   ```
   Disabling HP OpenView IP Configuration
   ****************************************

   Stopping the OV Platform...Done.
   Removing netmon...Done.
   Removing ovrepld...Done.
   Removing ovtopmd...Done.
   Removing snmpcollect...Done.
   Removing ipmap...Done.
   Disabling XNmevents for netmon and snmpCollect...Done.

   The disabling of IP Map discovery is complete.
   [Hit return to continue.]
   ```
7. Press Return to continue.

The following message appears:

```
Starting the OpenView object database...Done.
Processing field registration entries...Done.
```

8. At the HP OpenView Installation Menu, enter **5** to go to the CascadeView/UX Installation Menu.

9. At the CascadeView/UX Installation Menu, enter **4** to exit.

   The following message appears:

   ```
   Cleaning up temporary files. Done.

   Exiting Installation script.
   ```

10. Close the tail window by placing the mouse pointer in the window and entering **<Control> c**.

D

Configuring Additional Cascade Devices

If you use the SYBASE database in conjunction with other Cascade products, you must configure additional devices for these products, which include:

- Customer Network Management (CNM) Proxy Agent
- Fault Server
- Bulk Statistics

Perform the following steps to configure an additional device:

1. Log in as root by entering **su - root**.
2. When prompted, enter in root user's password.
3. Change to the scripts directory by entering

   ```
   cd /opt/cv_scripts
   ```

This appendix assumes you extracted the installation scripts during the SYBASE 11 installation. If you didn't, refer to Chapter 4, "Preparing for a SYBASE 11 Installation".

4. Run the SYBASE installation script by entering

   `./install_sybase`

   The SYBASE Installation menu appears.

5. At the SYBASE installation menu, enter **5** to configure an additional SYBASE data device.

   The Device Installation menu appears.

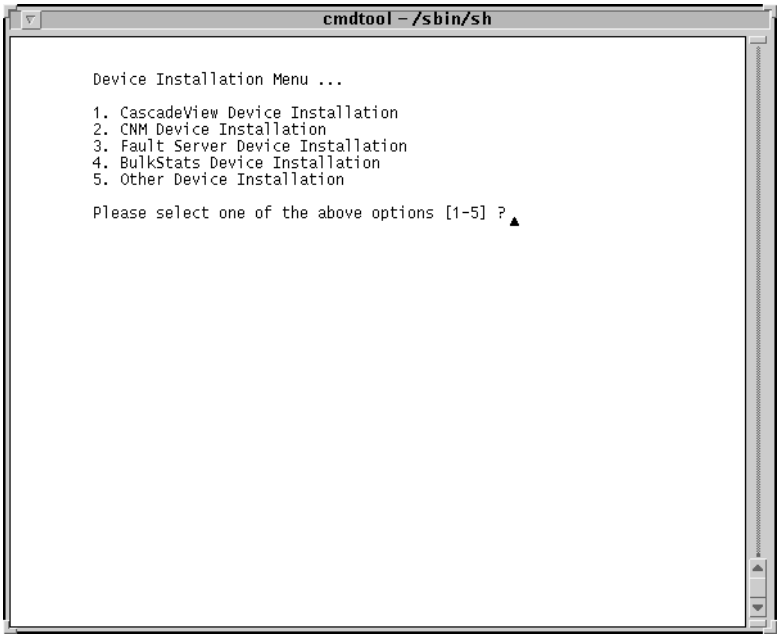


Figure D-1. Device Installation Menu

6. At the Device Installation menu, enter **[*data device*]**.

Refer to the SYBASE 11 worksheet in Appendix F for this information. The following message appears:

```
The [Cascade Product] Installation has been selected.
```

Substitute *Cascade Product* with the product you selected.

The following message appears:

Refer to the SYBASE 11 Worksheet in Appendix F to complete Step 7 through Step 9.

```
Sybase Information Request
**************************

Enter the Sybase install path (default=/opt/sybase) ?
```

7. Press Return to accept the default of */opt/sybase.*

   The following message appears:

   ```
   Enter the Database Server Name (default=CASCADE)
   ```

8. Press Return to accept the default of CASCADE.

   The following message appears:

   ```
   Enter the Database SA Password?
   ```

9. Enter **[*SA Password*].** When prompted, enter the password again.

The following menu appears.

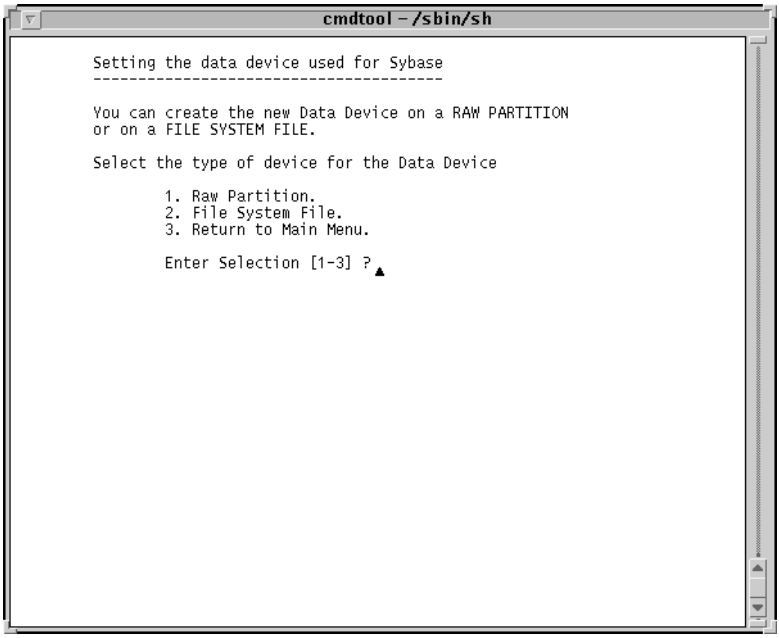


Figure D-2. SYBASE Data Device Menu

10. At the SYBASE Data Device Menu, do one of the following:

- Enter **1** to select Raw Partitions as the new data device type. Proceed to "Using Raw Partitions for the New Data Device" on page D-5.
- Enter **2** to select File-System Files as the new data device type. Proceed to "Using File System Files for the New Data Device" on page D-6.

Using Raw Partitions for the New Data Device

Refer to the SYBASE 11 Worksheet in Appendix F to complete this information.

The following message appears if you selected Raw Partitions for the data device:

```
WARNING: IF YOU INSTALL THE SQL SERVER ON A RAW PARTITION,
ANY EXISTING FILES ON THAT PARTITION WOULD BE OVERWRITTEN.

Do you wish to continue? [default=y]:
```

1. Press Return to continue.

   The following message appears:

   ```
   Setting up Raw Partition Devices
   ---------------------------------

   Enter the Data Device Path Name (e.g. /dev/rdsk/c0t1d0s7)
   ```

2. Enter **[*data device pathname*].**

   For example, */dev/rdsk/c0t1d0s4*. The following message appears:

   ```
   Setting device permissions. Please Wait..

   Device /dev/rdsk/c0t1d0s4 has been set.

   Data Device Installation completed.
   ***********************************
   ```

   The SYBASE Installation Menu reappears. Repeat the procedures above to install additional devices or exit the scripts.

Refer to the SYBASE 11 Worksheet in Appendix F for this information.

The following message appears if you selected File System Files for the data device.

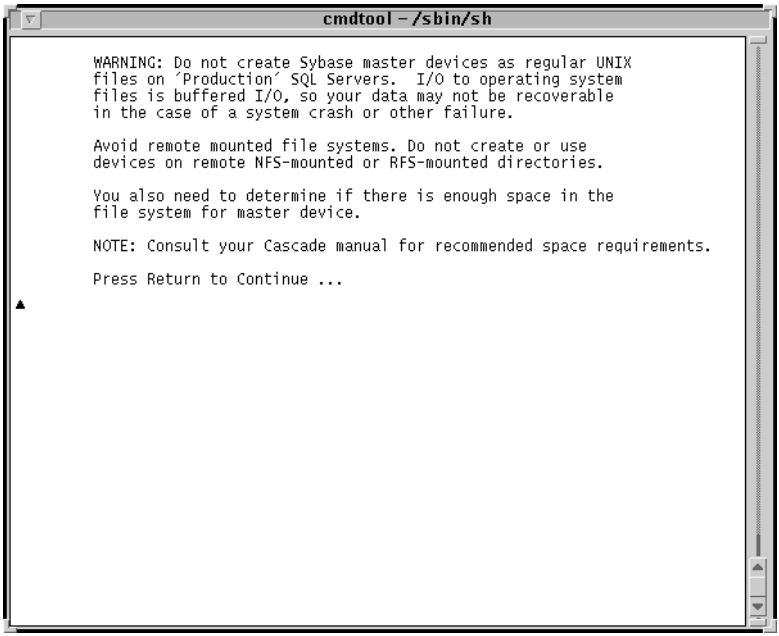


Figure D-3. Warning Window

1. Press Return to continue.

The following window appears:

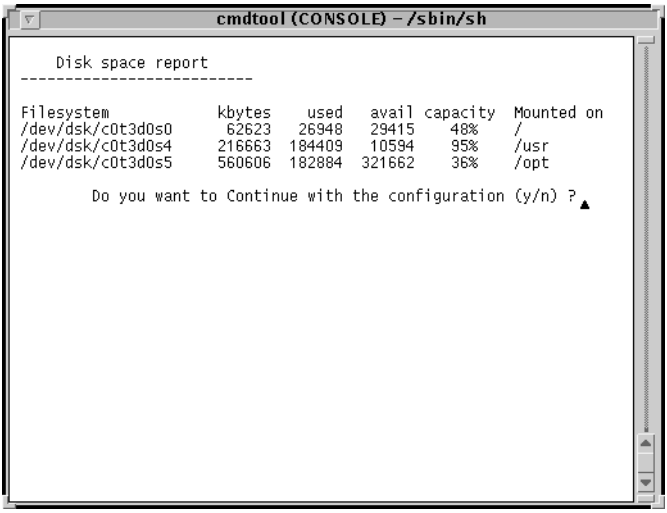


Figure D-4. Disk Space Report Window

2. Enter **y** to continue.

3. At the “Enter name for database device directory” prompt, press Return to accept the default of */opt/databases*.

4. At the “Enter the size of the /opt/databases/[*device name*]_device.dat” prompt, press Return to accept the default of 50.

   Where *device name* is the name of the device that you are configuring.

   The following message appears:

   ```
   Data Device Installation Completed.
   ************************************
   ```

   The SYBASE Installation Menu reappears. Repeat the procedures above to install additional devices or exit the scripts.

E

Integrating CascadeView with HP OpenView

This appendix provides instructions on integrating CascadeView with HP OpenView. Perform the following steps to do this:

1. Log in as root by entering **su - root**.
2. Change to the scripts directory by entering **cd /opt/cv_scripts**.

   This appendix assumes you extracted the installation scripts during the HP OpenView 4.11 installation. If you didn't, refer to "Setting Up the System" on page 6-2.
3. Start the Cascade script by entering./**install_cvux.**
4. At the CascadeView/UX Installation menu, enter **2** to display the CascadeView Installation menu.

   The following message appears:

   ```
   Would you like to view (tail -f) the install log (default=y)?
   ```

The Tail window allows users to view the log of the installation process. To view an example of the Tail window, refer to Figure 4-5 on page 4-12.

5. Press Return to view the Tail window.
6. At the CascadeView Installation menu, enter **3** (HP OpenView Integration).

   The following message appears:

```
****************************************
No Sybase Functionality will be altered.
****************************************

Do you wish to extract CV/UX Installation media 'y|n'
(default = 'n')?
```

7. Enter **y**.

   The following message appears:

```
Install the media in your local device now.
*********************************************

Enter the full path of media device:
```

8. Insert the Cascade media into the media device.
9. Enter ***[media device pathname]***.

   The following message appears:

```
The device was found and is ready for extraction.
Press Return to Continue...
```

10. Press Return to continue.

    The following message appears:

```
Extracting CV/UX Installation Media from the device...Done.

Do you wish to continue? <y|n> [default=y]:
```

11. Press Return to continue.

The integration takes several minutes. After the process completes, the CascadeView Installation menu reappears.

12. At the CascadeView/UX Installation menu, enter **4** to exit.

F

SYBASE 11 Worksheet

During the SYBASE installation, the script prompts you for the parameters on this worksheet.

Prerequisites

1. Media Device pathname: _____
2. SYBASE Home Directory: /opt/sybase
3. Database Server name: CASCADE
4. Error Log Pathname: CASCADE_err.log
5. Database SA Password: superbase
6. Name of additional user: nms
   User's group: staff
   Home directory: /opt/nms
7. TCP Socket Number of SYBASE 11: 1025
8. TCP Socket Number of Local Backup Server 1026

9. Number of Remote Users: 25

Using Raw Partitions for the Master Device

1. Master Device Pathname: /dev/rdsk/c0t1d0s0
2. SYBASE System Procs Device Pathname: /dev/rdsk/c0t1d0s4
3. Cascade Device Pathname: /dev/rdsk/c0t1d0s5
4. Log Device Pathname: /dev/rdsk/c0t1d0s6
5. Master Device size: 40

Using File System Files for the Master Device

1. Database Device Directory: /opt/databases
2. Master Device: 40
3. System Procs Device size: 25
4. Data Device size: 50
5. Log Device size: 100

Remote Backup Server Parameters

Complete if you install a Remote Backup Server.

1. Remote Backup Server's hostname
2. Remote Backup Server's IP address:
3. Sybase user's home directory: /opt/sybase
4. TCP Socket Number of Remote Backup Server: 1025

Configuring Additional Cascade Devices

Complete this information if you configure an additional Cascade Device

1. Data Device: _____

Using Raw Partitions for the New Device

2. Data Device pathname: /dev/rdsk/c0t1d0s7

Using File System Files for the New Device

3. Database Device directory: /opt/databases
4. Size of the /opt/databases/**[***device name***]**_device.dat: _____

   where *device name* is the name of the device you are configuring

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